

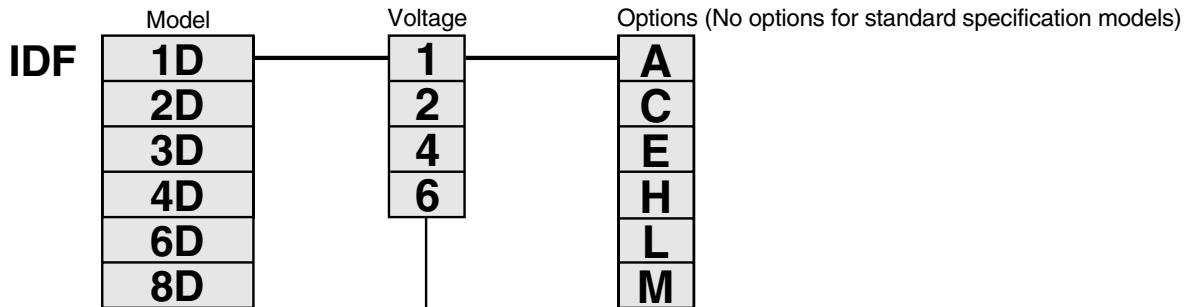
The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Refrigerant R134a

Series **IDF** Small

1D, 2D, 3D, 4D, 6D, 8D

How to Order



Voltage		
Single phase	100VAC (50Hz) 100 to 110VAC (60Hz)	1
	200VAC (50Hz) 200 to 220VAC (60Hz)	2
	240VAC (50Hz) 220 to 240VAC (50Hz)	4
		6
	220VAC (50Hz)	6



Note 1) A combination of three or more optional items is handled as a special order product.

Note 2) Single phase 220 to 240VAC is "S" specification standard.

Note 3) Combinations of H and M, R and S, S and T, A and H, L and M are not available.

Note 4) Option "T" is not available for IDF6D, 8D-4 and -6.

Model	Air compressor	Refrigerant
1D	0.75kW	R134a
2D	1.5kW	
3D	2.2kW	
4D	3.7kW	
6D	5.5kW	
8D	7.5kW	

Option	A	C	E	H	L	M	R	S	T
Optional specification	With cool compressed air output	With anti-corrosive treatment	With evaporation thermometer	For medium air pressure	With heavy duty auto drain	With motor operated auto drain	With circuit breaker	With power cord connection	With terminal block for run & alarm signal and remote operation
Model									
1D	●	●						●	
2D	●	●						●	
3D	●	●	●					●	
4D	●	●	●	●				●	
6D	●	●	Standard	●	●	●	●	●	● Note 4)
8D	●	●	Standard	●	●	●	●	●	● Note 4)



* Refer to pages 14-17-26 to 14-17-27 for further information on options.

Model and voltage combinations

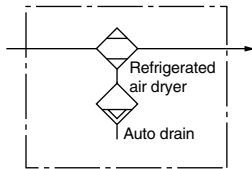
Model	Voltage 1		Voltage 2		Voltage 4		Voltage 6	
	100VAC (50Hz) 100 to 110VAC (60Hz)	200VAC (50Hz) 200 to 220VAC (60Hz)	220 to 240VAC (50Hz)	240VAC (50Hz)	220VAC (50Hz)			
1D	●							
2D	●							
3D	●	●		●	●			
4D	●	●		●	●			
6D	●	●	●					
8D	●	●	●					

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Refrigerated Air Dryer Series **IDF**Small



JIS Symbol



Standard Specifications/Models

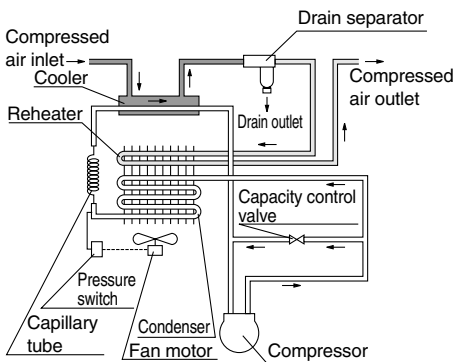
Specification		Model	IDF1D	IDF2D	IDD3D	IDF4D	IDF6D	IDF8D	
Air flow rate ^{Note 2)} ℓ/min (ANR)	50Hz		100	200	300	430	640	850	
	60Hz		120	235	350	500	750	1000	
Operating pressure (MPa)			0.7						
Inlet air temperature (°C)			35	40					
Ambient temperature (°C)			32						
Pressure dew point (°C)			10						
Working fluid			Compressed air						
Inlet air temperature (°C)			5 to 50						
Inlet air pressure (MPa)			0.15 to 1.0						
Ambient temperature (°C)			2 to 40 (Relative humidity of 85% or less)						
Power source			Single phase, 100/100 to 110VAC (50/60Hz)		Single phase, 100/100 to 110VAC (50/60Hz) Single phase, 200/200 to 220VAC (50/60Hz) Single phase, 220, 240/220 to 240VAC (50Hz)				
Power consumption (W)	100 VAC	50Hz	184	187	210	207	283	283	
		60Hz	213	210	260	250	330	330	
	220 to 240VAC	50Hz	—	—	—	—	259	292	
		220VAC	50Hz	—	—	172	247	—	—
		240VAC	50Hz	—	—	179	257	—	—
Circuit breaker (A) ^{Note 3)}			10 (for 100VAC), 5 (for 200VAC)						
Condenser			Air cooled						
Refrigerant			R134a						
Air connection			Rc 3/8				Rc 1/2	Rc 3/4	
Drain connection			Drain tube ø10 attached				Rc 1/4		
Auto drain			AD53	AD43			INA-20-41-04 ^{Note 5)}		
Weight (kg)	100 to 200VAC		15	16	18	26	32	32	
	220 to 240VAC		—		19	26	35	38	
Coating color			Munsell 10Y8/0.5 (White)						
Applicable compressor (screw type) kW			0.75	1.5	2.2	3.7	5.5	7.5	



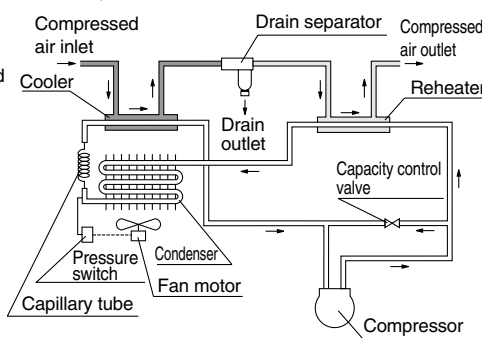
- Note 1) Select an air dryer according to the selection method and not the rated conditions.
 Note 2) The data for ℓ/min (ANR) refers to the conditions of 20°C, 1 atm. pressure and relative humidity of 65%.
 Note 3) Install a circuit breaker with sensitivity of ≤30 mA.
 Note 4) IDF3D to 8D-4/6 are only for frequency of 50Hz.
 Note 5) Spare part for auto drain INA-20-41-04 is AD44- x445.

Operation Principles

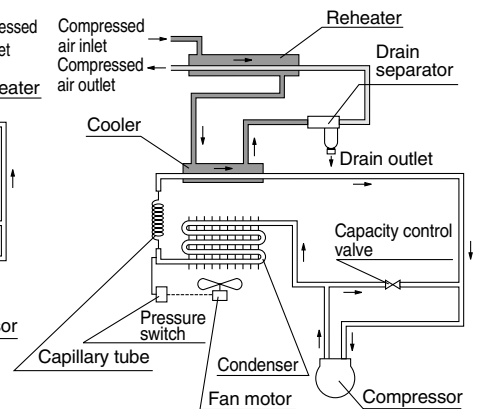
IDF1D



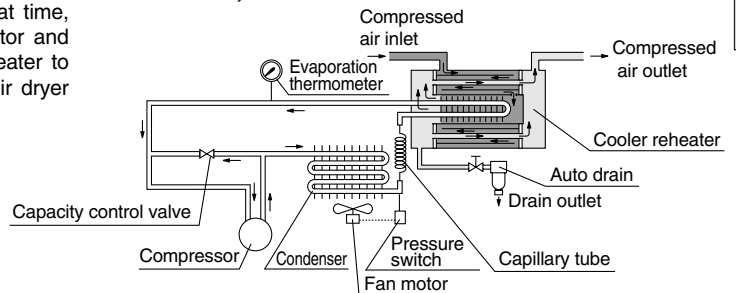
IDF2D, 3D



IDF4D



IDF6D, 8D



Hot humid air entering the air dryer is cooled by the cooler. At that time, condensed moisture is separated from the air by the drain separator and automatically discharged. The dried clean air is heated by the reheater to about the ambient temperature, and is then discharged from the air dryer outlet.

