



# Series variation

# High polymer membrane air dryer (Super dryer)

- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FlmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/  
PTFE FRL
- Outdrs FR
- F.R.L  
(Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- SiIncr
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

	Standard dew point			Low dew point		
Series	SD300E/400E-W SU300E/400E-W	SD300D/400D-W SU300D/400D-W	SU3000-A-W SU4000-A-W	SU3000-B-W SU4000-B-W	SD3000-A/4000-A	
Features	Low purge Purge rate 10% Atmospheric dew point -15°C	High flow rate Purge rate 20% Atmospheric dew point -20°C	Standard dew point unit Atmospheric dew point -20°C	Low dew point unit Atmospheric dew point -40°C	Standard dew point discrete type Atmospheric dew point -20°C	
Applicable air compressor kW						
0.2						
0.4	● (SD/SU301E)			● (SU3015-B)		
0.75	● (SD/SU302E)	● (SD/SU301D)	● (SU3015-A)	● (SU3025-B)	● (SD3015-A)	
1.5		● (SD/SU302D)		● (SU3050-B)		
2.2	● (SD/SU401E)		● (SU3025-A)		● (SD3025-A)	
3.7	● (SD/SU402E)	● (SD/SU401D)	● (SU3035-A)		● (SD3035/4050-A)	
5.5		● (SD/SU402D)	● (SU3050-A)		● (SD3050-A)	
7.5			● (SU3075-A)		● (SD3075/4075-A)	
11			● (SU4100-A)		● (SD4100-A)	
15						
22						
37						
55						
75						
95						
120						
150						
200						
250						
300						
400						
480						
710						
960						
1450						
With common exhaust port	● Option	● Option	● Option	● Option	● Option	
Medium pressure	×	×	×	×	● Standard equipment	
CE	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	
Freon-free	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	
Power supply not required	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	
Drain treatment not required	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	● Standard equipment	
Appearance						
Page	1624	1628	1632	1632	1635	

Note) This list is a selection guideline. For final selection, refer to the relevant page and select a model upon confirming installation and operating conditions.

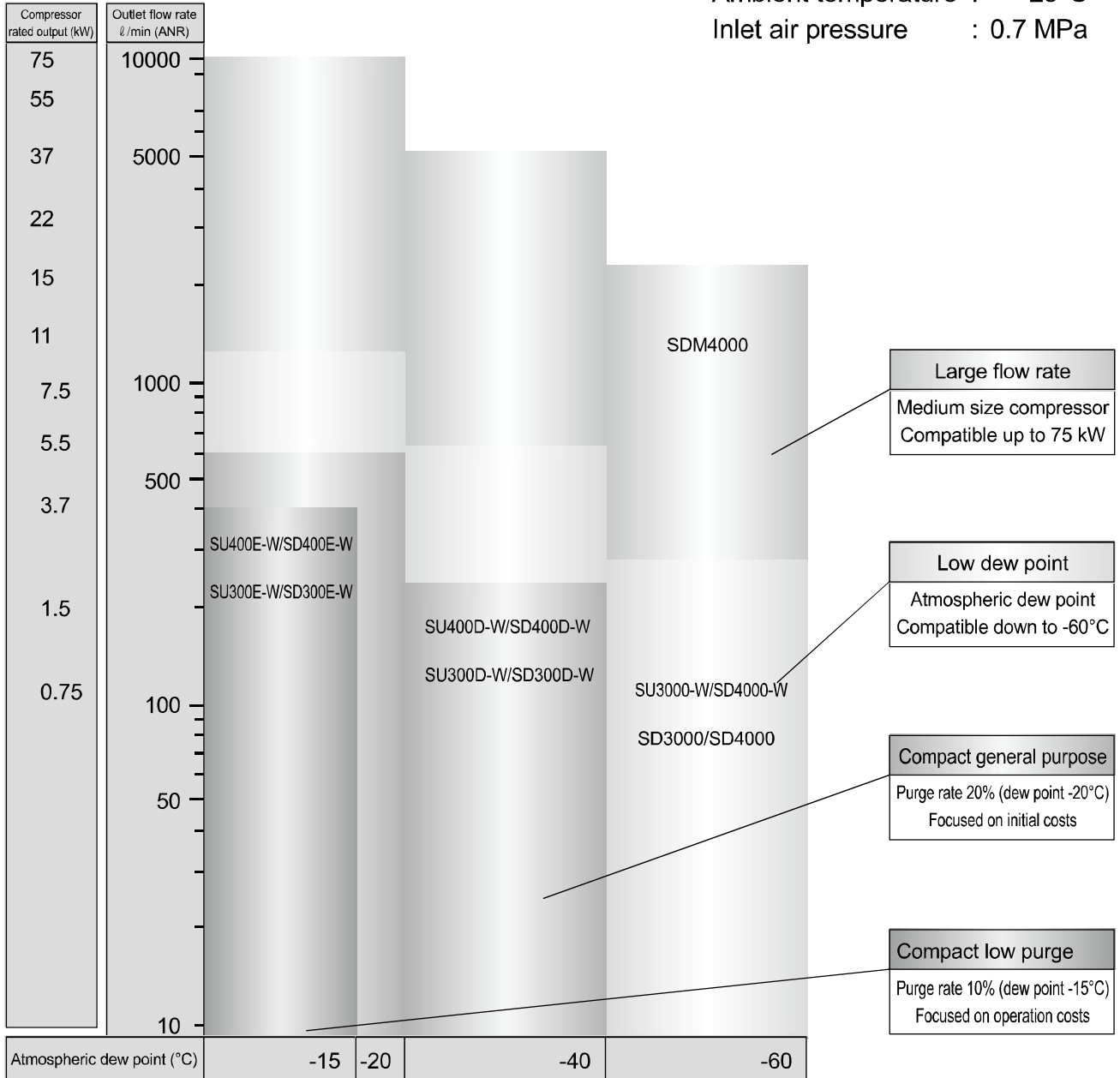


# 7 series and 65 models

Select the best suited model for your application.

## Selection guide MAP

Inlet air temperature : 25°C  
 Ambient temperature : 25°C  
 Inlet air pressure : 0.7 MPa



**Large flow rate**  
 Medium size compressor  
 Compatible up to 75 kW

**Low dew point**  
 Atmospheric dew point  
 Compatible down to -60°C

**Compact general purpose**  
 Purge rate 20% (dew point -20°C)  
 Focused on initial costs

**Compact low purge**  
 Purge rate 10% (dew point -15°C)  
 Focused on operation costs

	Compact low purge		Compact general purpose		Low dew point		Large flow rate
	E Series (purge rate 10%)		D Series (purge rate 20%)				
	SU300E-W/SU400E-W	SD300E-W/SD400E-W	SU300D-W/SU400D-W	SD300D-W/SD400D-W	SU3000-W/SU4000-W	SD3000/SD4000	SDM4000

The innovative super dryer series is a high-tech dryer that incorporates a high polymer membrane. Unprecedented ease of use, long service life, and high reliability are realized.

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FhiResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
SilIncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

## Pursuing ease of use

### Handy preassembled unit

Super dryer (High polymer membrane air dryer) with integrated pre-filter, etc., is available. Easily used by just connecting directly to the pneumatic source.

### Modular design

CKD original modular concept allows easy connections with CKD clean air units, reduces design and piping hours and enables systems to be upgraded easily.

### Amenity

The unpleasant effects of conventional air dryers, such as vibration, heat discharge, power source noise, impact noise, and dust generation, have been eliminated.

### No power supply needed

Electricity is not required, so expertise in electricity is not required when installing the dryer. The dryer can be installed anywhere including explosion-proof areas with different voltages.

### No more problems

There are no mechanical moving parts, so no need for concern about unexpected failures. Clean dry air is stably supplied for long periods of time.

## Diverse series to match applications

### Low purge Purge rate 10%

Reduces operation costs through energy-saving moisture removal with an atmospheric dew point of  $-15^{\circ}\text{C}$  and a purge ratio of 10%. [E Series]

### Low dew point Atmospheric dew point $-60^{\circ}\text{C}$

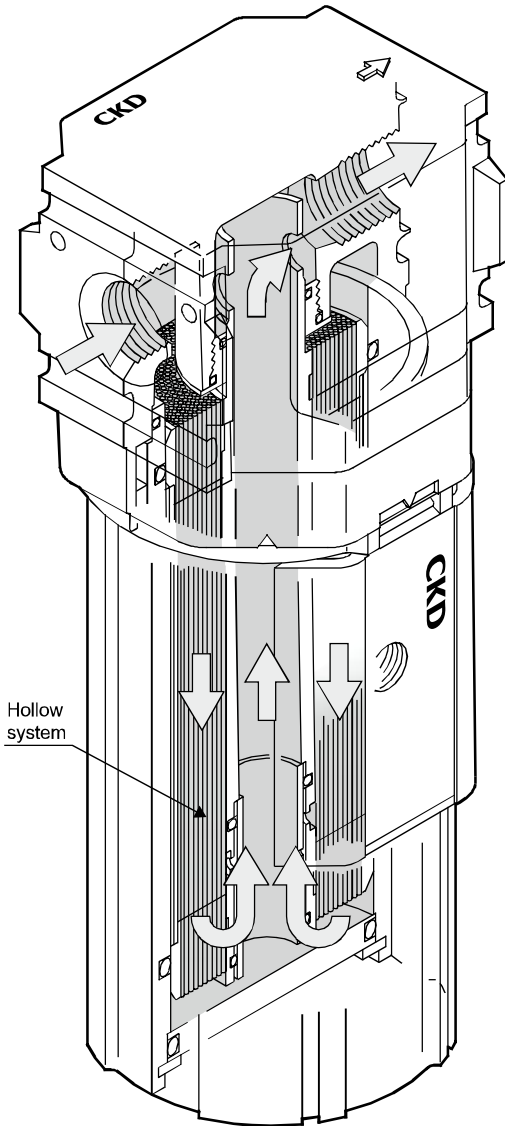
Clean ultra dry air can be supplied easily and stably. [3000 and 4000 Series]

### Large flow rate Compatible with 75 kW compressor

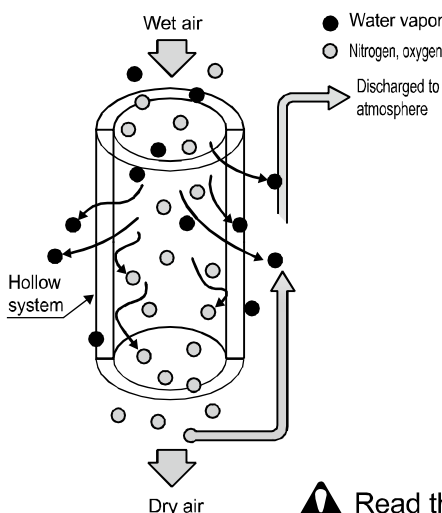
Large flow rate is achieved with a polymer separation membrane. In addition, compared to suction air dryers, this unit is very compact and slim at 1/3 of installation area and 1/6 of the occupied volume of our conventional products. [SDM Series]

### Compatible with medium pressure Max. working pressure 1.5 MPa

Available with max. working pressure of 1.5 MPa and a wide range of applications. [SD3000/4000 Series, SDM Series]



## Principle of dehumidification



The gaseous molecules can freely pass through the high polymer material, but the ease of passage varies widely according to the mutual properties of the gas and the high polymer material being used.

In order to remove water vapor only, the super dryer uses a high polymer material which allows water vapor, but not nitrogen or oxygen, to pass through easily.

Since the concentration of each gas is high inside the hollow fibers of this material, gases try to move toward the outside of the hollow fibers where concentration is lower when fed with moist compressed air.

The hollow fibers are made of material that allows water vapor to pass through easily, so that only water vapor moves toward the outside of the hollow fibers. Moist air supplied from the inlet leaves the outlet as dry air.

By having part of the outlet's dry air flow toward the outside of the hollow fibers as purge air, water vapor moved to the outside is quickly discharged into the atmosphere. This keeps the concentration of water vapor on the outside of the hollow fibers low, enabling continuous dehumidification.

