

Heatless Air Dryer

ID Series

Heatless ID series is best when dry air with a low dew point is needed.

Supply dry air with a low dew point below -30°C .

Compact and lightweight without heater and electric control board.

Possible to check the outlet dew point with the indicator.

(Self-regenerative type allows for easy maintenance.)



Model

Specifications		Model	ID20□	ID30□	ID40□	ID60□
Operating range (Note 1)	Fluid	Compressed air				
	Inlet air temperature $^{\circ}\text{C}$	5 to 50 (No water droplets)				
	Inlet air pressure MPa	0.3 to 1.0		0.3 to 0.9		
	Ambient temperature $^{\circ}\text{C}$	2 to 50				
Rating (Note 4)	Outlet air flow rate L/min (ANR) (Note 2)	80	155	330	780	
	Recycled air flow rate L/min (ANR) (Note 3)	20	37	85	195	
	Inlet air flow rate L/min (ANR)	100	192	415	975	
	Inlet air pressure MPa	0.7				
	Inlet air temperature $^{\circ}\text{C}$	Standard 35 Option Z 20				
	Outlet air atmospheric pressure dew point $^{\circ}\text{C}$	Standard -30 Option Z -50 (Note 5)				
	Electrical characteristics	Power supply voltage	Refer to How to Order.			
	Power consumption W	30				
Installation features		Indoor				
Port size		1/4	1/2	3/4		
Weight kg		7	8.5	18.5	25	

Note 1) The operating range does not guarantee use at the rated outlet air flow rate.

Note 2) Refers to the air flow rate under standard conditions (ANR) [20°C , atmospheric pressure, and 65% relative humidity]

Note 3) The recycled air flow rate includes the indicator purge air flow rate of 2 L/min (ANR) (when the inlet air pressure is 0.7 MPa).

Note 4) If the operating conditions differ from the rated values, select according to the flow rate characteristics and the dew point chart.

Note 5) For Option "Z," install a refrigerated air dryer on the inlet side.

Replacement Parts

Model		ID20□	ID30□	ID40□	ID60□
Adsorbent set (Note 6)	Standard	ID-200S	ID-300S	ID-400S	ID-600S
	Option Z	ID-200Z	ID-300Z	ID-400Z	ID-600Z
Bracket (Note 7)		ID-S0058		ID-S0059	
Indicator set		ID-DPM8			

Note 6) A set of adsorbent and a filter element for 1 air dryer (2 adsorption tubes) as well as O-rings

Note 7) For 1 air dryer (Set of 2)

How to Order

ID 20 0 - 02 □

Size

20
30
40
60

Option

Symbol	Description
NII	—
B	Bracket
Z	Atmospheric pressure dew point -50°C

Port size

Symbol	Size	Applicable size
02	1/4	● — — —
04	1/2	— ● ● —
06	3/4	— — — ●

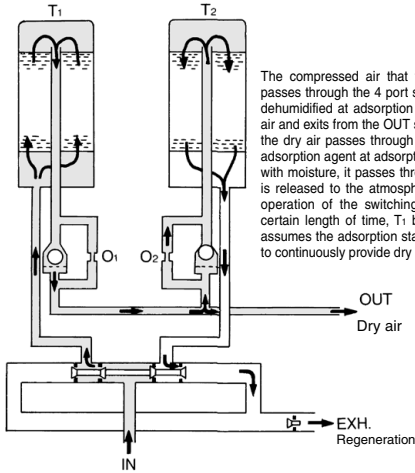
Thread type

Symbol	Type
NII	Rc
F	G
N	NPT

Power supply voltage

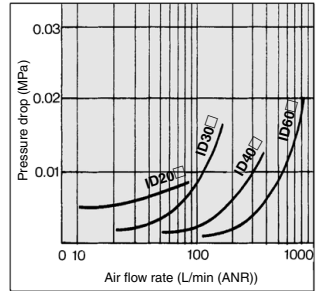
Symbol	Description
0	Single phase 100 VAC (50 Hz) 100, 110 VAC (60 Hz)
1	Single phase 110 VAC (50 Hz)
5	Single phase 200 VAC (50 Hz) 200, 220 VAC (60 Hz)
6	Single phase 220 VAC (50 Hz)

Working Principle

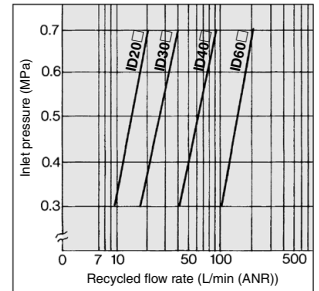


The compressed air that flowed in from the IN side passes through the 4 port solenoid valve, and after it is dehumidified at adsorption cylinder T₁, it turns into dry air and exits from the OUT side. Meanwhile, a portion of the dry air passes through orifice O₂, it reactivates the adsorption agent at adsorption cylinder T₂, and together with moisture, it passes through the solenoid valve and is released to the atmosphere. Conversely, due to the operation of the switching valve that occurs after a certain length of time, T₁ becomes reactivated and T₂ assumes the adsorption state. This process is repeated to continuously provide dry air.