HA

AT

ID

AMG

AFF

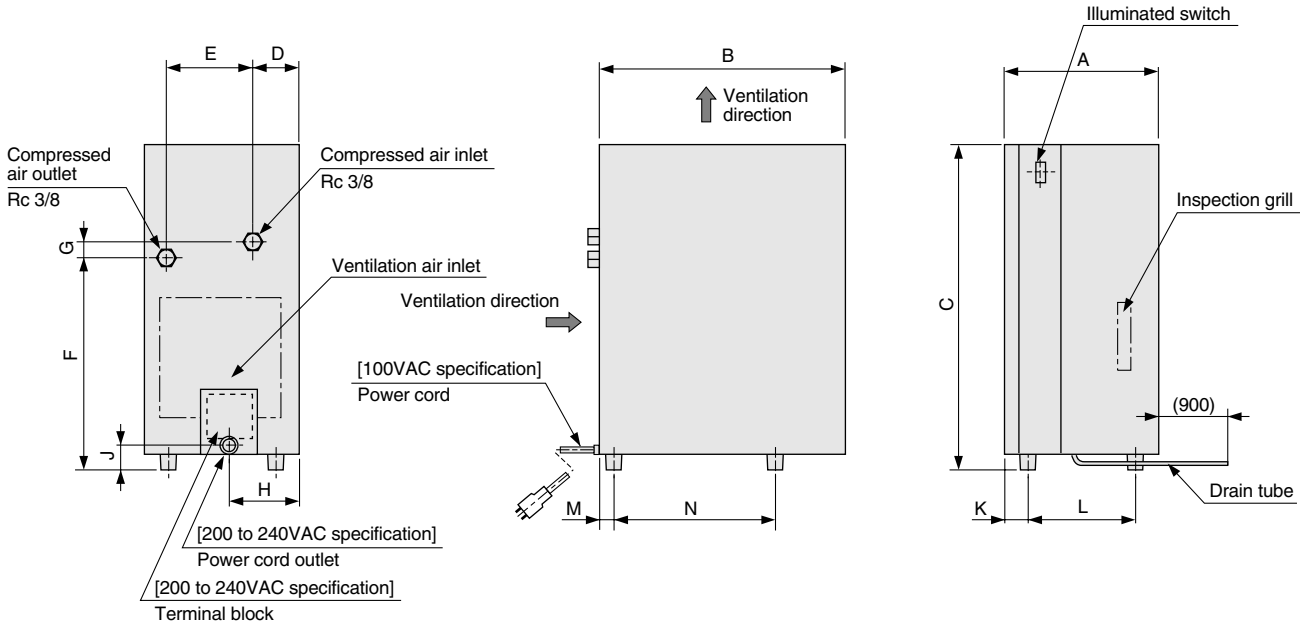
AM

Misc.

Series IDF **Small**

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

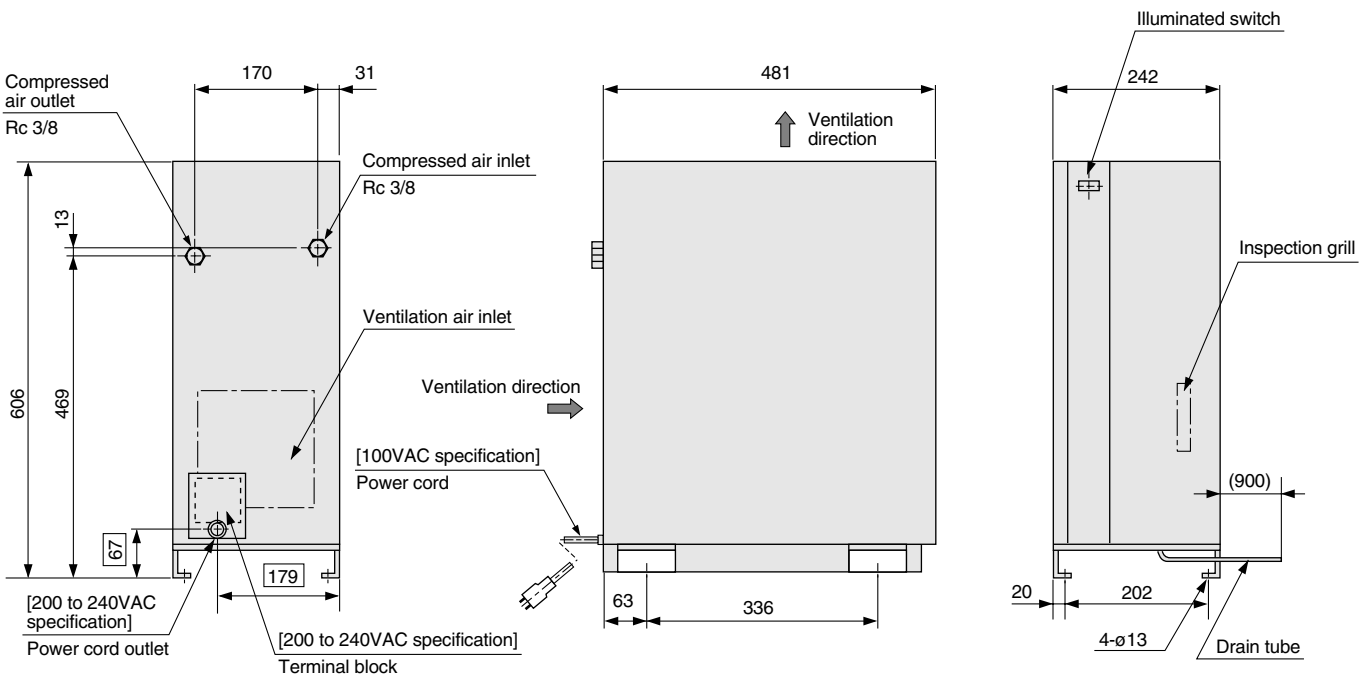
IDF1D, 2D, 3D



Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N
IDF1D	Rc 3/8	200	328	395	59	74	247	36	—	—	34	132	38	198
IDF2D		226	328	410	51	125	232	138	—	—	38	150	24	217
IDF3D		226	358	470	67	125	304	33	[103]	[28]	36	154	21	236

[] : Power source 200 to 240VAC

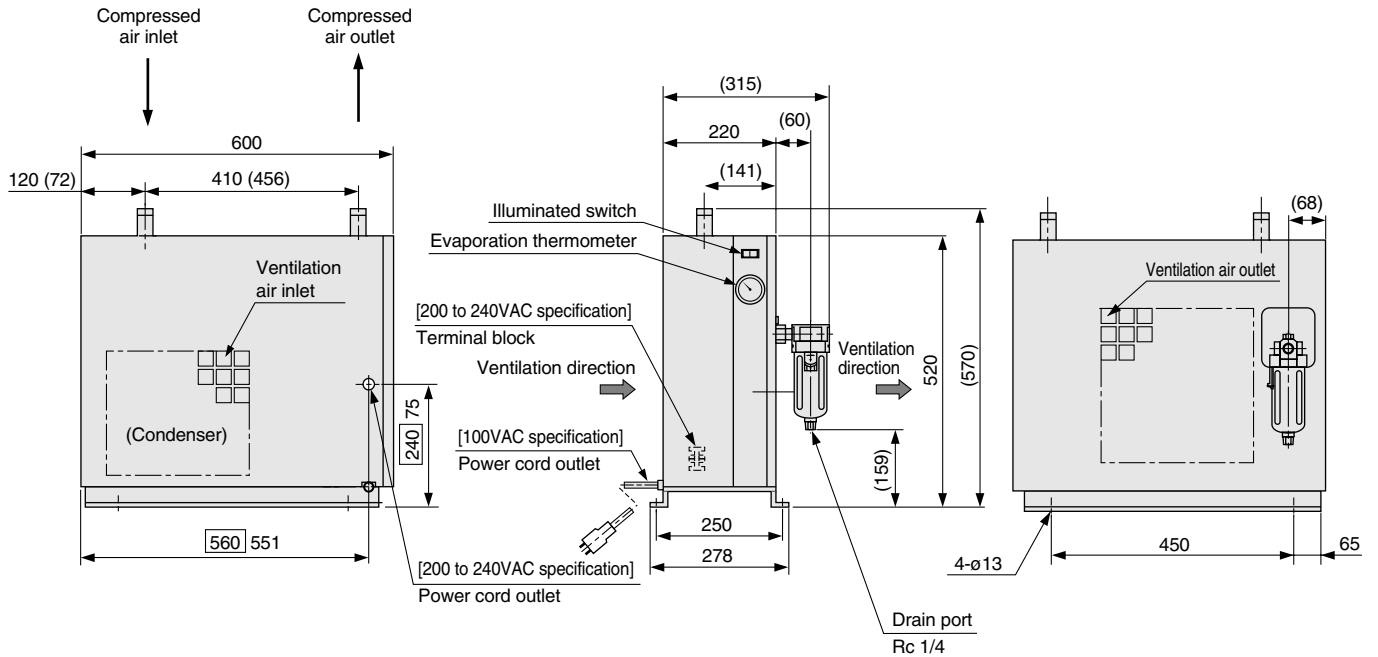
IDF4D



[] : Power source 200 to 240VAC

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

IDF6D, 8D



□: In case of 200VAC. Dimension shown on the right is for 220 to 240VAC.
 (): Dimension within bracket is for air dryer with option A, with cool compressed air output.
 Air inlet and outlet are reversed for air dryer with option A, with cool compressed air output.

* Auto drain is packed together with the air dryer. (Some assembly is required.)

Model	Port size
IDF6D	R 1/2
IDF8D	R 3/4

- HA □
- AT
- ID □**
- AMG
- AFF
- AM □
- Misc.

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Refrigerant R22

Series **IDF** Medium

11D, 11C, 15C, 15C1, 22C, 22C1, 37C, 37C1, 55C, 75C

How to Order

IDF

Model	11D
	11C
	15C
	15C1
	22C
	22C1
	37C
	37C1
	55C
	75C

Voltage

1
2
3
4
6

Voltage	
Single phase 100VAC (50Hz) 100 to 110VAC (60Hz)	1
Single phase 200VAC (50Hz) 200 to 220VAC (60Hz)	2
Three phase 200VAC (50Hz) 200 to 220VAC (60Hz)	3
Single phase 240VAC (50Hz) 220 to 240VAC (50Hz)	4
Single phase 220VAC (50Hz)	6

Options (No options for standard specification models)

A
C
E
H
L
M
R
S
T
W

Model	Air compressor	Refrigerant
11D	11kW	R134a
11C		
15C/15C1	15kW	R22
22C/22C1	22kW	
37C/37C1	37kW	
55C	55kW	
75C	75kW	

Note 1) A combination of two is standard. A combination of three or more optional items is handled as a special order product.

Note 2) 200 to 240VAC is "S" specification standard.

Note 3) Combinations of A and H, H and M, R and S, S and T are not available.

Note 4) Options "T" and "W" are not available for IDF37C, 55C and 75C-4/6.