Read the precautions on pages 1642 to 1643 before use.



# Super dryer combination Super dryer (High polymer membrane air dryer) SU300E/SU400E/SD300E/SD400E-W Series

E Series, with small air loss and filter-like usability

- Reduces operation costs through energy-saving moisture removal with a purge ratio of 10%.
- 3 types of units are available. Appropriate system is available according to applications.
- Processing air flow rate: 75 to 450 ℓ/min. (ANR) (0.7 MPa, atmospheric dew point -15°C)



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Descriptions	SU301E *-W-C1	SU302E *-W-C1	SU401E *-W-C1	SU402E *-W-C1	SU301E *-W-C2	SU302E *-W-C2	SU401E *-W-C2	SU402E *-W-C2	SU301E *-W-C3	SU302E *-W-C3	SU401E *-W-C3	SU402E *-W-C3	SD301E *-W	SD302E *-W	SD401E *-W	SD402E *-W																
Appearance																																
	Simple & space saving structure unit that removes moisture from the air from which solid impurities have already been removed. (*1)				Unit supplying clean dry air with line not requiring pressure adjustment.				A unit that supplies pressure-adjusted clean dry air just by supplying compressed air.				Discrete super dryer (High polymer membrane air dryer) enabling easy system configuration with peripheral devices due to modular design.																			
Configuration	Oil mist filter Super dryer (High polymer membrane air dryer)				Air filter Oil mist filter (with differential pressure gauge) Super dryer (High polymer membrane air dryer)				Air filter Oil mist filter (with differential pressure gauge) Super dryer (High polymer membrane air dryer) Regulator				Super dryer (High polymer membrane air dryer)																			
Range of working conditions	Working fluid																Compressed air															
	Inlet air pressure MPa																0.4 (≈58 psi, 4 bar) to 1.0 (≈150 psi, 10 bar)															
	Proof pressure MPa																1.5 (≈220 psi, 15 bar)															
	Inlet air temperature °C																5 (41°F) to 50 (122°F)															
	Ambient temperature °C																5 (41°F) to 50 (122°F)															
Standard rating	Outlet air atmospheric dew point °C																-15 (5°F)															
	Inlet air flow rate ℓ/min(ANR)																75	150	300	450	75	150	300	450	75	150	300	450	75	150	300	450
	Outlet air flow ℓ/min(ANR)																67	135	270	405	67	135	270	405	67	135	270	405	67	135	270	405
	Purge flow rate ℓ/min(ANR)																8	15	30	45	8	15	30	45	8	15	30	45	8	15	30	45
	Inlet air pressure dew point °C																25 (77°F)															
	Inlet air pressure MPa																0.7 (≈100 psi, 7 bar)															
	Inlet air temperature °C																25 (77°F)															
Ambient temperature °C																25 (77°F)																
Air filter	Filtration rating μm				—				5				—																			
Oil mist filter	Oil removal mg/m <sup>3</sup>																0.1 (approximately 0.1 ppm) (when the inlet air is 30°C (86°F))															
Regulator	Set pressure range MPa				—				0.05 to 0.85				—																			
	Relief pressure MPa				—				Setting pressure plus 0.05				—																			
Standard accessories	Bracket				Differential pressure gauge/bracket				Press gauge/diff press gauge/bracket				—																			

\*1: An oil mist filter cannot be controlled with a differential pressure gauge for C1. Replace the oil mist filter mantle every year.

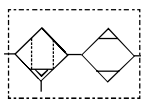
\*2: Purge flow rate in standard rating section is also the same value at 0.5 MPa.

## JIS symbol

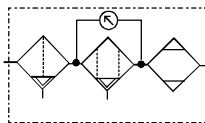
SD301E to 402E-\*



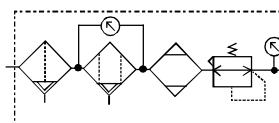
SU301E to 402E- \*-C1



SU301E to 402E- \*-C2



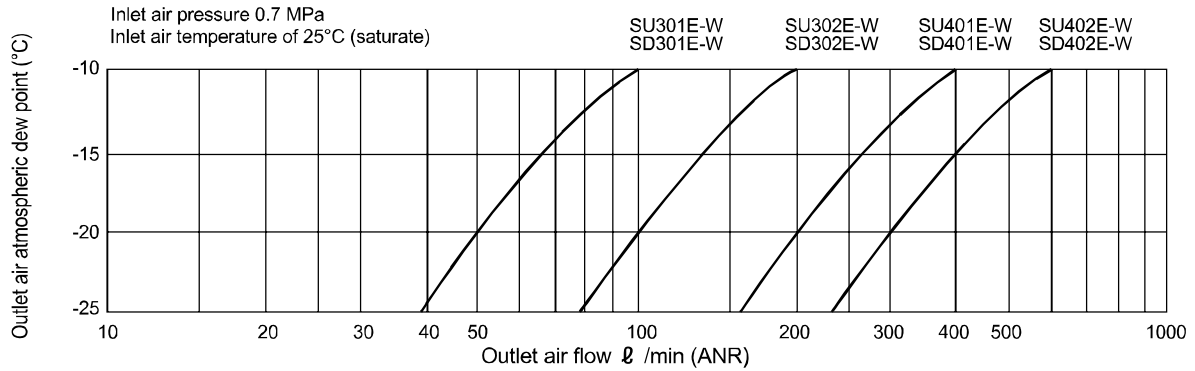
SU301E to 402E- \*-C3



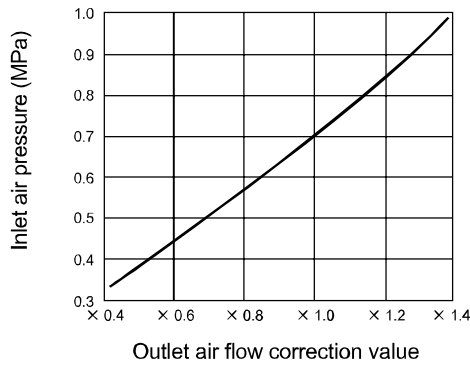
## Dew point performance

Refer to page 1641 for selection guide and compensation method.

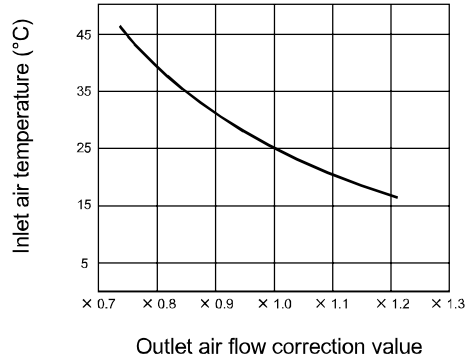
### ● Dew point performance curve



Inlet pressure - outlet air flow rate correction curve



Inlet temperature - outlet air flow rate correction curve



F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
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FmResistFR
Oil-ProhR
MedPresFR
No Cu/PTFE FRL
Outdirs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
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Jnt/tube
AirUnt
PresCompn
Mech/ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

# SU<sup>3</sup><sub>4</sub>00E/SD<sup>3</sup><sub>4</sub>00E-W Series

- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/  
PTFE FRL
- Outdrs FR
- F.R.L  
(Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

## How to order

### ● Super dryer Combination

**SU301E-05-W-C1-X1**

Ⓐ Model No.

Ⓑ Inlet air pressure

Ⓒ Unit

Ⓓ Option  
\*5

Code	Content
<b>Ⓐ Model No.</b>	
SU301E	
SU302E	
SU401E	
SU402E	
<b>Ⓑ Inlet air pressure</b>	
05	0.5 MPa (*1)
07	0.7 MPa (*1)
<b>Ⓒ Unit</b>	
C1	
C2	
C3	
<b>Ⓓ Option</b>	
Blank	None
E	Common exhaust (*4)
X1	Rev. inlet/outlet (*3)

### ● Super dryer (High polymer membrane air dryer)

**SD402E-05-W-B**

Ⓐ Model No.

Ⓑ Inlet air pressure

Ⓒ Option  
\*5

Code	Content
<b>Ⓐ Model No.</b>	
SD301E	
SD302E	
SD401E	
SD402E	
<b>Ⓑ Inlet air pressure</b>	
05	0.5 MPa (*1)
07	0.7 MPa (*1)
<b>Ⓒ Option</b>	
Blank	None
B	With C type bracket (*2)
E	Common exhaust (*4)
X1	Reversed inlet and outlet (*3)

## ⚠ Precautions for model No. selection

- \*1: If inlet air pressure is less than 0.7 MPa, indicate 05, while 0.7 MPa and over, indicate 07.
- \*2: If fixed by C type bracket, a modular connection with peripheral devices is not possible.
- \*3: Viewed from the front, standard products have an air inlet on the left port and an air outlet on the right port. For "X1", an air inlet is provided on the right port, with an air outlet provided on the left port.
- \*4: Purge air from standard products is released into the atmosphere. If "E" is indicated, common exhaust of purge air is enabled. The size of exhaust ports include the Rc1/8 for the 300 Series and the Rc1/4 for the 400 Series.
- \*5: When ordering several options, indicate the required options in alphabetical order.

## Specifications for rechargeable battery (Catalog No. CC-1226A)

- Design compatible with rechargeable battery manufacturing process

**SU\*0\*E - ..... - P4\***

**SD\*0\*E - ..... - P4\***

## Components

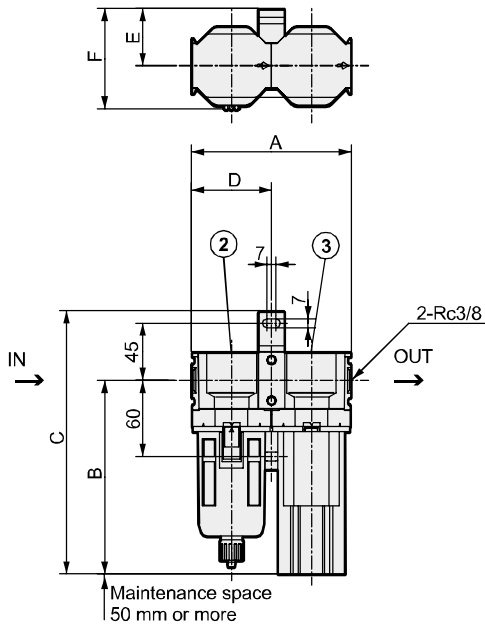
Components Model No.	(1) Air filter	(2) Oil mist filter	(3) Super dryer (High polymer membrane air dryer)	(4) Regulator	(5) Differential pressure gauge
SU301E-*W-C1	—	M3000-10-W-F1	SD301E-*W	—	—
SU302E-*W-C1	—	M4000-10-W-F1	SD302E-*W	—	—
SU401E-*W-C1	—	M4000-10-W-F1	SD401E-*W	—	—
SU402E-*W-C1	—	SM4100-W	SD402E-*W	—	—
SU301E-*W-C2	F3000-10-W-F	M3000-10-W-F1	SD301E-*W	—	GA400-8-P02
SU302E-*W-C2	F4000-10-W-F	M4000-10-W-F1	SD302E-*W	—	GA400-8-P02
SU401E-*W-C2	F4000-10-W-F	M4000-10-W-F1	SD401E-*W	—	GA400-8-P02
SU402E-*W-C2	F4000-10-W-F	SM4100-W	SD402E-*W	—	GA400-8-P02
SU301E-*W-C3	F3000-10-W-F	M3000-10-W-F1	SD301E-*W	R3000-10-W	GA400-8-P02
SU302E-*W-C3	F4000-10-W-F	M4000-10-W-F1	SD302E-*W	R4000-10-W	GA400-8-P02
SU401E-*W-C3	F4000-10-W-F	M4000-10-W-F1	SD401E-*W	R4000-10-W	GA400-8-P02
SU402E-*W-C3	F4000-10-W-F	SM4100-W	SD402E-*W	R4000-10-W	GA400-8-P02

- \*1: Oil mist filter (SM4100-W) is a custom order product.