Flow rate characteristics Inlet air pressure: 0.7 MPa

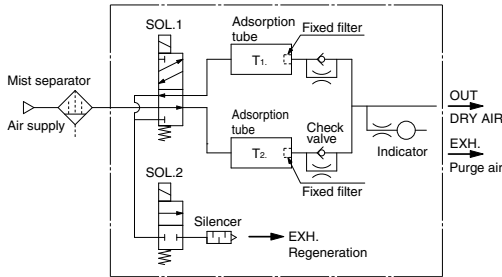


Recycled Flow Rate

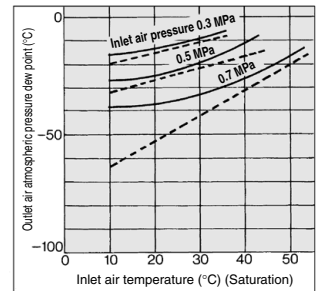


Operating System Diagram/Time Chart/Electric Circuit Diagram

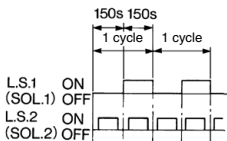
Operating system diagram



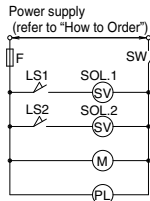
Dew Point Condition: Air flow/Rating



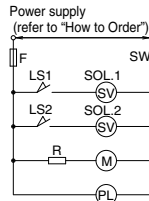
Time chart



Electric circuit



For ID000, ID001



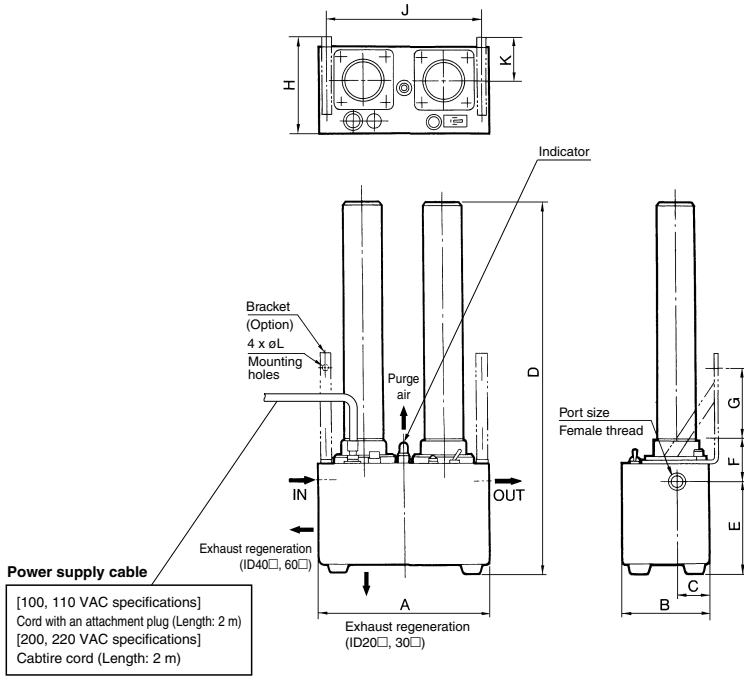
For ID005, ID006

Symbol	Description
SOL.1	4 port solenoid valve
SOL.2	4 port solenoid valve
F	Fuse
SW	Snap switch

Symbol	Description
PL	Light
LS1,2	Micro switch
M	Timing motor
R	Resistor

- HAA
- HAW
- AT
- IDF
- IDU
- IDF
- IFS
- IDFA
- IDFB
- IDH
- ID
- IDG
- IDK
- AMG
- AFF
- AM
- AMD
- AMH
- AME
- AMF
- ZFC
- SF
- SFD
- LLB
- AD
- GD

Dimensions



Model	Port size Nominal size (B)	A	B	C	D	E	Mounting dimension					
							F	G	H	J	K	øL
ID20□	1/4	240	120	45	520	128.5	59.5	95	134.5	222	59.5	9
ID30□	1/2	240	120	45	615	128.5	59.5	95	134.5	222	59.5	9
ID40□	1/2	320	170	75	850	243.5	66.5	95	183	302	88	9
ID60□	3/4	320	170	75	961	243.5	66.5	95	183	302	88	9