Option	A	C	E	H	L	M	R	S	T	W		
Optional specification	With cool compressed air output	With anti-corrosive treatment	With evaporation thermometer	For medium air pressure	With heavy duty auto drain	With motor operated auto drain	With circuit breaker	With power cord connection	With terminal block for run & alarm signal	Water cooled condenser		
Model			Standard					Standard				
11C/11D	●	●			●	●	●		●	●		
15C/15C1	●	●			●	●	●		●	●		
22C/22C1	●	●			●	●	●		●	●		
37C/37C1	●	●			●	●	●		●	●	● Note 4)	● Note 4)
55C	●	●			●	●	●		●	●	● Note 4)	● Note 4)
75C	●	●		●	●	●	●	●	● Note 4)	● Note 4)		

* Refer to pages 14-17-26 to 14-17-27 for further information on options.

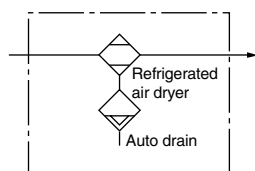
Model and voltage combinations

Voltage	1		2		3		4		6	
	Single phase		Three phase		Single phase		Single phase			
	100VAC (50Hz) 100 to 110VAC (60Hz)	200VAC (50Hz) 200 to 220VAC (60Hz)	200VAC (50Hz) 200 to 220VAC (60Hz)	200VAC (50Hz) 200 to 220VAC (60Hz)	220 to 240VAC (50Hz)	240VAC (50Hz)	220VAC (50Hz)			
Model										
11D										
11C	●	●								
15C	●	●								
15C1						●			●	
22C							●		●	
22C1				●						
37C							●		●	
37C1				●						
55C				●				●	●	
75C				●				●	●	

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.



JIS Symbol



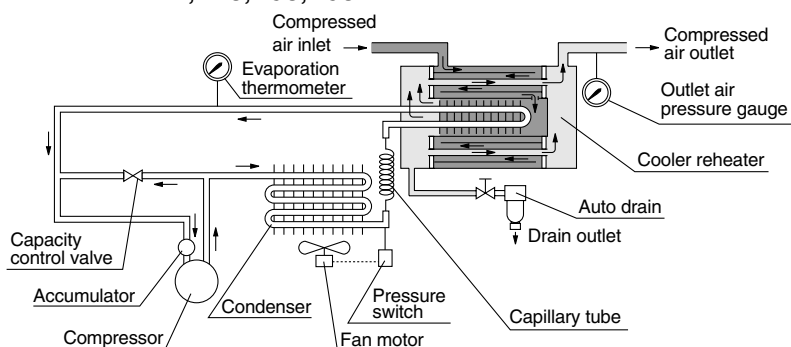
Standard Specifications/Models

Specification	Model	IDF11D	IDF11C	IDF15C	IDF15C1	IDF22C	IDF22C1	IDF37C	IDR37C1	IDF55C	IDF75C	
Air flow rate ^{Note 2)} l/min (ANR)	50Hz	1300	2050	3150	5200	7650	10500					
	60Hz	—	1500	2400	—	3700	—	6100	9000	12400		
Operating pressure (MPa)		0.7										
Inlet air temperature (°C)		40										
Ambient temperature (°C)		32										
Pressure dew point (°C)		10										
Working fluid		Compressed air										
Inlet air temperature (°C)		5 to 50										
Inlet air pressure (MPa)		0.15 to 1.0										
Ambient temperature (°C)		2 to 40 (Relative humidity of 85% or less)										
Power source		Single phase, 100/100 to 110VAC (50/60Hz) 220, 240VAC (50Hz) 220 to 240VAC (50Hz)					Three phase, 200/200 to 220VAC (50/60Hz) Single phase, 220, 240VAC (50Hz)					
Power consumption (W)	100 VAC	50Hz	—	320	543	—	—	—	—	—	—	—
		60Hz	—	347	662	—	—	—	—	—	—	—
	200 VAC	50Hz	—	308	561	—	—	670	—	750	1400	2100
		60Hz	—	346	652	—	—	800	—	880	1750	2150
	^{220 to 240VAC}	50Hz	337	—	—	—	—	—	—	—	—	—
	220VAC	50Hz	—	—	—	548	747	—	830	—	1530	2150
	240VAC	50Hz	—	—	—	570	777	—	860	—	1580	2200
Circuit breaker (A) ^{Note 3)}		10 (for 100VAC), 5 (for 200VAC)					10			15		
Condenser		Air cooled										
Refrigerant		R134a										
Air connection		Rc 3/4		Rc 1			Rc 1 1/2		Rc 2			
Drain connection		Rc 1/4										
Auto drain		INA-20-41-04 ^{Note 5)}										
Weight (kg)	100 to 200VAC	—	47	50	—	—	60	—	72	114	126	
	220 to 240VAC	50	—	—	53	60	—	72	—	125	135	
Coating color		Munsell 10Y8/0.5 (White)										
Applicable compressor (screw type) kW		11	15	22	37	55	75					

- Note 1) Select an air dryer according to the selection method and not the rated conditions.
- Note 2) The data for l/min (ANR) refers to the conditions of 20°C, 1 atm. pressure and relative humidity of 65%.
- Note 3) Install a circuit breaker with sensitivity of ≤30 mA.
- Note 4) IDU11D to 75C-4/6 are only for frequency of 50Hz.
- Note 5) Spare part for auto drain INA-20-41-04 is AD44-x445.

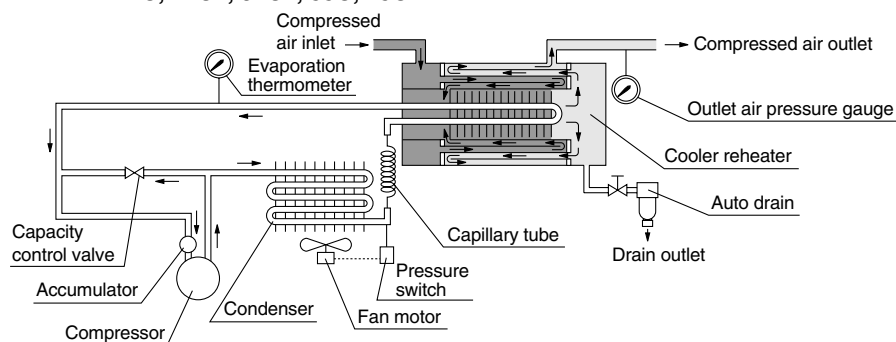
Operation Principles

IDF11D, 11C, 15C, 15C1



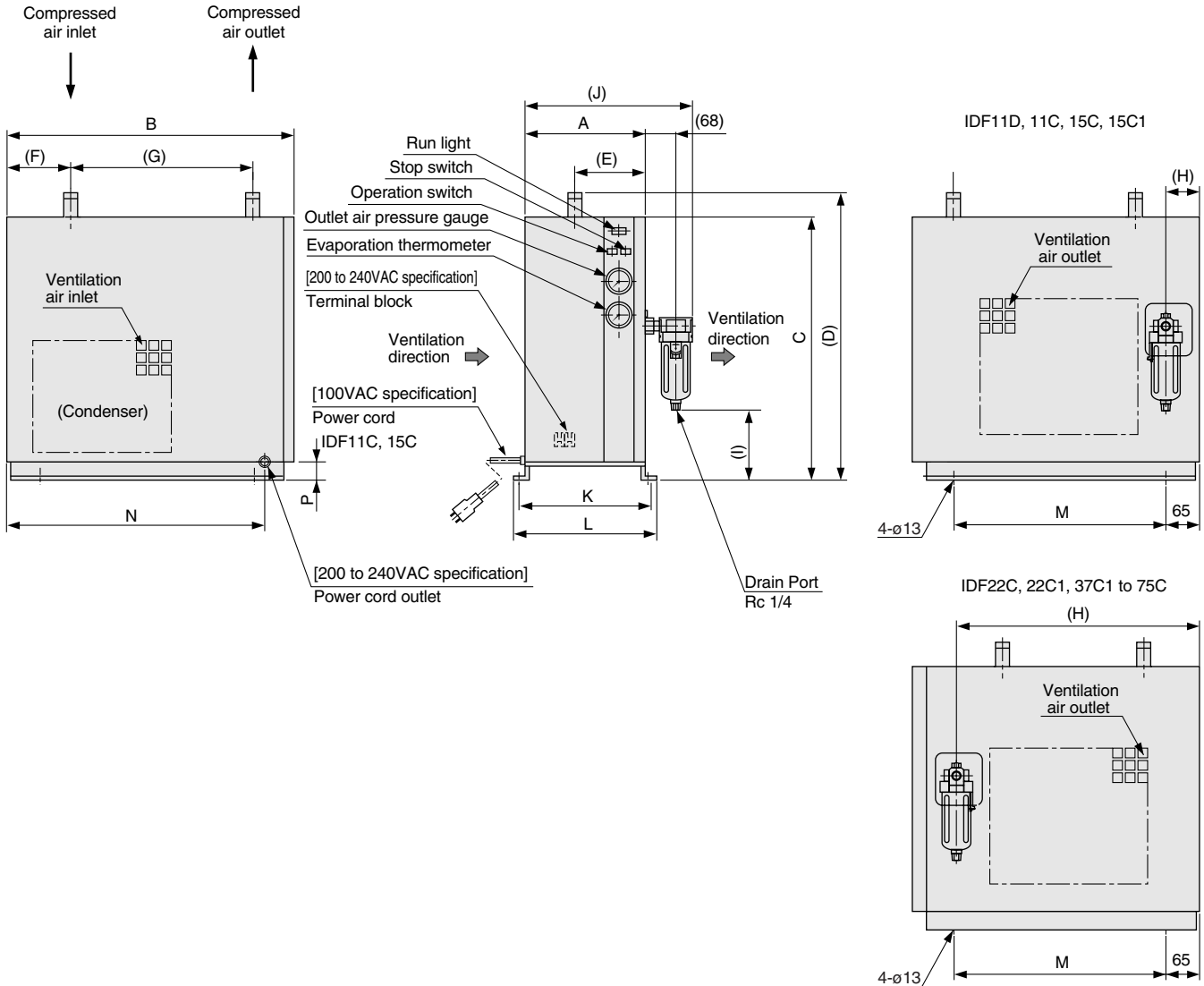
Hot humid air entering the reheater is pre-cooled by dehumidified cool air. (The hot air is cooled further and dehumidified inside the cooler as heat is transferred to the refrigerant. The water condensed by the cooling process is collected and discharged automatically by the auto drain.) Finally, the cool dehumidified air is heated in the reheater by hot inlet air and discharged in a dry state.