### Dimensions

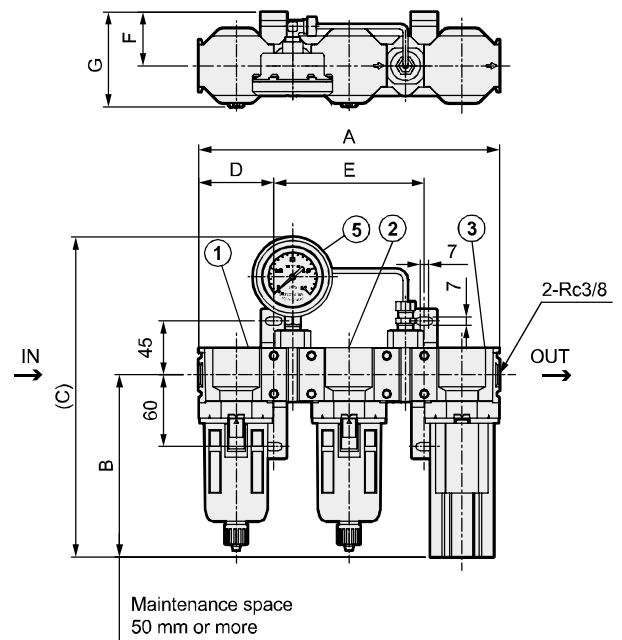


#### ● Unit C1



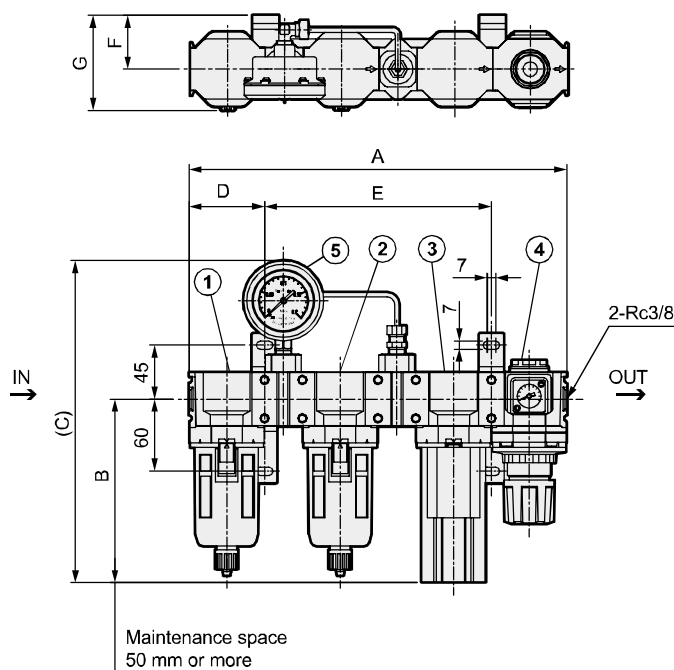
	A	B	C	D	E	F	Wt. (kg)
SU301E-*-W-C1	126	153	208	63	45	79	1.0
SU302E-*-W-C1	143	223	278	80	55	97	1.6
SU401E-*-W-C1	160	223	278	80	55	97	2.1
SU402E-*-W-C1	160	328	383	80	55	95	3.5

#### ● Unit C2



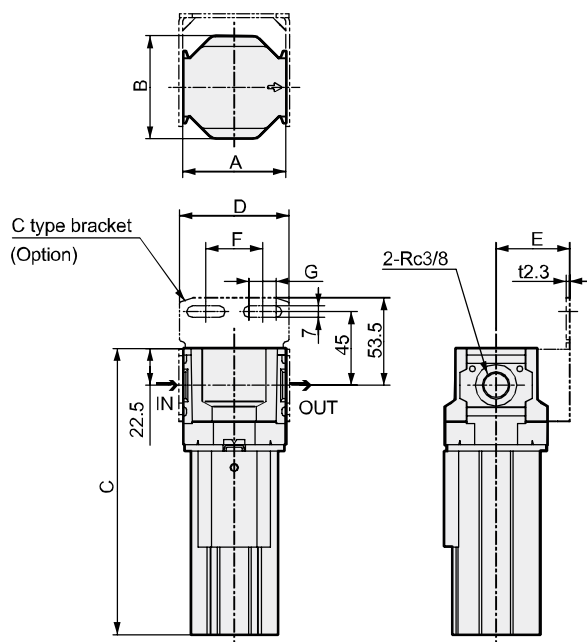
	A	B	C	D	E	F	G	Wt. (kg)
SU301E-*-W-C2	252	153	268	63	126	45	79	2.0
SU302E-*-W-C2	286	223	338	80	143	55	97	2.8
SU401E-*-W-C2	303	223	338	80	143	55	97	3.3
SU402E-*-W-C2	303	328	443	80	143	55	97	4.7

#### ● Unit C3



	A	B	C	D	E	F	G	Wt. (kg)
SU301E-*-W-C3	315	153	268	63	189	45	79	2.5
SU302E-*-W-C3	366	223	338	80	206	55	97	3.5
SU401E-*-W-C3	383	223	338	80	223	55	97	4.0
SU402E-*-W-C3	383	328	443	80	223	55	97	5.4

#### ● SD300E/SD400E



	A	B	C	D	E	F	G	Wt. (kg)
SD301E-*-W	63	63	175	67	45	34.5	16.5	0.6
SD302E-*-W	63	63	245	67	45	34.5	16.5	0.9
SD401E-*-W	80	80	245	84	55	55	14	1.4
SD402E-*-W	80	80	315	84	55	55	14	1.8

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FmResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrescR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending





# Super dryer combination Super dryer (High polymer membrane air dryer) SU300D/SU400D/SD300D/SD400D-W Series

## Slim body and high performance D series

- Small and powerful removal performance. Appropriate for integrating in devices.
- 3 types of units are available. Appropriate system is available according to applications.
- Processing air flow rate: 125 to 750 ℓ/min. (ANR) (0.7 MPa, atmospheric dew point -20°C)



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

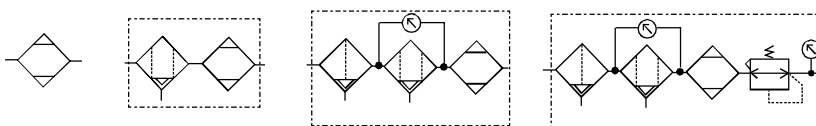
Descriptions	SU301D	SU302D	SU401D	SU402D	SU301D	SU302D	SU401D	SU402D	SU301D	SU302D	SU401D	SU402D	SD301D	SD302D	SD401D	SD402D
	*-W-C1	*-W-C1	*-W-C1	*-W-C1	*-W-C2	*-W-C2	*-W-C2	*-W-C2	*-W-C3	*-W-C3	*-W-C3	*-W-C3	*-W	*-W	*-W	*-W
Appearance																
	Simple & space saving structure unit that removes moisture from the air from which solid impurities have already been removed. (*1)				Unit supplying clean dry air with line not requiring pressure adjustment.				A unit that supplies pressure-adjusted clean dry air just by supplying compressed air.				Discrete super dryer (High polymer membrane air dryer) enabling easy system configuration with peripheral devices due to modular design.			
Configuration	Oil mist filter Super dryer (High polymer membrane air dryer)				Air filter Oil mist filter (with differential pressure gauge) Super dryer (High polymer membrane air dryer)				Air filter Oil mist filter (with differential pressure gauge) Super dryer (High polymer membrane air dryer) Regulator				Super dryer (High polymer membrane air dryer)			
Range of working conditions	Working fluid															
	Compressed air															
	Inlet air pressure MPa															
	0.4 (≈58 psi, 4 bar) to 1.0 (≈150 psi, 10 bar)															
	Proof pressure MPa															
1.5 (≈220 psi, 15 bar)																
Inlet air temperature °C																
5 (41°F) to 50 (122°F)																
Ambient temperature °C																
5 (41°F) to 50 (122°F)																
Outlet air atmospheric dew point °C																
-20 (-4°F)																
Standard rating	Inlet air flow rate ℓ/min(ANR)															
	125	250	500	750	125	250	500	750	125	250	500	750	125	250	500	750
	Outlet air flow ℓ/min(ANR)															
	100	200	400	600	100	200	400	600	100	200	400	600	100	200	400	600
	Purge flow rate ℓ/min(ANR)															
25	50	100	150	25	50	100	150	25	50	100	150	25	50	100	150	
Inlet air pressure dew point °C																
25 (77°F)																
Inlet air pressure MPa																
0.7 (≈100 psi, 7 bar)																
Inlet air temperature °C																
25 (77°F)																
Ambient temperature °C																
25 (77°F)																
Air filter	Filtration rating μm				5				5				—			
Oil mist filter	Oil removal mg/m <sup>3</sup>															
0.1 (approximately 0.1 ppm) (when the inlet air is 30°C)																
Regulator	Set pressure range MPa								0.05 to 0.85							
	Relief pressure MPa								Setting pressure plus 0.05							
Standard accessories																
Bracket				Differential pressure gauge/bracket				Press gauge/diff press gauge/bracket				—				

\*1: An oil mist filter cannot be controlled with a differential pressure gauge for C1. Replace the oil mist filter mantle every year.

\*2: Purge flow rate in standard rating section is also the same value at 0.5 MPa.

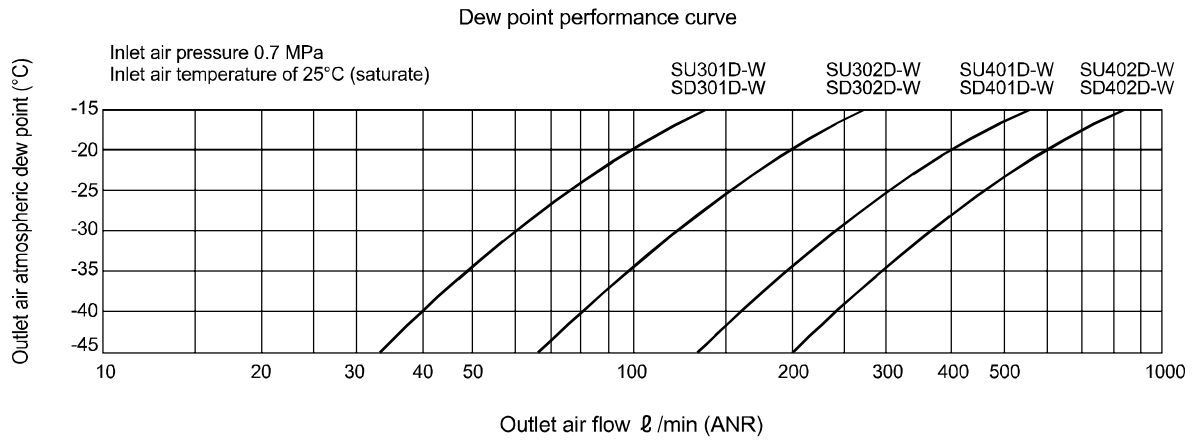
## JIS symbol

SD301D to 402D-\* SU301D to 402D-\*C1 SU301D to 402D-\*C2 SU302D to 402D-\*C3

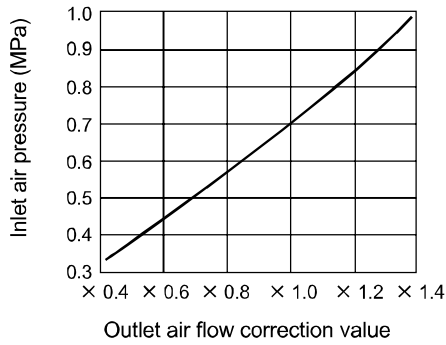


Dew point performance machine Refer to page 1641 for selection guide and compensation method.