IDF22C, 22C1, 37C1, 55C, 75C



- HA
- AT
- ID
- AMG
- AFF
- AM
- Misc.

IDF11D, 11C, 15C, 15C1, 22C, 22C1, 37C1, 55C, 75C



* Auto drain is packed together with the air dryer. (Some assembly is required.)

Model	Port size	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P
IDF11C/11D	R 3/4	260	620	570	630	152	131 (85)	405 (450)	77	157	363	289	317	470	580 [580]	70 [65]
IDF15C/15C	R 1	280	620	620	680	175	131 (85)	405 (450)	77	207	383	309	337	470	580 [580]	70 [65]
IDF22C/22C1	R 1	295	750	680	760	183	98	405 (530)	642	199	398	323	351	600	700 [700]	70 [30]
IDF37C/37C1	R 1 1/2	320	830	730	810	208	98	405 (610)	722	249	423	348	376	680	776 [780]	70 [30]
IDF55C	R 2	405	850	850	930	85	98	405 (610)	722	247	508	433	461	700	800 [800]	75 [30]
IDF75C	R 2	425	850	900	980	85	98	405 (610)	722	297	528	453	481	700	802 [800]	75 [30]

□ : Power source 200VAC. Dimension shown on the right is for 220 to 240VAC.
(): Dimension within bracket is for air dryer with option A, with cool compressed air output.
Air inlet and outlet are reversed for air dryer with option A, with cool compressed air output.

Series IDU/IDF Option Specification

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Refer to pages 14-17-8, 12,16,20 and 23 for "How to order" of options.

A Option symbol

Cool compressed air output at 10°C

The air flow with this option is lower than that of the standard dryer.

* On models IDF6D to 15C, the air inlet and outlet are reversed.

** Except for IDF1D to 4D, piping dimensions of the air inlet and outlet are different from standard. (Refer to pages 19, 22 and 25.)

Model		IDF1D	IDF2D	IDF3D	IDF4D
Air flow capacity (ℓ /min (ANR)) 50/60Hz	50Hz	85	120	180	215
	60Hz	100	140	210	250
Model		IDF6D	IDF8D	IDF11C	IDF15C
Air flow capacity (ℓ /min (ANR)) 50/60Hz	50Hz	320	425	650	1025
	60Hz	375	500	750	1200
Model		IDF22C1	IDF37C1	IDF55C	IDF75C
Air flow capacity (ℓ /min (ANR)) 50/60Hz	50Hz	1575	2600	3825	5250
	60Hz	1850	3050	4500	6200

[Condition IDF1D] Pressure: 0.7MPa, Saturation: 35°C
Ambient temperature: 32°C, Outlet air temperature: 10°C
[IDF2D to 75C] Pressure: 0.7MPa, Saturation: 40°C,
Ambient temperature: 32°C, Outlet air temperature: 10°C

C Option symbol

Anti-corrosive treatment

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

Special epoxy coating of 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 coating.

Note) For IDF370B, option C is assigned as X204.

E Option symbol

With evaporation thermometer

A thermometer (pressure gauge) indicating the evaporating temperature of the refrigerant is attached to the operation panel, facilitating maintenance and daily checks. IDU6D to 75C, IDF6D to 370B standard.

H Option symbol

For medium air pressure

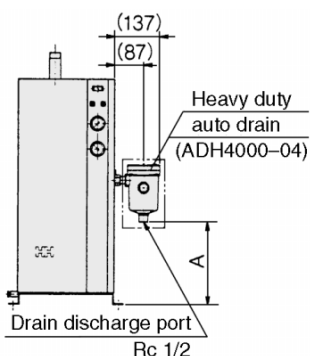
This option provides a heat exchanger, auto drain, air pressure gauge and ball valve, etc., with a medium pressure capability. This is different from the standard specifications. Maximum operating pressure is 1.5MPa.

L Option symbol

With heavy duty auto drain

A dryer with heavy duty auto drain (ADH4000-04) is installed instead of the float type auto drain (INA20-41-04), which is used for standard models to discharge drainage. IDF120D, 150D, 190D, 240D standard.

Note) For IDF370B, option L is assigned as X205.



Model	A	Model	A
IDU6D	210	IDF6D	210
IDU8D	210	IDF8D	210
IDU11C	208	IDF11C	208
IDU15C	258	IDF15C	258
IDU22C1	270	IDF22C1	250
IDU37C1	320	IDF37C1	300
IDU55C	318	IDF55C	298
IDU75C	368	IDF75C	348
		IDF120D	365
		IDF150D	365
		IDF190D	427
		IDF240D	592

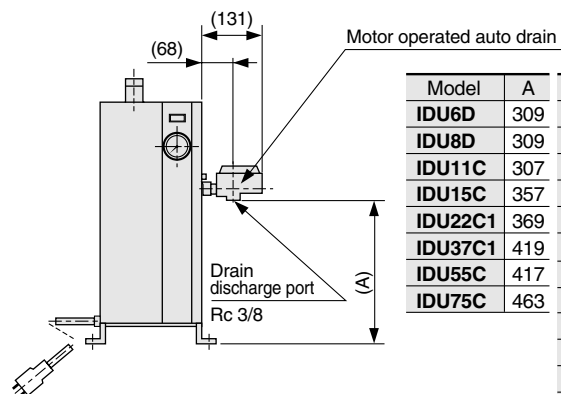
M Option symbol

With motor operated auto drain

This option changes the float style auto drain (INA-20-41-04) used by standard air dryers to a motor operated auto drain (ADM200-04) where by drainage is discharged more precisely.

Operating air pressure	Air discharge if no drainage
0.3MPa	6 ℓ (ANR) each time
0.5MPa	10 ℓ (ANR) each time
0.7MPa	14 ℓ (ANR) each time

* Operation cycle: 1 cycle/min. Operation time: 2 sec./min.
IDF220B to 370B standard.



Model	A	Model	A
IDU6D	309	IDF6D	309
IDU8D	309	IDF8D	309
IDU11C	307	IDF11C	307
IDU15C	357	IDF15C	357
IDU22C1	369	IDF22C1	349
IDU37C1	419	IDF37C1	399
IDU55C	417	IDF55C	397
IDU75C	463	IDF75C	447
		IDF120D	464
		IDF150D	464
		IDF190D	526
		IDF240D	690

* Motor operated auto drain is packed together with main unit. Assembly is required.

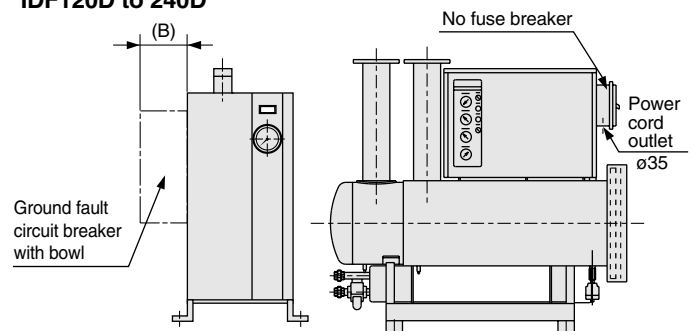
R Option symbol

With circuit breaker X202 (IDF220B, 370B)

A circuit breaker with bowl is attached to the side of the air dryer. This saves additional electrical wiring at the time of installation. (IDF120D to 370B do not have an electric leakage detection function.)

IDU6D to 75C
IDF6D to 75C
IDF120D to 240D

IDF370B



Model	B	Breaker capacity	Sensitivity current
IDU6D, IDF6D IDU8D, IDF8D IDU11C, IDF11C IDU15C, IDF15C	95	10A (100VAC) 5A (200VAC)	15 to 30mA
IDU22C1, IDF22C1 IDU37C1, IDF37C1		10A	
IDU55C, IDF55C IDU75C, IDF75C		15A	
IDF120D	69	30A	
IDF150D	94	45A	
IDF190D	95	50A	
IDF240D		60A	
IDF370B	156	80A	

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Option Specification

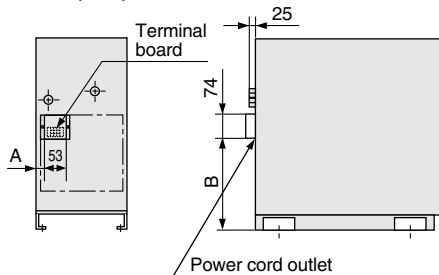
S

Option symbol

With power cord connection

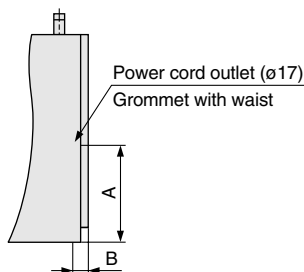
This option allows connection of the power supply to a terminal board (3P).

IDU3D, 4D, IDF1D to 4D



Model	A	B
IDU3D	24	247
IDU4D	20	298
IDF1D	47	123
IDF2D	55	123
IDF3D	37	173
IDF4D	45	197

IDU6D to 15C, IDF6D to 15C



Model	A	B
IDU6D	240	40
IDU8D	240	40
IDU11C	30	49
IDU15C	30	49
IDF6D	240	40
IDF8D	240	40
IDF11C	65	40
IDF15C	65	40

T

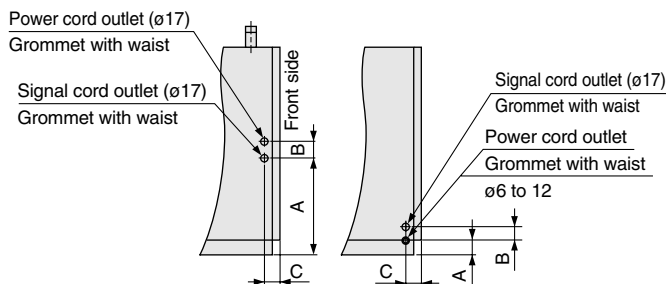
Option symbol

With terminal block for run & alarm signal and remote operation

With the optional terminal, in addition to connection of the power supply, the air dryer can be started and stopped by remote control and an operation failure signal can be obtained. (If no voltage contact is made, an operation failure signal will register.) IDF120D to 370B standard.