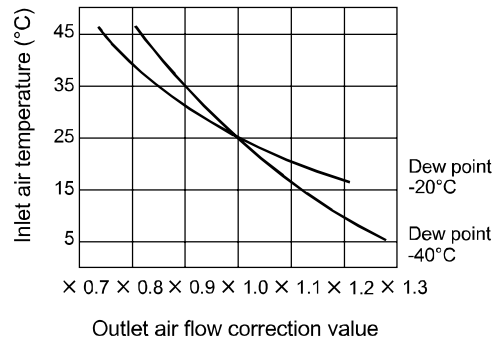
● Dew point performance curve



Inlet pressure - outlet air flow rate correction curve



Inlet temperature - outlet air flow rate correction curve



F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FmResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

# SU<sub>4</sub>00D/SD<sub>4</sub>00D-W Series

- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/  
PTFE FRL
- Outdrs FR
- F.R.L  
(Related)
- CompFRL
- LgFRL
- PrecsR
- VacFR
- Clean FR
- ElecPneUR
- AirBoost
- SpdContr
- Silncr
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

## How to order

● Super dryer Combination

**SU301D-05-W-C1-X1**

Ⓐ Model No.

Ⓑ Inlet air pressure

Ⓒ Unit

Ⓓ Option  
\*5

Code	Content
<b>Ⓐ Model No.</b>	
SU301D	
SU302D	
SU401D	
SU402D	
<b>Ⓑ Inlet air pressure</b>	
05	0.5 MPa (*1)
07	0.7 MPa (*1)
<b>Ⓒ Unit</b>	
C1	
C2	
C3	
<b>Ⓓ Option</b>	
Blank	None
E	Common exhaust (*4)
X1	Rev. inlet/outlet (*3)

● Super dryer (High polymer membrane air dryer)

**SD402D-05-W-B**

Ⓐ Model No.

Ⓑ Inlet air pressure

Ⓒ Option  
\*5

Code	Content
<b>Ⓐ Model No.</b>	
SD301D	
SD302D	
SD401D	
SD402D	
<b>Ⓑ Inlet air pressure</b>	
05	0.5 MPa (*1)
07	0.7 MPa (*1)
<b>Ⓒ Option</b>	
Blank	None
B	With C type bracket (*2)
E	Common exhaust (*4)
X1	Reversed inlet and outlet (*3)

## ⚠ Precautions for model No. selection

- \*1: If inlet air pressure is less than 0.7 MPa, indicate 05, while 0.7 MPa and over, indicate 07.
- \*2: If fixed by C type bracket, modular connection with peripheral devices is not possible.
- \*3: Viewed from the front, standard products have an air inlet on the left port and an air outlet on the right port. For "X1", an air inlet is provided on the right port, with an air outlet provided on the left port.
- \*4: Purge air from standard products is released into the atmosphere. If "E" is indicated, common exhaust of purge air is enabled. The size of exhaust ports include the Rc1/8 for the 300 Series and the Rc1/4 for the 400 Series.
- \*5: When ordering several options, indicate the required options in alphabetical order.

Specifications for rechargeable battery (Catalog No. CC-1226A)

● Design compatible with rechargeable battery manufacturing process

**SU\*0\*D - ..... - P4\***

**SD\*0\*D - ..... - P4\***

## Components

Components	(1) Air filter	(2) Oil mist filter	(3) Super dryer (High polymer membrane air dryer)	(4) Regulator	(5) Differential pressure gauge
SU301D-*W-C1	—	M4000-10-W-F1	SD301D-*W	—	—
SU302D-*W-C1	—	M4000-10-W-F1	SD302D-*W	—	—
SU401D-*W-C1	—	SM4100-W	SD401D-*W	—	—
SU402D-*W-C1	—	SM4100-W	SD402D-*W	—	—
SU301D-*W-C2	F4000-10-W-F	M4000-10-W-F1	SD301D-*W	—	GA400-8-P02
SU302D-*W-C2	F4000-10-W-F	M4000-10-W-F1	SD302D-*W	—	GA400-8-P02
SU401D-*W-C2	F4000-10-W-F	SM4100-W	SD401D-*W	—	GA400-8-P02
SU402D-*W-C2	F4000-10-W-F	SM4100-W	SD402D-*W	—	GA400-8-P02
SU301D-*W-C3	F4000-10-W-F	M4000-10-W-F1	SD301D-*W	R4000-10-W	GA400-8-P02
SU302D-*W-C3	F4000-10-W-F	M4000-10-W-F1	SD302D-*W	R4000-10-W	GA400-8-P02
SU401D-*W-C3	F4000-10-W-F	SM4100-W	SD401D-*W	R4000-10-W	GA400-8-P02
SU402D-*W-C3	F4000-10-W-F	SM4100-W	SD402D-*W	R4000-10-W	GA400-8-P02

\*1: An oil mist filter (SM4100-W) is custom order.

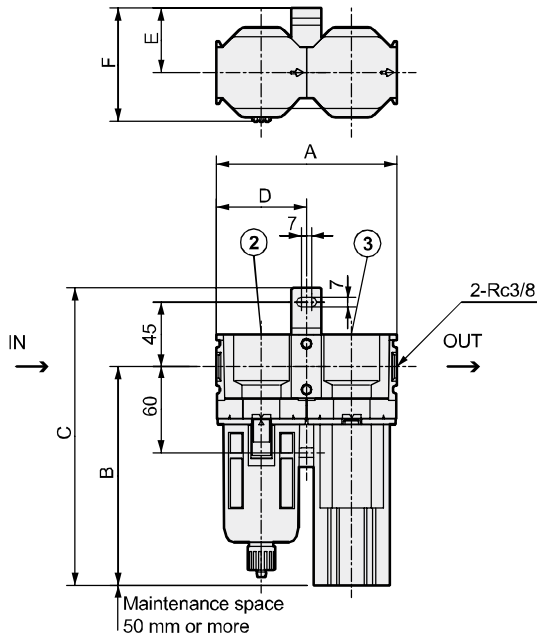
# SU<sub>4</sub>00D/SD<sub>4</sub>00D-W Series

## Dimensions

### Dimensions

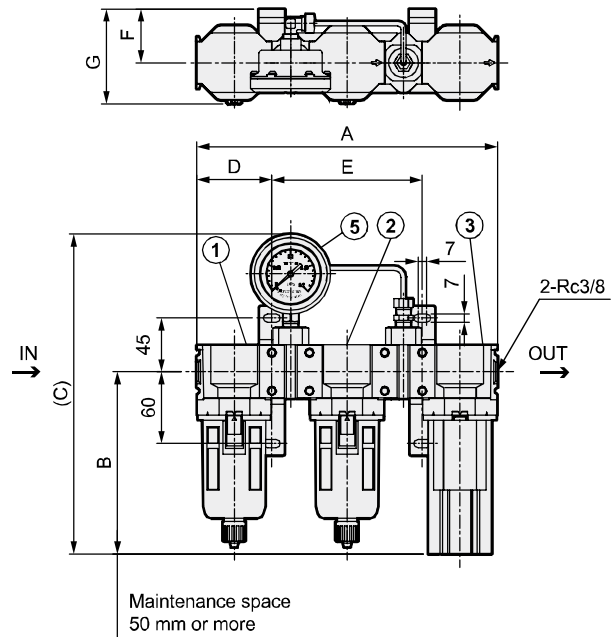


#### ● Unit C1



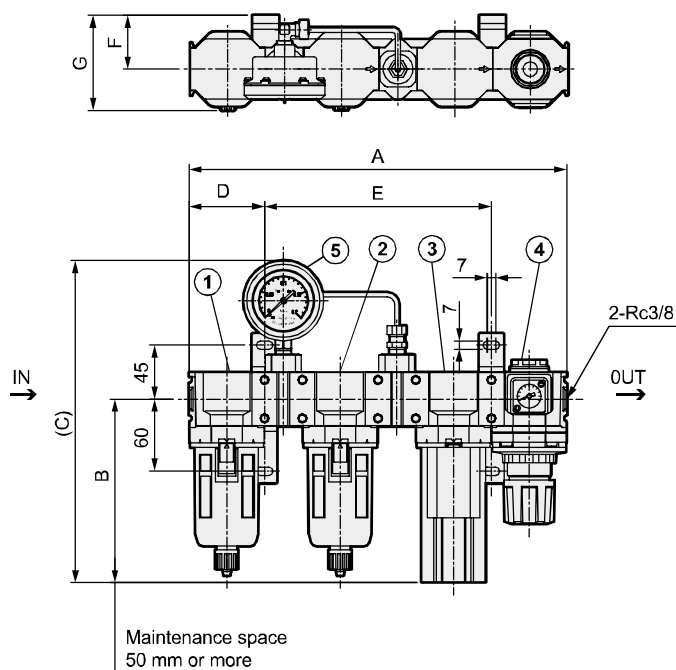
	A	B	C	D	E	F	Wt. (kg)
SU301D-*-W-C1	143	171	226	80	55	97	1.3
SU302D-*-W-C1	143	223	278	80	55	97	1.6
SU401D-*-W-C1	160	328	383	80	55	95	3.1
SU402D-*-W-C1	160	328	383	80	55	95	3.5

#### ● Unit C2



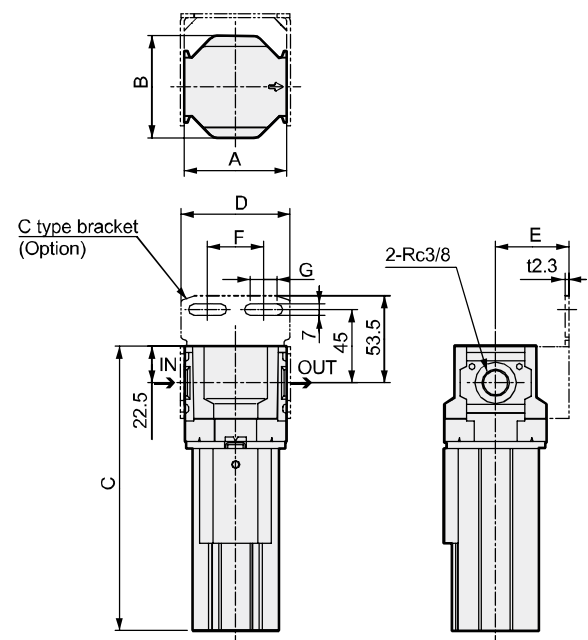
	A	B	C	D	E	F	G	Wt. (kg)
SU301D-*-W-C2	286	171	286	80	143	55	97	2.5
SU302D-*-W-C2	286	223	338	80	143	55	97	2.8
SU401D-*-W-C2	303	328	443	80	143	55	97	4.3
SU402D-*-W-C2	303	328	443	80	143	55	97	4.7

#### ● Unit C3



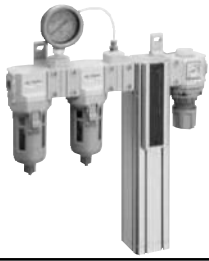
	A	B	C	D	E	F	G	Wt. (kg)
SU301D-*-W-C3	366	171	286	80	206	55	97	3.2
SU302D-*-W-C3	366	223	338	80	206	55	97	3.5
SU401D-*-W-C3	383	328	443	80	223	55	97	5.0
SU402D-*-W-C3	383	328	443	80	223	55	97	5.4

#### ● SD300D/SD400D



	A	B	C	D	E	F	G	Wt. (kg)
SD301D-*-W	63	63	175	67	45	34.5	16.5	0.6
SD302D-*-W	63	63	245	67	45	34.5	16.5	0.9
SD401D-*-W	80	80	245	84	55	55	14	1.4
SD402D-*-W	80	80	315	84	55	55	14	1.8

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FmResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrescR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending



Super dryer combination

# SU3000/SU4000-W Series

Easily and stably supplying ultra dry air.

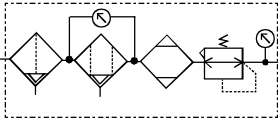
- Ultra dry air with atmospheric dew point  $-60^{\circ}\text{C}$  is obtained just by piping to a pneumatic source.
- All in one unit with superior installability.
- Processing air flow rate: 35 to 1500  $\ell/\text{min}$  (ANR) (at 0.7 MPa and  $-40^{\circ}\text{C}$  atmospheric dew point)



## Specifications

Descriptions	SU 3015-A-W	SU 3025-A-W	SU 3035-A-W	SU 3050-A-W	SU 3075-A-W	SU 4100-A-W	SU 3015-B-W	SU 3025-B-W	SU 3050-B-W	SU 4050-B-W	SU 4100-B-W	
Working fluid	Compressed air											
Inlet air pressure MPa	0.4 ( $\approx 58$ psi, 4 bar) to 1.0 ( $\approx 150$ psi, 10 bar)											
Proof pressure MPa	1.5 ( $\approx 220$ psi, 15 bar)											
Inlet air temperature $^{\circ}\text{C}$	5 ( $41^{\circ}\text{F}$ ) to 50 ( $122^{\circ}\text{F}$ )											
Ambient temperature $^{\circ}\text{C}$	5 ( $41^{\circ}\text{F}$ ) to 50 ( $122^{\circ}\text{F}$ )											
Outlet air atmospheric dew point $^{\circ}\text{C}$	$-20$ ( $-4^{\circ}\text{F}$ )						$-40$ ( $-40^{\circ}\text{F}$ )					
Inlet air flow rate $\ell/\text{min}$ (ANR)	125	300	490	760	1200	1500	35	90	230	410	890	
Outlet air flow $\ell/\text{min}$ (ANR)	100	240	390	610	960	1260	25	65	170	300	650	
Purge flow rate $\ell/\text{min}$ (ANR)	25	60	100	150	240	240	10	25	60	110	240	
Inlet air pressure dew point $^{\circ}\text{C}$	25 ( $77^{\circ}\text{F}$ )											
Inlet air pressure MPa	0.7 ( $\approx 100$ psi, 7 bar)											
Inlet air temperature $^{\circ}\text{C}$	25 ( $77^{\circ}\text{F}$ )											
Ambient temperature $^{\circ}\text{C}$	25 ( $77^{\circ}\text{F}$ )											
Air filter	Filtration rating $\mu\text{m}$	5										
Oil mist filter	Oil removal $\text{mg}/\text{m}^3$	0.1 (approximately 0.1 ppm) (when the inlet air is $30^{\circ}\text{C}$ )										
Regulator	Set pressure range MPa	0.05 ( $\approx 7.3$ psi, 0.5 bar) to 0.85 ( $\approx 120$ psi, 8.5 bar)										
	Relief pressure MPa	Setting pressure plus 0.05 ( $\approx 7.3$ psi, 0.5 bar)										
Standard accessories	Pressure gauge/differential pressure gauge/bracket											

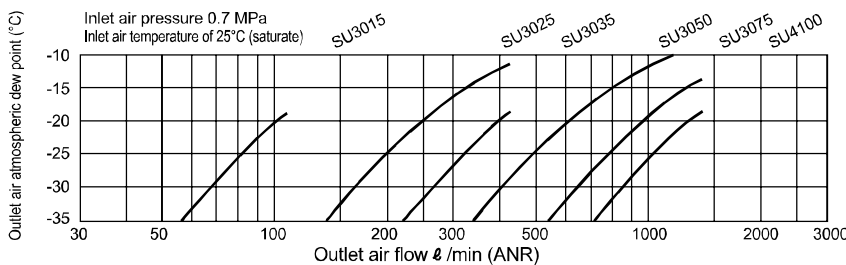
## JIS symbol



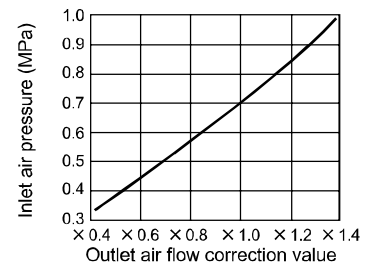
## Dew point performance

Refer to page 1641 for selection guide and compensation method.

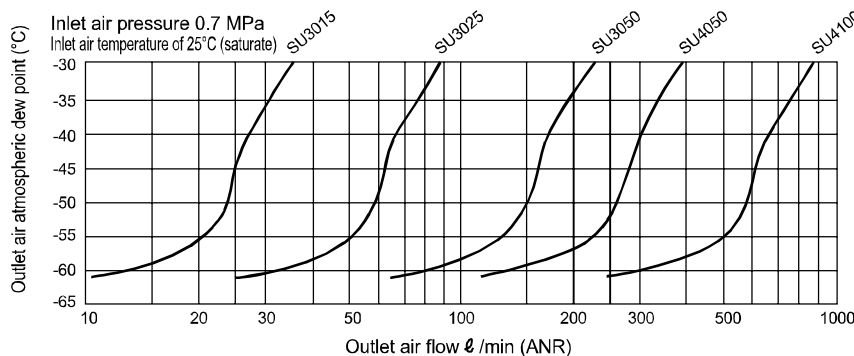
### ● Dew point performance curve ( $-20^{\circ}\text{C}$ specifications)



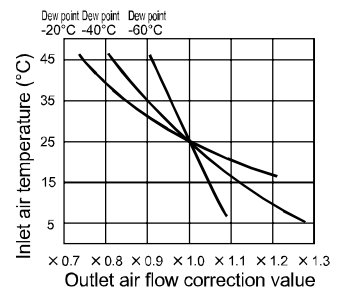
### ● Inlet pressure - outlet air flow rate correction curve



### ● Dew point performance curve ( $-40, -60^{\circ}\text{C}$ specifications)



### ● Inlet temperature - outlet air flow rate correction curve



### How to order

- Super dryer Combination

**SU3015 - A 05 - W - E**

**A** Model No.

**B** Outlet air atmospheric dew point

**C** Inlet air pressure

**D** Option  
\*6

Code	Content
<b>A Model No.</b>	
SU3015	
SU3025	
SU3035	
SU3050	
SU3075	
SU4050	
SU4100	
<b>B Outlet air atmospheric dew point</b>	
<b>A</b>	-20°C
<b>B</b>	-40°C, -60°C (*5)
<b>C Inlet air pressure</b>	
<b>05</b>	0.5 MPa (*1)
<b>07</b>	0.7 MPa (*1)
<b>D Option</b>	
<b>Blank</b>	None
<b>E</b>	Common exhaust (*3)
<b>X1</b>	Reversed inlet and outlet (*2)

### ⚠ Precautions for model No. selection

- \*1: If inlet air pressure is less than 0.7 MPa, indicate 05, while 0.7 MPa and over, indicate 07.
- \*2: Viewed from the front, standard products have an air inlet on the left port and an air outlet on the right port. For "X1", an air inlet is provided on the right port, with an air outlet provided on the left port.
- \*3: Purge air from standard products is released into the atmosphere. If "E" is indicated, common exhaust of purge air is enabled. Size of exhaust port is Rc1/2.
- \*4: Purge flow rate in standard rating section is also the same value at 0.5 MPa.
- \*5: If outlet atmospheric dew point is -60°C, model No. is "B" as at -40°C.
- \*6: When ordering several options, indicate the required options in alphabetical order.

Specifications for rechargeable battery (Catalog No. CC-1226A)

- Design compatible with rechargeable battery manufacturing process

**SU\*000 - ..... - P4\***

### Components

Components	(1) Air filter	(2) Oil mist filter	(3) Super dryer (High polymer membrane air dryer)	(4) Regulator	(5) Differential pressure gauge
Model No.					
SU3015-A-W	F3000-10-W-F	M3000-10-W-F1	SD3015-A	R3000-10-W	GA400-8-P02
SU3025-A-W	F4000-10-W-F	M4000-10-W-F1	SD3025-A	R4000-10-W	GA400-8-P02
SU3035-A-W	F4000-10-W-F	M4000-10-W-F1	SD3035-A	R4000-10-W	GA400-8-P02
SU3050-A-W	F4000-10-W-F	SM4000	SD3050-A	R4000-10-W	GA400-8-P02
SU3075-A-W	F4000-10-W-F	SM4000	SD3075-A	R4000-10-W	GA400-8-P02
SU4100-A-W	F4000-15-W-F	SM4000	SD4100-A	R4000-15-W	GA400-8-P02
SU3015-B-W	F3000-10-W-F	M3000-10-W-F1	SD3015-B	R3000-10-W	GA400-8-P02
SU3025-B-W	F3000-10-W-F	M3000-10-W-F1	SD3025-B	R3000-10-W	GA400-8-P02
SU3050-B-W	F4000-10-W-F	M4000-10-W-F1	SD3050-B	R4000-10-W	GA400-8-P02
SU4050-B-W	F4000-15-W-F	SM4000	SD4050-B	R4000-15-W	GA400-8-P02
SU4100-B-W	F4000-15-W-F	SM4000	SD4100-B	R4000-15-W	GA400-8-P02

- \*1: Oil mist filter (SM4000) is a custom order product.

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FlnResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrescR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

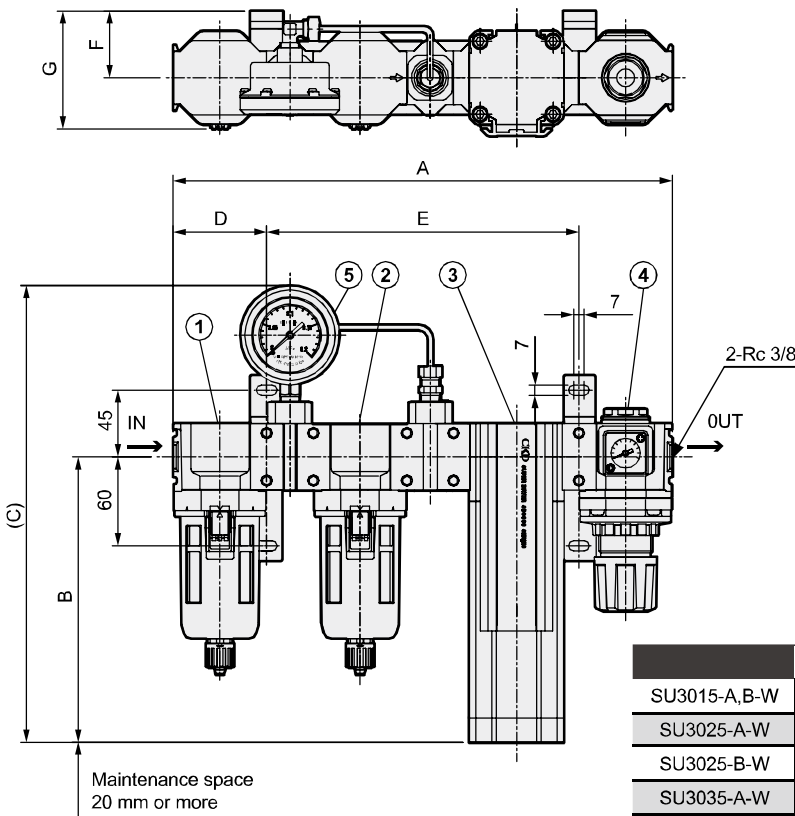
# SU3000/SU4000-W Series



## Dimensions

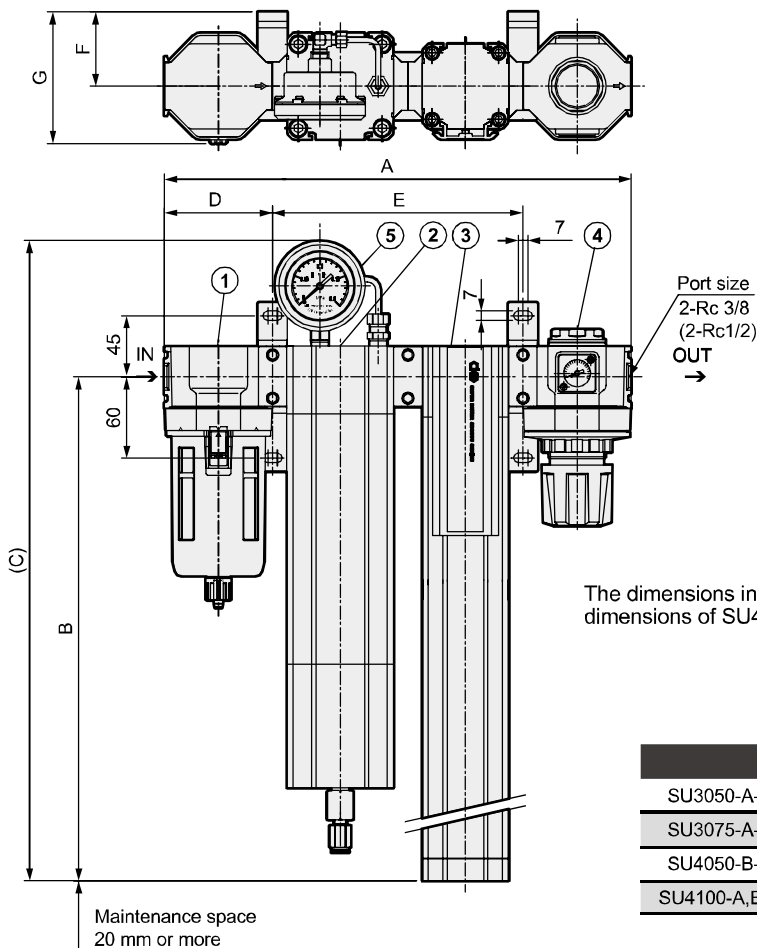
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/  
PTFE FRL
- Outdrs FR
- F.R.L  
(Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