IDU6D, 8D IDF6D, 8D

IDU11C to 75C IDF11C to 75C



Model	A	B	C
IDU6D	240	38	70
IDU8D	240	38	70
IDU11C	30	50	49
IDU15C	30	50	49
IDU22C1	50	45	50
IDU37C1	50	45	50
IDU55C	50	45	50
IDU75C	50	45	50

Model	A	B	C
IDF6D	240	38	70
IDF8D	240	38	70
IDF11C	65	32	40
IDF15C	65	32	40
IDF22C1	30	45	50
IDF37C1	30	45	50
IDF55C	30	45	50
IDF75C	30	45	50

W

Option symbol

Water cooled condenser (IDF37C1 to 240D)

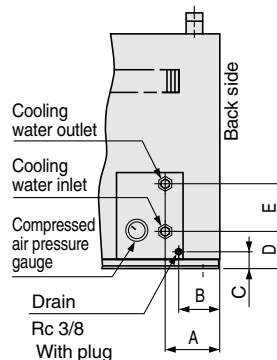
This option can be used where the ambient temperature is high (Max. 43°C), and does not reduce air flow capacity. It is also possible to use this option in an enclosed environment to prevent increasing of the surrounding temperature. IDF370B standard.

W: Water cooled condenser (IDF37C1 to 240D)

Model	IDF37C1	IDF55C	IDF75C	IDF120D	IDF150D	IDF190D	IDF240D
Condenser type	Shell & coil system						
Cooling water flow /min ^{Note 1)}	6	8	20	50	65	80	90
Cooling tower capacity RT ^{Note 2)}	2	2	3	5	7.5	7.5	7.5
Water flow regulator	Pressure auto feed valve						
Connection bore on water side (union)	1/2B	1/2B	3/4B	1B	1B	1B	1B

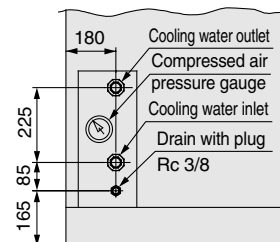
Note 1) Value for inlet water temperature of 32°C and rated load.
Note 2) Value calculated for 1RT = 3, 300kcal/h.

IDF75C



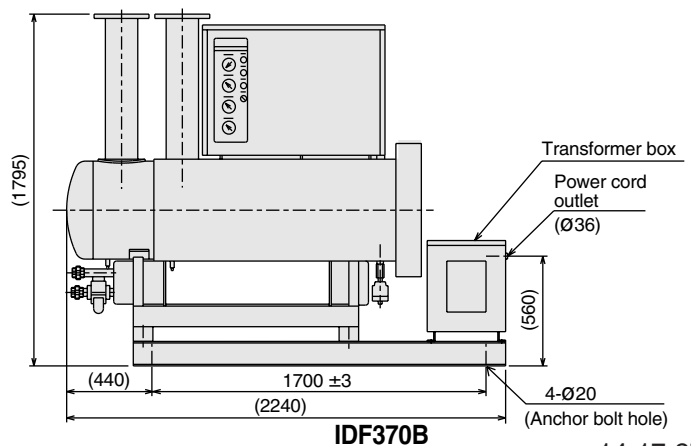
Model	A	B	C	D	E
IDF37C1	425	375	75	153	225
IDF55C	190	140	75	153	225
IDF75C	208	158	66	144	181

IDF120D to 240D







Transformer integrated

The power supply transformer can be integrated with an air dryer. It is used when a refrigerated air dryer is using a non-standard voltage specification. The power supply transformer for IDF120D to 240D is installed inside of the air dryer. Therefore, external dimensions are the same as the standard product.



The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Accessories (Option)

Description	Features	Specifications	Applicable dryer	Dimensions
Transformer separately installed 	This is for power supply and voltage other than standard.	Max. ambient temperature 40°C (Relative humidity 85% or less)	All models	14-17-30
Base integrated with transformer 	This is the base for integrating the transformer and air dryer.	—	IDU3D to 15C IDF4D to 75C	14-17-30
Dust proof filter set 	Avoids decreasing of air dryer performance even in dusty atmosphere.	Max. ambient temperature 40°C	IDU3D to 75C IDF1D to 75C	14-17-30
Bypass piping set 	Easy bypass piping (connect this set to the air dryer), realizing substantial reduction of man-hours at the site.	Max. operating pressure 1.0MPa Max. operating temperature 60°C	IDU3D to 75C IDF1D to 75C	14-17-31

How to Order

Transformer separately installed

IDF — TR **1500** — **5**

Volume

Symbol	Volume	Applicable dryer
500	500 VA	IDU3D-1 to 11C-1, IDF1D-1 to 11C-1
1000	1 kVA	IDU15C-1, IDF15C-1
1500	1.5 kVA	IDU22C1-3, 37C1-3, IDF22C1-3, 37C1-3
4000	4 kVA	IDU55C-3, 75C-3, IDF55C-3, 75C-3
7000	7 kVA	IDF120D
9000	9 kVA	IDF150D
11000	11 kVA	IDF190D
13000	13 kVA	IDF240D
18000	18 kVA	IDF370B

Supply voltage

Symbol	Primary voltage	Secondary voltage	Model
1	110VAC (50Hz), 110 to 120VAC (60Hz)	100VAC (50Hz) 100 to 110VAC (60Hz)	Single phase Single turn
2	200, 220, 230, 240VAC (50Hz), 200 to 260VAC (60Hz)		
3	380, 400, 415VAC (50Hz), 380 to 420VAC (60Hz)		
4	420, 440, 480VAC (50Hz), 420 to 520VAC (60Hz)		
5	220VAC (50Hz), 220 to 240VAC (60Hz)	200VAC (50Hz) 200 to 220VAC (60Hz)	Three phase Single turn
6	380, 400, 415VAC (50Hz), 380 to 440VAC (60Hz)		
7	440, 460VAC (50Hz), 440 to 500VAC (60Hz)		
8	220, 240, 380, 400, 415, 440VAC (50/60Hz)	200VAC (50/60Hz)	Three phase Compound

Refer to page 14-17-29 for dimensions.

Base integrated with transformer

IDF — TB **2**

Size order

Symbol	Applicable dryer
1	IDU3D, IDF4D
2	IDU4D to 15C, IDF6D to 15C
3	IDF22C1
4	IDF37C1 to 75C

Not available for IDF1D to 3D, IDF22C to 75C. Refer to page 14-17-30 for dimensions.

Dust proof filter set

IDU — FL **22** C

Applicable dryer

Symbol	Dryer	Symbol	Dryer	Symbol	Dryer
3	IDU3D	6	IDU6D	22	IDU22C1
4	IDU4D	8	IDU8D	37	IDU37C1
		11	IDU11C	55	IDU55C
		15	IDU15C	75	IDU75C

IDF — FL **22** C

Applicable dryer

Symbol	Dryer	Symbol	Dryer	Symbol	Dryer
1	IDF1D	6	IDF6D	22	IDF22C1
2	IDF2D	8	IDF8D	37	IDF37C1
3	IDF3D	11	IDF11C	55	IDF55C
4	IDF4D	15	IDF15C	75	IDF75C

IDF — FL **120** D

Applicable dryer

Symbol	Dryer
120	IDF120D
150	IDF150D
190	IDF190D
240	IDF240D

Bypass piping set

IDU — BP **22** C

Applicable dryer

Symbol	Dryer	Symbol	Dryer	Symbol	Dryer
3	IDU3D	6	IDU6D	22	IDU22C1
4	IDU4D	8	IDU8D	37	IDU37C1
		11	IDU11C	55	IDU55C
		15	IDU15C	75	IDU75C

IDF — BP **22** C

Applicable dryer

Symbol	Dryer	Symbol	Dryer	Symbol	Dryer
1	IDF1D	6	IDF6D	22	IDF22C1
2	IDF2D	8	IDF8D	37	IDF37C1
3	IDF3D	11	IDF11C	55	IDF55C
4	IDF4D	15	IDF15C	75	IDF75C

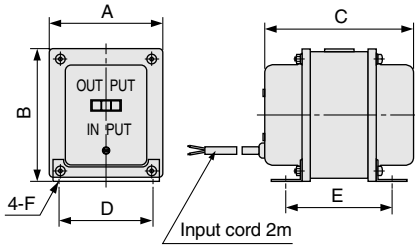
Cannot be mounted on models with option "A" (IDF6D to 75C). Available as Special Order Product.