● SU3015-A/B-W SU3025-A/B-W SU3035-A-W SU-3050-B-W



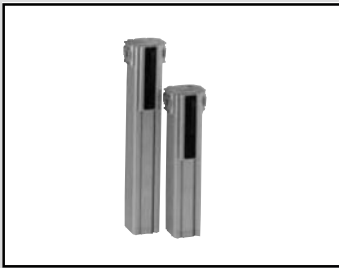
	A	B	C	D	E	F	G	Wt. (kg)
SU3015-A,B-W	337	193	308	63	211	45	85	3.3
SU3025-A-W	388	293	408	80	228	55	97	4.4
SU3025-B-W	337	293	408	63	211	45	85	3.7
SU3035-A-W	388	393	508	80	228	55	97	4.8
SU3050-B-W	388	543	658	80	228	55	97	5.3

● SU3050-A-W SU3075-A-W SU4050-B-W SU4100-A/B-W



The dimensions in ( ) indicate the dimensions of SU4000.

	A	B	C	D	E	F	G	Wt. (kg)
SU3050-A-W	345	543	644	80	185	55	97	7.7
SU3075-A-W	345	793	894	80	185	55	97	8.6
SU4050-B-W	360	543	644	80	200	55	106	9.0
SU4100-A,B-W	360	1043	1144	80	200	55	106	11.8



Super dryer (High polymer membrane air dryer)

# SD3000/SD4000 Series

Modular design for easy system expansion with peripheral devices

- Quickly supplies ultra dry air of -60°C atmospheric dew point.
- Suitable for a wide range of applications with 1.5 MPa max. working pressure.
- Processing air flow rate: 35 to 890 ℓ/min (ANR) (at 0.7 MPa and -40°C atmospheric dew point)



## Specifications

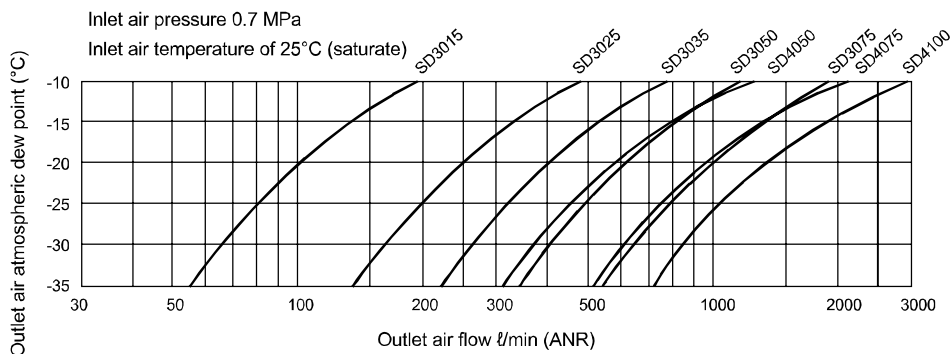
Descriptions		SD3015	SD3025	SD3035	SD3050	SD3075	SD4050	SD4075	SD4100	
Range of working conditions	Working fluid	Compressed air								
	Inlet air pressure	MPa 0.4 (≈58 psi, 4 bar) to 1.5 (≈220 psi, 15 bar)								
	Proof pressure	MPa 2.25 (≈330 psi, 22.5 bar)								
	Inlet air temperature	°C 5 (41°F) to 50 (122°F)								
	Ambient temperature	°C 5 (41°F) to 50 (122°F)								
Standard rating	Inlet air pressure dew point	°C 25 (77°F)								
	Inlet air pressure	MPa 0.7 (≈100 psi, 7 bar)								
	Inlet air temperature	°C 25 (77°F)								
	Ambient temperature	°C 25 (77°F)								
Outlet air atmospheric dew point	-20°C	Inlet air flow rate	ℓ/min(ANR) 125	300	490	760	1200	680	1100	1500
		Outlet air flow	ℓ/min(ANR) 100	240	390	610	960	570	930	1260
		Purge flow rate	ℓ/min(ANR) 25	60	100	150	240	110	170	240
	-40°C	Inlet air flow rate	ℓ/min(ANR) 35	90	150	230	370	410	650	890
		Outlet air flow	ℓ/min(ANR) 25	65	110	170	270	300	480	650
		Purge flow rate	ℓ/min(ANR) 10	25	40	60	100	110	170	240
	-60°C	Inlet air flow rate	ℓ/min(ANR) 20	55	90	140	220	240	380	520
		Outlet air flow	ℓ/min(ANR) 10	30	50	80	120	130	210	280
		Purge flow rate	ℓ/min(ANR) 10	25	40	60	100	110	170	240

## JIS symbol



## Dew point performance Refer to page 1641 for selection guide and compensation method.

- Dew point performance curve (-20°C specifications)



- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneur
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PresCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

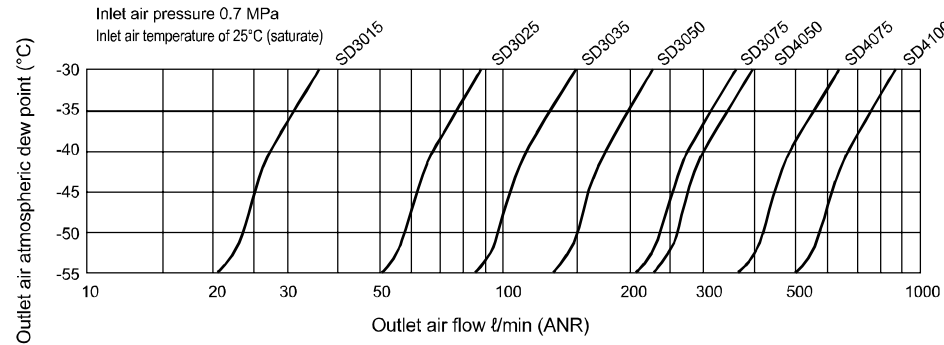


# SD3000/SD4000 Series

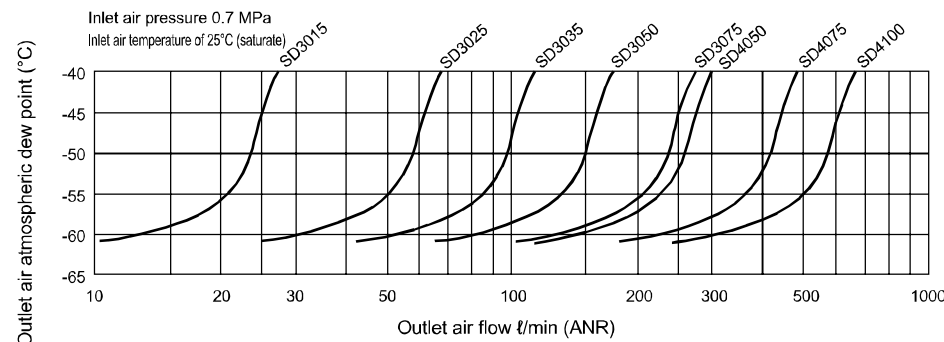
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FlmResistFR
- Oil-ProhrR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneUR
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

## Dew point performance Refer to page 1641 for selection guide and compensation method.

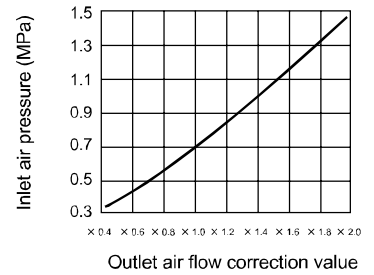
### ● Dew point performance curve (-40°C specifications)



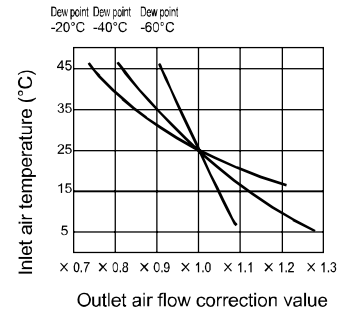
### ● Dew point performance curve (-60°C specifications)



### ● Inlet pressure - outlet air flow rate correction curve



### ● Inlet temperature - outlet air flow rate correction curve



### ● Super dryer (High polymer membrane air dryer)

## How to order

**SD3015 - A 05 - B**

**A** Model No.

**B** Outlet air atmospheric dew point

**C** Inlet air pressure  
\*1  
\*2

**D** Option  
\*3  
\*4  
\*5

Code	Content
<b>A Model No.</b>	
SD3015	
SD3025	
SD3035	
SD3050	
SD3075	
SD4050	
SD4075	
SD4100	
<b>B Outlet air atmospheric dew point</b>	
A	-20°C
B	-40°C
C	-60°C
<b>C Inlet air pressure</b>	
05	0.5 MPa
07	0.7 MPa
14	1.4 MPa (N/A for outlet air atm dew point "A" (-20°C))
<b>D Option</b>	
Blank	None
B	With bracket
E	Common exhaust (*4)
X1	Reversed inlet and outlet (*3)

## ⚠ Precautions for model No. selection

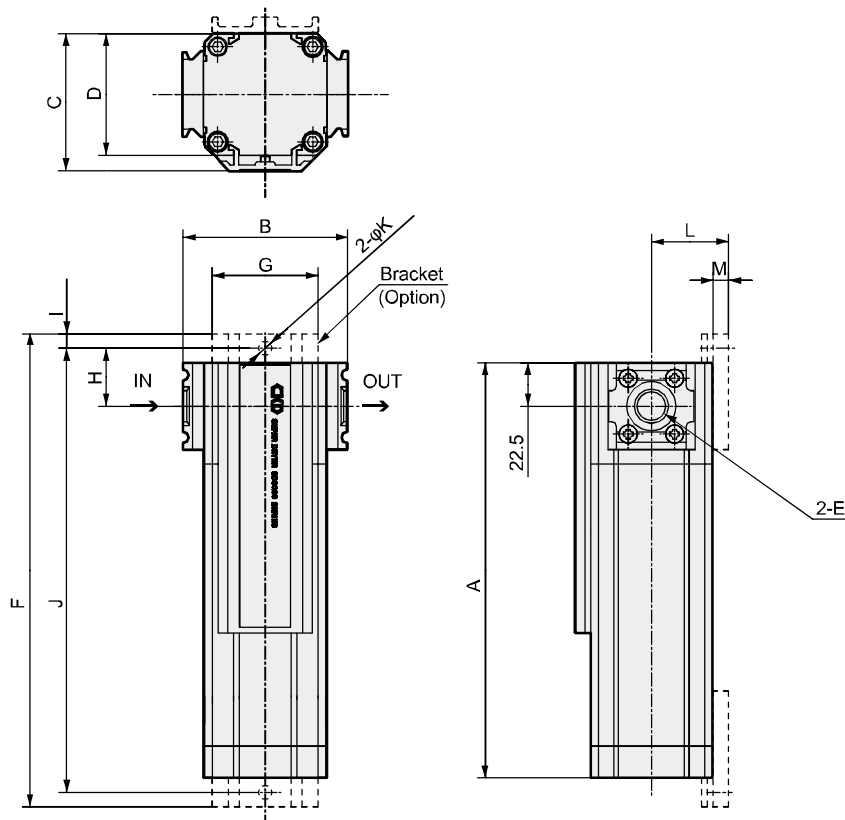
- \*1: Select 05 if the inlet air pressure is less than 0.7 MPa, and 07 if it is 0.7 MPa and over and less than 1.4 MPa.
- \*2: 1.4 MPa inlet air pressure and -20°C outlet air atmospheric dew point cannot be selected at the same time. As the atmospheric dew point will be -14°C when the inlet air temperature is 25°C and the pressure is 1.4 MPa, there is no point in using the dryer. Select -40°C or -60°C.
- \*3: Viewed from the front, a standard product has an air inlet on the left port, while an air outlet on the right port. For "X1", air inlet is provided on the right port, while air outlet is provided on the left port.
- \*4: Purge air from standard products is released into the atmosphere. If "E" is indicated, common exhaust of purge air is enabled. Size of exhaust port is Rc1/2.
- \*5: When ordering several options, indicate the required options in alphabetical order.

## Specifications for rechargeable battery (Catalog No. CC-1226A)

- Design compatible with rechargeable battery manufacturing process

**SD\*\*\*\* - ..... - P4\***

Dimensions



Model No.	A	B	C	D	E	Weight (kg)	Bracket relational dimensions							
							F	G	H	I	J	K	L	M
SD3015	215	85	71	63	Rc 3/8	1.4	245	55	30	7.5	230	7	40	8
SD3025	315	85	71	63	Rc 3/8	1.8	345	55	30	7.5	330	7	40	8
SD3035	415	85	71	63	Rc 3/8	2.2	445	55	30	7.5	430	7	40	8
SD3050	565	85	71	63	Rc 3/8	2.7	595	55	30	7.5	580	7	40	8
SD3075	815	85	71	63	Rc 3/8	3.6	845	55	30	7.5	830	7	40	8
SD4050	565	100	90	79	Rc 1/2	4.0	605	70	32.5	10	585	9	50	10
SD4075	815	100	90	79	Rc 1/2	5.4	855	70	32.5	10	835	9	50	10
SD4100	1065	100	90	79	Rc 1/2	6.8	1105	70	32.5	10	1085	9	50	10

- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdirs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PresCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterPtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending



Super dryer modular series

# SDM4000 Series

Large flow rate is achieved with polymer separation membrane.

- A single unit can support up to 75 kW compressor.
- Joined headers enable flexible expansion according to the use conditions.
- Suitable for area where explosion must strictly be prevented.
- Processing air flow rate: 1.36 to 12.4 m<sup>3</sup>/min. (ANR) (0.7 MPa, atmospheric dew point -20°C)

## Specifications

Descriptions	SDM 4050-2	SDM 4050-3	SDM 4075-2	SDM 4075-3	SDM 4100-2	SDM 4100-3	SDM 4050-6	SDM 4050-8	SDM 4050-10	SDM 4075-6	SDM 4075-8	SDM 4075-10	SDM 4100-6	SDM 4100-8
Working fluid	Compressed air													
Inlet air pressure MPa	0.4 (≈58 psi, 4 bar) to 1.5 (≈220 psi, 15 bar)													
Proof pressure MPa	2.25 (≈330 psi, 22.5 bar)													
Inlet air temperature °C	5 (41°F) to 50 (122°F)													
Ambient temperature °C	5 (41°F) to 50 (122°F)													
Outlet air atmospheric dew point °C	-20 (-4°F)													
Inlet air flow rate m <sup>3</sup> /min(ANR)	1.36	2.04	2.20	3.30	3.00	4.50	4.08	5.44	6.80	6.60	8.80	11.00	9.20	12.40
Outlet air flow m <sup>3</sup> /min(ANR)	1.14	1.71	1.86	2.79	2.52	3.78	3.42	4.56	5.70	5.58	7.44	9.30	7.76	10.48
Purge flow rate m <sup>3</sup> /min(ANR)	0.22	0.33	0.34	0.51	0.48	0.72	0.66	0.88	1.10	1.02	1.36	1.70	1.44	1.92
Inlet air pressure dew point °C	25 (77°F)													
Inlet air pressure MPa	0.7 (≈100 psi, 7 bar)													
Inlet air temperature °C	25 (77°F)													
Ambient temperature °C	25 (77°F)													

Note: The product will be floor-mounted for 6 stations or more.

## JIS symbol



## How to order

- Super dryer (High polymer membrane air dryer)

**SDM4050-2-A05-B**

**A** Model No.

**B** Station No.

**C** Outlet air atmospheric dew point

**D** Inlet air pressure

\*1

\*2

**E** Option

\*3

Code	Content
<b>A Model No.</b>	
<b>SDM4050</b>	
<b>SDM4075</b>	
<b>SDM4100</b>	
<b>B Station No.</b>	
<b>2</b>	2 stations
<b>3</b>	3 stations
<b>6</b>	6 stations
<b>8</b>	8 stations
<b>10</b>	10 stations (not available for SDM4100)
<b>C Outlet air atmospheric dew point</b>	
<b>A</b>	-20°C
<b>B</b>	-40°C
<b>C</b>	-60°C
<b>D Inlet air pressure</b>	
<b>05</b>	0.5 MPa
<b>07</b>	0.7 MPa
<b>14</b>	1.4 MPa (N/A for outlet air atm dew point "A" (-20°C))
<b>E Option</b>	
<b>Blank</b>	None
<b>B</b>	With bracket

## ⚠ Precautions for model No. selection

\*1: If inlet air pressure is less than 0.7 MPa, indicate 05; for 0.7 MPa and over, indicate 07.

\*2: 1.4 MPa inlet air pressure and -20°C outlet air atmospheric dew point cannot be selected at the same time.

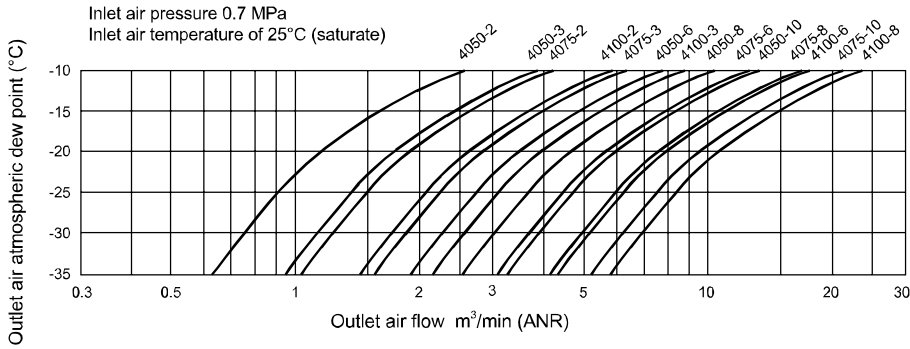
As the atmospheric dew point will be -14°C when the inlet air temperature is 25°C and the pressure is 1.4 MPa, there is no point in using the dryer. Select -40°C or -60°C.

\*3: The product will be floor-mounted without bracket for 6 stations or more.

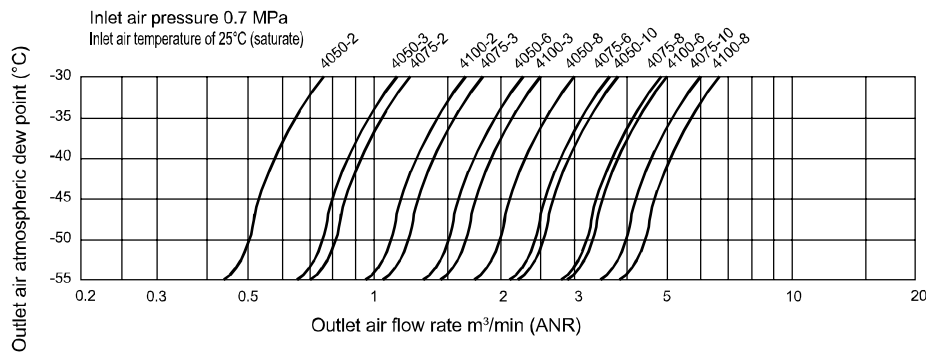
### Dew point performance

Refer to page 1641 for selection guide and compensation method.

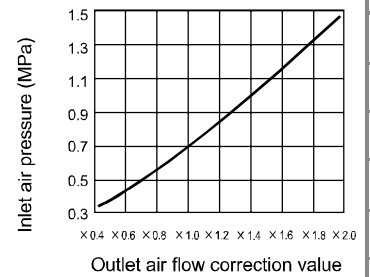
#### ● Dew point performance curve (-20°C specifications)



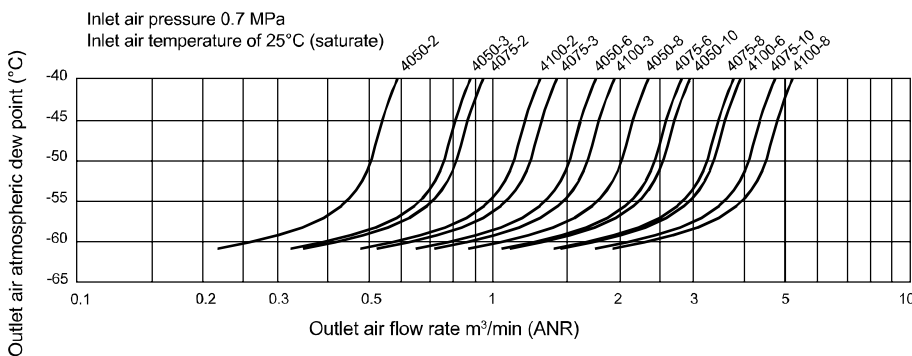
#### ● Dew point performance curve (-40°C specifications)



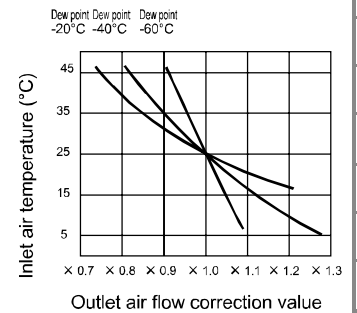
#### ● Inlet pressure - outlet air flow rate correction curve



#### ● Dew point performance curve (-60°C specifications)



#### ● Inlet temperature - outlet air flow rate correction curve



### Selection guide by compressor capacity

Inlet air pressure 0.7 MPa  
Inlet air temperature of 25°C (saturate) m³/min(ANR)

Compatible compressor kw	3.7	5.5	7.5	11	15	22	37	55	75
Atm dew point									
-20°C	Model No.		SDM4050-2-A07	SDM4075-2-A07	SDM4075-3-A07	SDM4050-6-A07	SDM4075-6-A07	SDM4100-6-A07	SDM4100-8-A07
	Inlet air flow rate		1.36	2.20	3.30	4.08	6.60	9.20	12.40
	Outlet air flow		1.14	1.86	2.79	3.42	5.58	7.76	10.48
-40°C	Model No.		SDM4050-2-B07	SDM4075-2-B07	SDM4075-3-B07	SDM4100-3-B07	SDM4075-6-B07	SDM4075-10-B07	
	Inlet air flow rate		0.82	1.30	1.95	2.67	3.90	6.50	
	Outlet air flow		0.60	0.96	1.44	1.95	2.88	4.80	
-60°C	Model No.	SDM4050-2-C07	SDM4075-2-C07	SDM4075-3-C07	SDM4100-3-C07	SDM4075-8-C07	SDM4075-10-C07		
	Inlet air flow rate	0.50	0.76	1.14	1.65	3.04	3.80		
	Outlet air flow	0.28	0.42	0.63	0.93	1.68	2.10		

With different flow rate and conditions, select the model based on the dew point performance curve above according to the required outlet air flow rate.