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Accessories (Options)

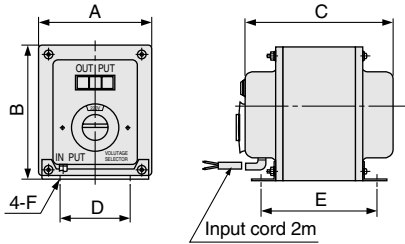
Transformers

IDF-TR-1



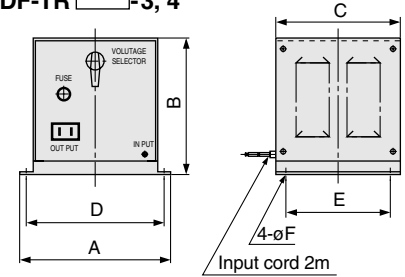
Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-1	IDF1D-1 to 11C-1 IDU3D-1 to 11C-1	500VA	Single phase Single turn	110VAC (50Hz) 110 to 120VAC (60Hz)	100VAC (50Hz) 100 to 110VAC (60Hz)	78	94	100	64	75	4.2 x 7 (Long hole)	1.5
	IDF-TR1000-1	IDF15C-1 IDU15C-1		1kVA	104	122	134	75	114	4.2 x 9 (Long hole)	4	

IDF-TR-2



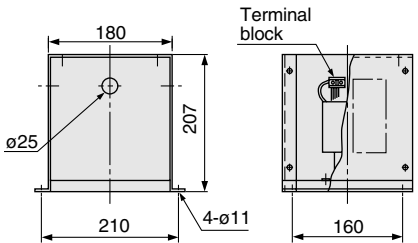
Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-2	IDF1D-1 to 11C-1 IDU3D-1 to 11C-1	500VA	Single phase Single turn	200, 220, 230, 240VAC (50Hz) 200 to 260VAC (60Hz)	100VAC (50Hz) 100 to 110VAC (60Hz)	118	140	163	70	112	5.5 x 10 (Long hole)	6
	IDF-TR1000-2	IDF15C-1 IDU15C-1		1kVA	118	140	208	70	157	10		

IDF-TR-3, 4



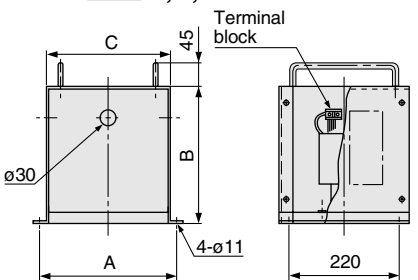
Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	A	B	C	D	E	F	Weight (kg)
IDF-TR500-3	IDF1D-1 to 11C-1 IDU3D-1 to 11C-1	500VA	Single phase Single turn	380, 400, 415VAC (50Hz) 380 to 420VAC (60Hz)	100VAC (50Hz) 110VAC (60Hz)	230	207	190	210	160	9	15
IDF-TR1000-3	IDF15C-1 IDU15C-1	1kVA										22
IDF-TR500-4	IDF1D to 11C-1 IDU3D to 11C-1	500VA		15								
IDF-TR1000-4	IDF15C-1 IDU15C-1	1kVA		22								

IDF-TR1500-5



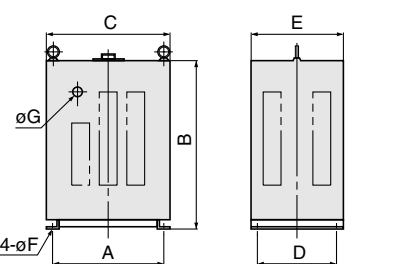
Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	Weight (kg)
IDF-TR1500-5	IDF22C1-3 IDF37C1-3 IDU22C1-3 IDU37C1-3	1.5kVA	Three phase Single turn	220V (50Hz) 220 to 240V (60Hz)	200V (50Hz) 200 to 220V (60Hz)	9

IDF-TR-5, 6, 7



Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	A	B	C	Weight (kg)
IDF-TR1500-6	IDF22C1-3, 37C1-3 IDU22C1-3, 37C1-3	1.5kVA	Three phase Single turn	380, 400, 415V (50Hz) 380 to 400, 400 to 415, 415 to 440V (60Hz)	200V (50Hz) 200 to 220V (60Hz)	275	259	240	18
IDF-TR1500-7	IDF22C1-3, 37C1-3 IDU22C1-3, 37C1-3	1.5kVA			200V (50Hz) 200 to 220V (60Hz)	275	259	240	18
IDF-TR4000-5	IDF55C-3, 75C-3 IDU55C-3, 75C-3	4kVA		220V (50Hz) 220 to 240V (60Hz)	200V (50Hz) 200 to 220V (60Hz)	275	259	240	14
IDF-TR4000-6	IDF55C-3, 75C-3 IDU55C-3, 75C-3	4kVA		380, 400, 415V (50Hz) 380 to 400, 400 to 415, 415 to 440V (60Hz)	200V (50Hz) 200 to 220V (60Hz)	355	299	320	35
IDF-TR4000-7	IDF55C-3, 75C-3 IDU55C-3, 75C-3	4kVA		440, 460V (50Hz) 440 to 460, 460 to 500V (60Hz)	200V (50Hz) 200 to 220V (60Hz)	355	299	320	42

IDF-TR-8



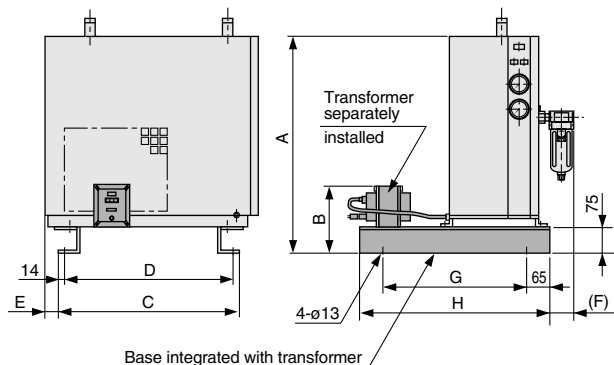
Part No.	Dryer	Capacity	Model	Primary voltage	Secondary voltage	A	B	C	D	E	F	G	Weight (kg)
IDF-TR7000-8	IDF120D	7kVA	Three phase compound	220, 240, 380, 400, 415, 440V (50/60Hz)	200V (50/60Hz)	360	540	400	260	300	11	30	94
IDF-TR9000-8	IDF150D	9kVA				400	650	450	300	350	13	40	109
IDF-TR11000-8	IDF190D	11kVA				550	450	600	350	400	13	60	131
IDF-TR13000-8	IDF240D	13kVA				400	600	450	300	350	13	60	138
IDF-TR18000-8	IDF370B	18kVA				400	650	450	300	350	13	40	179

- HA □
- AT
- ID □
- AMG
- AFF
- AM □
- Misc.

Accessories (Options)

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Base Integrated with Transformer



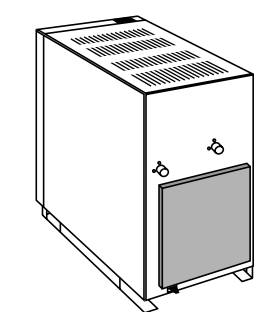
Part No.	Dryer	Transformer	A	B	C	D	E	F	G	H	Weight (kg)	
IDF-TB3	IDF22C1	IDF-TR1500-5		327							83	
		IDF-TR1500-6	755	379	628	600					92	
		IDF-TR1500-7										95
IDF-TB4	IDF37C1	IDF-TR1500-5	805	327	708	680					104	
		IDF-TR1500-6		379			51	69	675	805	142	
		IDF-TR1500-7										163
	IDF55C	IDF-TR4000-5	925	379	728	700						170
		IDF-TR4000-6		419								154
		IDF-TR4000-7										175
IDF75C	IDF-TR4000-5	975	379	728	700						182	
	IDF-TR4000-6		419									

Part No.	Dryer	Transformer	A	B	C	D	E	F	G	H	Weight (kg)	
IDF-TB1	IDF4D-1	IDF-TR500-1		171							33	
		IDF-TR500-2	681	217	356	328					37	
		IDF-TR500-3.4		284			53				46	
	IDU3D-1	IDF-TR500-1		171								30
		IDF-TR500-2	584	217	376	348						34
		IDF-TR500-3.4		284								43
IDF-TB2	IDF6D-1	IDF-TR500-1		171							39	
		IDF-TR500-2	595	217	470	442					44	
		IDF-TR500-3.4		284							53	
	IDF8D-1	IDF-TR500-1		171								39
		IDF-TR500-2	595	217	470	442						44
		IDF-TR500-3.4		284			55	69				53
	IDF11C-1	IDF-TR500-1		171								54
		IDF-TR500-2	645	217	490	462						59
	IDF15C-1	IDF-TR500-3.4		284								68
		IDF-TR1000-1		199								60
	IDF15C-1	IDF-TR1000-2	695	217	490	462				427	557	66
		IDF-TR1000-3.4		284								78
	IDU4D-1	IDF-TR500-1		171								38
		IDF-TR500-2	681	217	466	438	53					43
		IDF-TR500-3.4		284								52
	IDU6D-1	IDF-TR500-1		171								50
		IDF-TR500-2	785	217	470	442						55
	IDU8D-1	IDF-TR500-3.4		284								64
IDF-TR500-1			171								54	
IDU11C-1	IDF-TR500-2	885	217	470	442						59	
	IDF-TR500-3.4		284			55	69				68	
	IDF-TR500-1		171								66	
IDU15C-1	IDF-TR500-2	985	217	490	462						71	
	IDF-TR500-3.4		284								80	
IDU15C-1	IDF-TR1000-1		199								76	
	IDF-TR1000-2	1035	217	490	462						82	
IDU15C-1	IDF-TR1000-3.4		284								94	

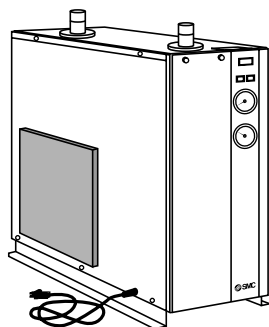


Note) Weight includes air dryer and transformer.
Not available for IDF1D to 3D, IDU22C to 75C.

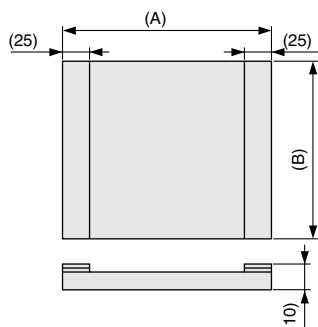
Dust proof filter set



(IDF-FL1C, 2C, 3C, 4C,
IDU-FL3C, 4C)



(IDF-FL6C, 8C, 11C, 15C)



Part No.	Dryer	A	B
IDF-FL1C	IDF1D	180	145
IDF-FL2C	IDF2D	180	145
IDF-FL3C	IDF3D	225	180
IDF-FL4C	IDF4D	225	180
IDF-FL6C	IDF6D	345	270
IDF-FL8C	IDF8D	345	270
IDF-FL11C	IDF11C	365	270
IDF-FL15C	IDF15C	385	310
IDF-FL22C	IDF22C1	430	310
IDF-FL37C	IDF37C1	555	380
IDF-FL55C	IDF55C	600	410
IDF-FL75C	IDF75C	640	510
IDF-FL120D	IDF120D	360	420
		440	420
IDF-FL150D	IDF150D	360	420
		440	420
IDF-FL190D	IDF190D	250	480
		750	480
IDF-FL240D	IDF240D	440	670
		600	670

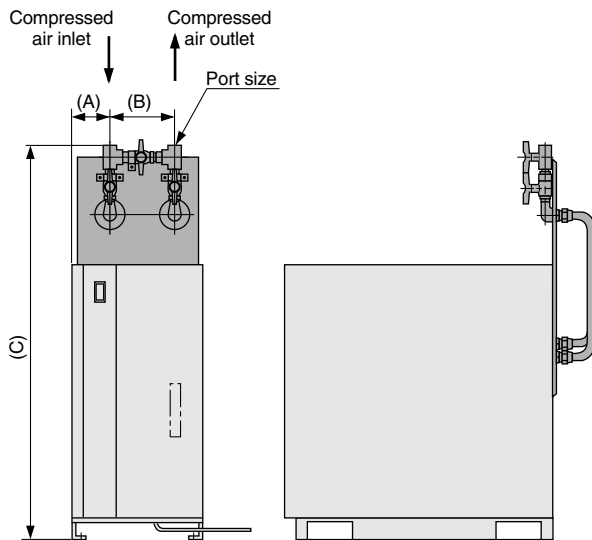
Part No.	Dryer	A	B
IDU-FL3C	IDU3D	245	265
IDU-FL4C	IDU4D	240	300
IDU-FL6C	IDU6D	400	170
		345	270
IDU-FL8C	IDU8D	405	270
		345	
IDU-FL11C	IDU11C	395	310
		365	270
IDU-FL15C	IDU15C	395	310
		385	
IDU-FL22C	IDU22C1	480	430
		430	310
IDU-FL37C	IDU37C1	605	475
		555	345
IDU-FL55C	IDU55C	605	475
		600	410
IDU-FL75C	IDU75C	625	550
		640	510

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

Accessories (Options)

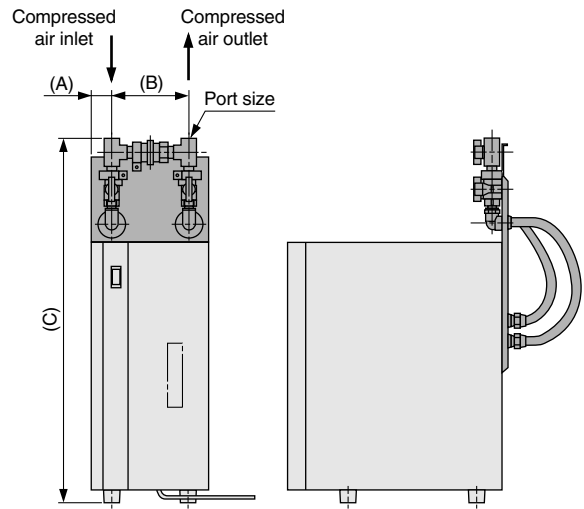
Bypass Piping Set

IDU3D, 4D



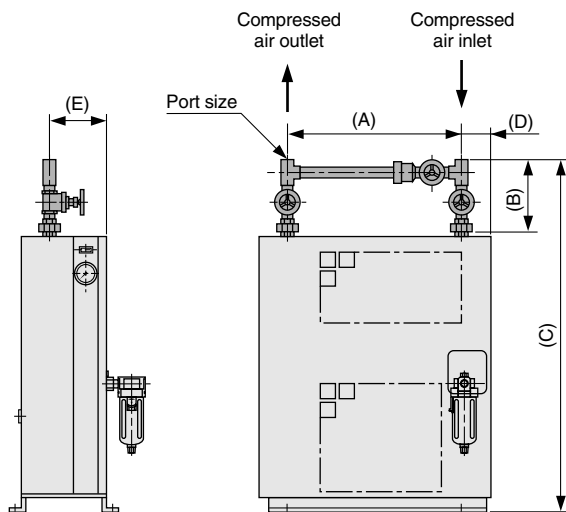
Part No.	Applicable dryer	Port size Rc	A	B	C
IDU-BP3C	IDU3D	3/8	77	112	706
IDU-BP4C	IDU4D		66	112	791

IDF1D, 2D, 3D, 4D



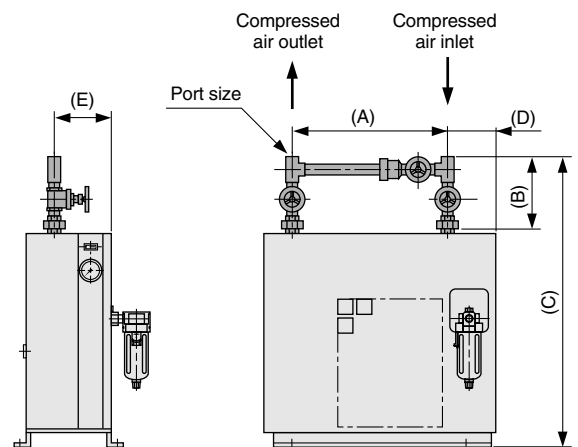
Part No.	Applicable dryer	Port size Rc	A	B	C
IDF-BP1C	IDF1D	3/8	34	112	563
IDF-BP2C	IDF2D		62	112	571
IDF-BP3C	IDF3D		57	112	632
IDF-BP4C	IDF4D		66	112	792

IDU6D, 8D, 11C, 15C, 22C1, 37C1, 55C, 75C



Part No.	Applicable dryer	Port size Rc	A	B	C	D	E
IDU-BP6C	IDU6D	1/2	445	165	915	85	141
IDU-BP8C	IDU8D	3/4	445	196	1045	85	141
IDU-BP11C	IDU11C	3/4	445	196	1155	91	152
IDU-BP15C	IDU15C	1	445	222	1230	91	175
IDU-BP22C	IDU22C1	1	445	222	1445	70	71
IDU-BP37C	IDU37C1	1 1/2	550	280	1615	136	112
IDU-BP55C	IDU55C	2	530	325	1750	155	87
IDU-BP75C	IDU75C	2	530	325	1885	220	87

IDF6D, 8D, 11C, 15C, 22C1, 37C1, 55C, 75C



Part No.	Applicable dryer	Port size Rc	A	B	C	D	E
IDF-BP6C	IDF6D	1/2	410	165	725	120	141
IDF-BP8C	IDF8D	3/4	410	196	755	120	141
IDF-BP11C	IDF11C	3/4	405	196	815	131	152
IDF-BP15C	IDF15C	1	405	222	890	131	175
IDF-BP22C	IDF22C1	1	405	222	970	91	183
IDF-BP37C	IDF37C1	1 1/2	405	280	1075	98	208
IDF-BP55C	IDF55C	2	405	325	1240	98	85
IDF-BP75C	IDF75C	2	405	325	1290	98	85

Cannot be mounted on models with option "A".

HA

AT

ID

AMG

AFF

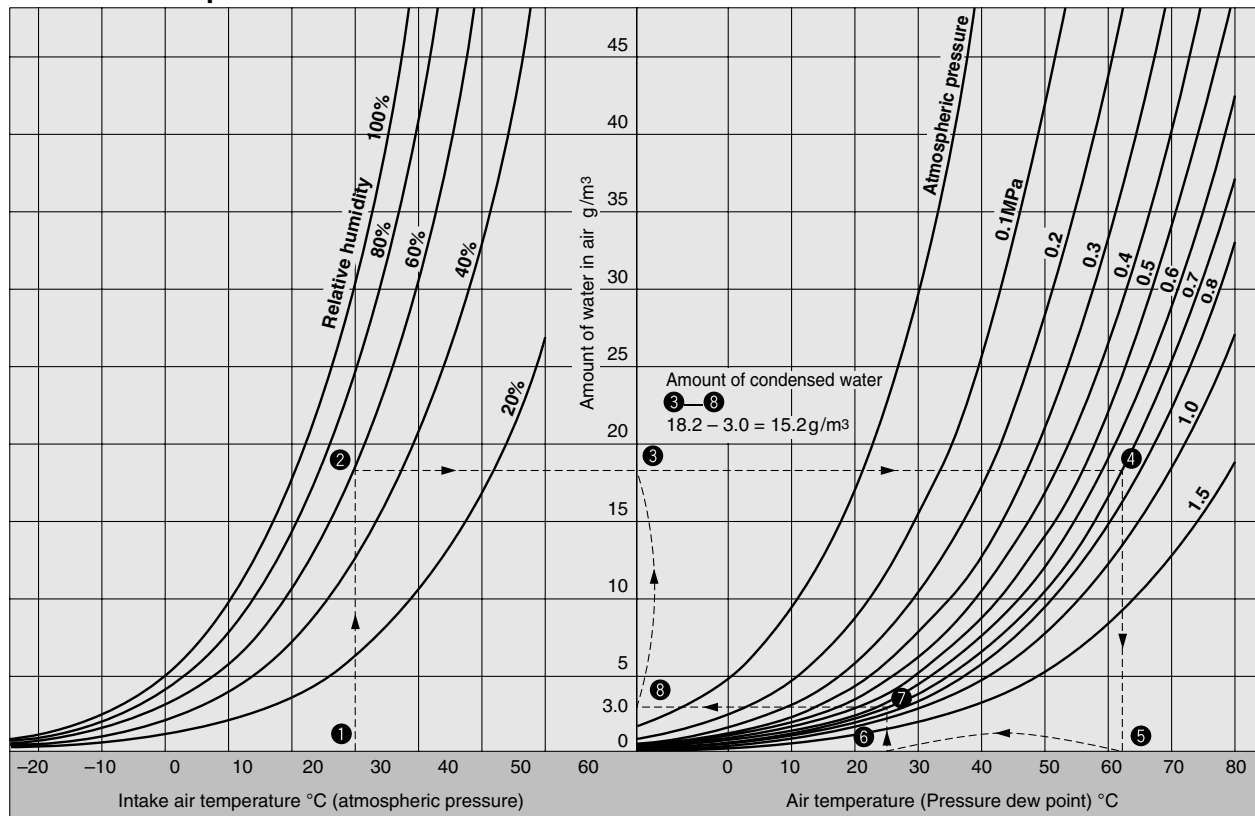
AM

Misc.

The models IDF1E to 11E and IDU3E to 6E have been revised. For details, refer to catalog no. ES30-8A. Similar updating for other IDF/IDU models is scheduled to follow shortly.

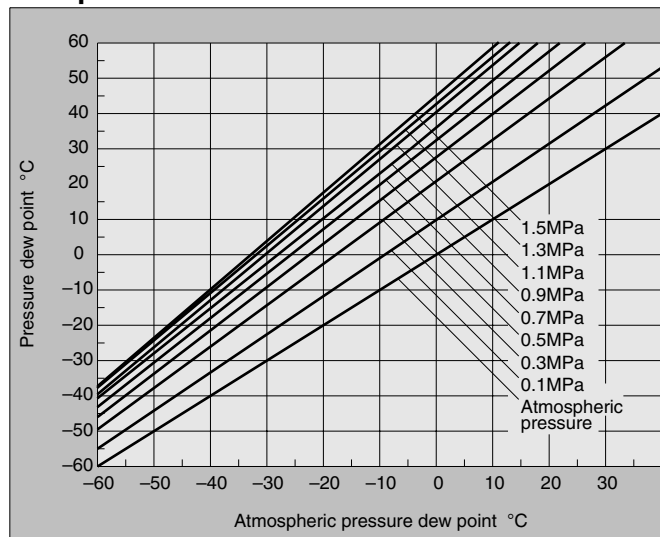
Technical Data

Pressure dew point — Condensed water calculation



[Example] If air at 30°C and 60% humidity is pressurized to 0.7MPa, the dew point of the air will be 62°C. (1→2→3→4→5) If this is cooled to 25°C, the amount of condensed water generated will be 15.2g/m³. (6→7→8→9) Therefore, with an air flow rate of 3m³/min (22kW equivalent compressor), the amount of condensed water per unit of time is 15.2 x 3 x 60 = 2736g/h.

Dew point conversion chart





Series IDU/IDF Specific Product Precautions 1 Air Preparation Equipment Precautions

Be sure to read before handling.

Installation Location

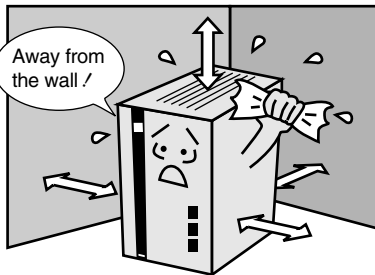
⚠ Caution

- Avoid locations where the air dryer will be in direct contact with wind and rain. (Places where relative humidity is more than 85%)
- Avoid exposure to direct sunlight.
- Avoid dusty or corrosive environments.

If it is used in the above environments, select option C (with anti-corrosive treatment).

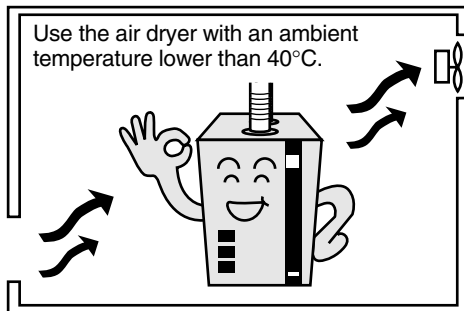


- Avoid places with poor ventilation and high temperature.



- Allow ample space around the air dryer.

- Avoid locations subjected to vibrations.
- Avoid locations where drainage can freeze.

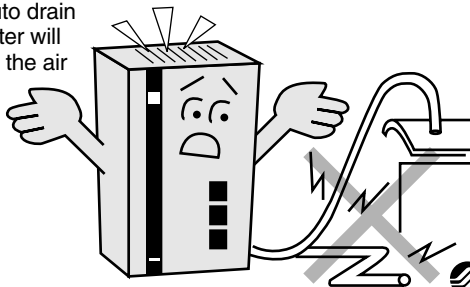


- Avoid installation on moving objects like trucks, ships, and so forth.

Drain Tube

⚠ Caution

- A polyurethane tube of 10mm outer diameter is attached as the drain tube for IDF1D to 4D and IDU3D, 4D. Use this tube to discharge drainage.
- Do not use the drain tube in an upward direction. Do not bend or crush the drain tube. (Operation of auto drain will stop and water will flow out through the air outlet.)



Power Supply

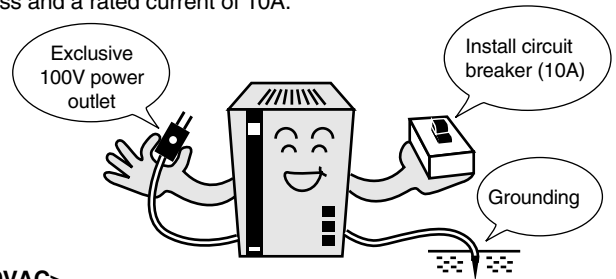
⚠ Caution

<100VAC>

- Insert the power supply plug into an exclusive 100VAC power outlet.
- Install a circuit breaker (10A)* at the power supply.
- Be sure to ground the power supply prior to use.
- Multiple-branch wiring is dangerous as it causes over-heating.
- Do not extend the power supply cord length using an extension cord.

A voltage drop may cause the air dryer to stop operating.

* Use a circuit breaker having a sensitivity current of 30mA or less and a rated current of 10A.



<200VAC>

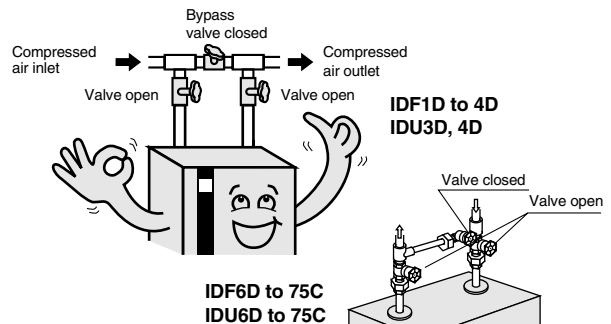
- Connect the power supply to the terminal block.
- Install a suitable circuit breaker applicable to each model.

When the voltage used is other than specified in the standard product specifications, use a transformer (page 14-17-28).

Air Piping

⚠ Caution

- Be careful to avoid errors in connecting the air piping to the compressed air inlet (IN) and outlet (OUT).
- Install bypass piping which it is needed for maintenance.



- When tightening piping at the air inlet/outlet tube, the nozzle should be held firmly with a pipe wrench. (IDF6D to 75C, IDU6D to 75C)
- Variation of operating conditions may cause condensate to form on the surface of the outlet piping. In the case of models larger than IDF6D and IDU6D, roll thermal insulation around piping to prevent condensate from forming.
- Vibration caused by the compressor should not be transmitted through air piping to the air dryer.
- Do not allow the weight of piping to be applied directly to the air dryer.

HA

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Misc.



Series IDU/IDF Specific Product Precautions 2 Air Preparation Equipment Precautions

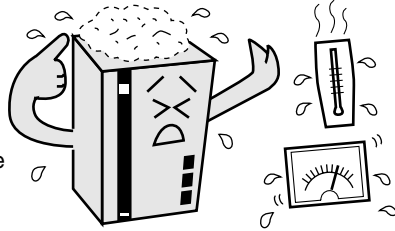
Be sure to read before handling.

Protection Circuit

⚠ Caution

When the air dryer is operated under the following conditions, the protection circuit is activated, the light goes off and operation stops.

- When compressed air temperature is too high
- When compressed air flow rate is too high
- When ambient temperature is too high (40°C or higher)
- When power supply is beyond rated voltage by $\pm 10\%$
- When ventilation port is obstructed by a wall or clogged with dust



Compressor Air Delivery

⚠ Caution

Use an air compressor of 100 ℓ /min or greater air delivery with IDF2D to 4D/IDU3D, 4D, and 300 ℓ /min or greater air delivery with IDF6D to 75C/IDU6D to 75C.

Since the auto drain of IDF2D to 75C/IDU3D to 75C is designed in such a way that the valve remains open unless the air pressure rises to 0.15MPa or higher, air will blow out from the drain discharge port when the air compressor starts up until the pressure increases. Therefore, if an air compressor has a low air delivery, the pressure may not be sufficient.

Auto Drain

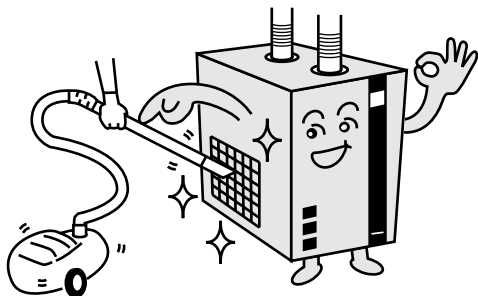
⚠ Caution

The auto drain may not function properly, depending on the quality of compressed air. Check its operation once a day.

Cleaning of Ventilation Area

⚠ Caution

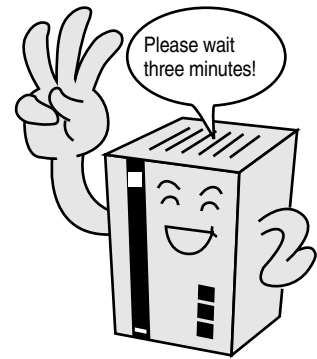
Remove dust from the ventilation area once a month using a vacuum cleaner or an air blow nozzle.



Time Delay for Restarting

⚠ Caution

Allow at least three minutes before restarting the dryer. If the air dryer is restarted within three minutes after being stopped, the protection circuit will be activated, the operating light goes off and the dryer will not be activated.



Crank Case Heater

⚠ Caution

A crank case heater is installed on IDF370B. Energize the crank case heater 12 hours prior to operation of the dryer to prevent trouble occurring in the refrigerant compressor.