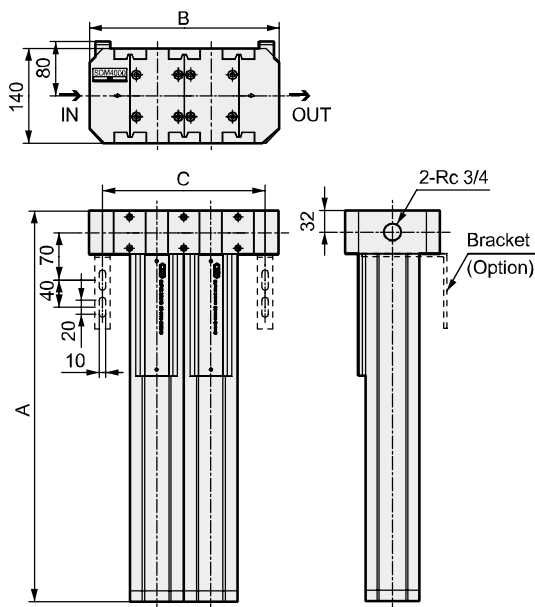
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- PhiResistFR
- Oil-ProhR
- MedPresFR
- No Cu/PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneUR
- AirBoost
- SpdContr
- Silncr
- CheckV/other
- Jnt/tube
- AirUnt
- PresCompn
- Mech/ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

# SDM4000 Series

## Dimensions

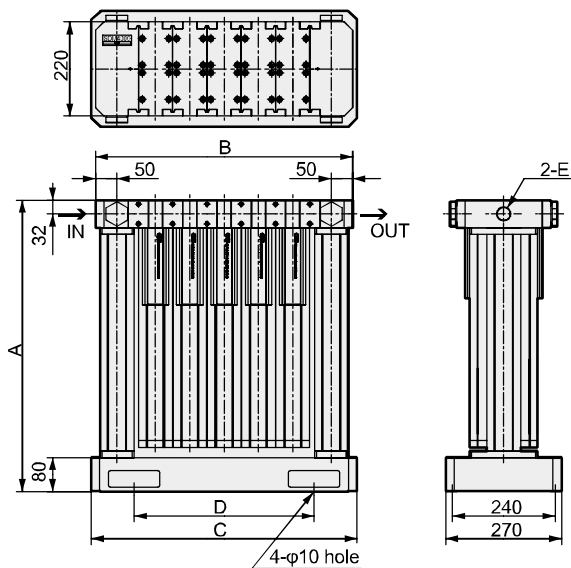
- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FmResistFR
- Oil-ProhR
- MedPresFR
- No Cu/  
PTFE FRL
- Outdrs FR
- F.R.L  
(Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/  
other
- Jnt/tube
- AirUnt
- PrecsCompn
- Mech/  
ElecPresSw
- ContactSW
- AirSens
- PresSW  
Cool
- AirFloSens/  
Contr
- WaterRtSens
- TotAirSys  
(Total Air)
- TotAirSys  
(Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg  
etc
- Ending

### ● 2/3 stations



Model No.	A	B	C	Weight (kg)
SDM4050-2	577	280	240	12
SDM4050-3	577	360	320	17
SDM4075-2	827	280	240	15
SDM4075-3	827	360	320	21
SDM4100-2	1077	280	240	18
SDM4100-3	1077	360	320	25

### ● 6/8/10 stations



Model No.	A	B	C	D	E	Weight (kg)
SDM4050-6	680	440	460	260	Rc1	41
SDM4050-8	680	520	540	340	Rc1	50
SDM4050-10	680	600	620	420	Rc1	59
SDM4075-6	930	440	460	260	Rc1 1/2	52
SDM4075-8	930	520	540	340	Rc1 1/2	64
SDM4075-10	930	600	620	420	Rc1 1/2	76
SDM4100-6	1180	440	460	260	Rc1 1/2	63
SDM4100-8	1180	520	540	340	Rc1 1/2	78

## Selection guide

### (Selection guide)

Each performance curve shows the relation of the outlet air flow and the outlet air atmospheric dew point of each model at an inlet pressure of 0.7 MPa and inlet air temperature of 25°C (saturate). Select the model according to the intersection of the required dew point and required flow rate shown on the right.

### (Flow rate compensation method)

If the inlet pressure and inlet temperature differ from the rated values, the outlet air flow rate that can be supplied will change. Use each compensation curve and compensate in this case.

(Rated outlet air flow rate) x (correction value) = (conditional outlet air flow rate)

In addition, when the inlet air is the air which comes through the refrigeration air dryer, regardless of actual temperature, select the model with inlet air temperature of 10°C.

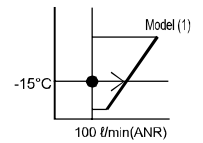
## Purge flow rate

The purge flow rate is shown in the specifications.

Make sure that the flow rate including the purge flow rate as well as the outlet side operating air flow rate can be supplied from the inlet. If the inlet air pressure differs from the rated valve, the purge flow rate will be obtained by multiplying the rated purge flow rate with the compensation value shown on the right.

(Example) Required dew point of -15°C

When the required flow rate is 100 l/min (ANR), the model (1) located on the right side of an intersection point can be selected.

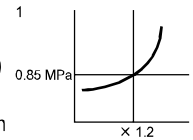


(Example) Inlet pressure of 0.85 MPa

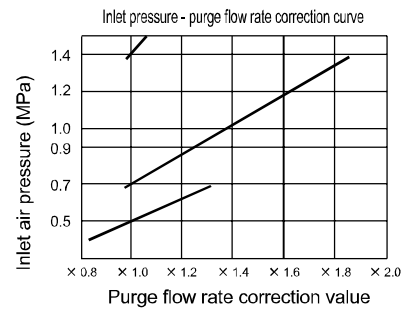
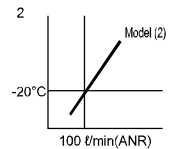
Required dew point of -20°C

When the required flow rate is 120 l/min (ANR)

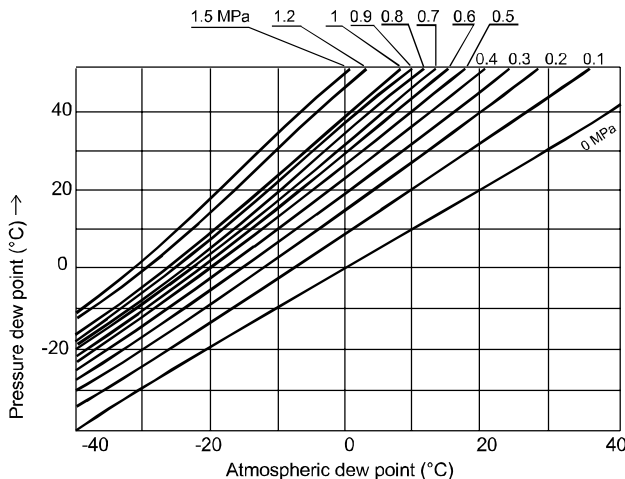
1. Obtain compensation (in this case 1.2) from the pressure flow rate compensation curve.



2. Model (2) has an outlet atmospheric dew point of -20°C and outlet air flow rate of 100 l/min, allowing up to a 1.2-fold rate of 120 l/min (ANR); therefore model (2) is selectable.

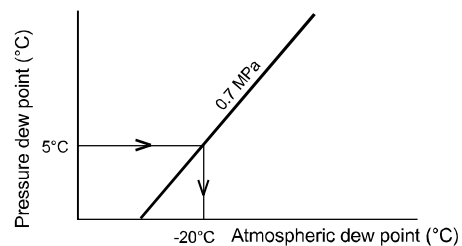


## Pressure dew point - atmospheric dew point conversion table



### Reading pressure dew point - atmospheric dew point conversion table

This table is used to convert the pressure dew point at each pressure into an atmospheric dew point, or vice versa. Example: Obtain the atmospheric dew point when the pressure is 0.7 MPa and the pressure dew point is 5°C.



According to the above table, when the pressure is 0.7 MPa, the 5°C pressure dew point is converted into a -20°C atmospheric dew point.

## Measuring the working air flow rate

If the working flow rate is not clear when selecting the super dryer model, measure the flow rate.

The flow sensor for compressed air "FLUEREX Flow Sensor Tester Kit" with functions such as cumulative display, peak display, peak value hold, and analog output is handy for measuring the flow rate.

### ● FLUEREX Flow Sensor Tester Kit FLUEREX PFK SERIES



- F.R.L
- F (Filtr)
- R (Reg)
- L (Lub)
- PresSW
- Shutoff
- SlowStart
- FhiResistFR
- Oil-ProhR
- MedPresFR
- No Cu/ PTFE FRL
- Outdrs FR
- F.R.L (Related)
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- SpdContr
- Silncr
- CheckV/ other
- Jnt/tube
- AirUnt
- PresCompn
- Mech/ ElecPresSw
- ContactSW
- AirSens
- PresSW Cool
- AirFloSens/ Contr
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending



Pneumatic components (high polymer membrane air dryer)

# Safety Precautions

Be sure to read this section before use.

Refer to Intro Page 63 for general precautions regarding pneumatic components and detailed precautions for individual series

Refer to “▲ Safety precautions”.

## Product-specific cautions: Super dryer SD/SU Series

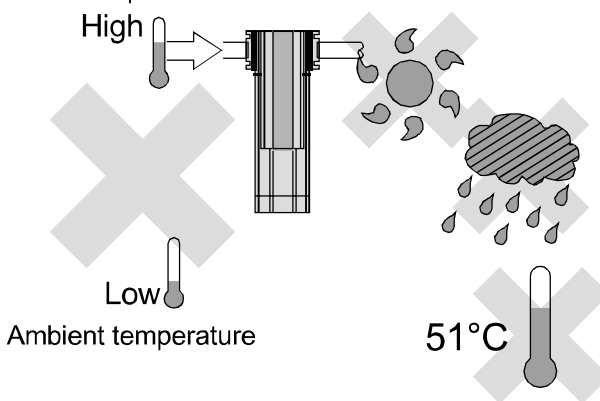
### Design/selection

#### CAUTION

##### Working environment

- Avoid using in conditions under which the inlet air temperature is higher than the ambient temperature. (Water drops may form and accumulate inside if the super dryer body cools)
- Avoid installing this product where it will be subject to direct sunlight or rain.
- As the bowl material is polycarbonate, avoid use with the following chemicals or in an atmosphere containing these chemicals. [SU Series]
- Avoid use in environments where ozone is generated.
- Avoid using this product where vibration and impact are present.

Inlet air temperature

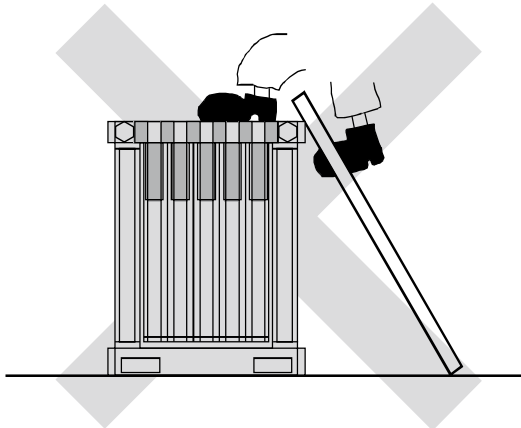


Types of chemicals	Categories of chemicals	Main products of chemicals	General applications	Polycarbonate
Inorganic compound	Acids	Hydrochloric acid, sulfuric acid, fluorine, phosphoric acid, chromic acid, etc.	Acid washing of metals, acidic degreasing solution, coating treatment solution	×
	Alkalines	Caustic soda, caustic potash, calcium hydroxide, aqueous ammonia, sodium carbonate, etc.	Alkaline degreasing solution for metals	×
	Inorganic salts	Sodium sulfide, potassium nitrate, potassium bichromate, sodium sulfate, etc.		×
Organic compound	Aromatic hydrocarbons	Benzene, toluene, xylene, ethyl benzene, styrene, etc.	Contained in paint thinner (benzene, toluene, and xylene)	×
	Chlorinated aliphatic hydrocarbons	Methyl chloride, ethylene chloride, methylene chloride, perchlene, carbon tetrachloride	Organic solvent-based washing solution for metals (trichlene, perchlene, carbon tetrachloride, etc.)	×
	Chlorinated aromatic hydrocarbons	Chlorobenzene, dichlorobenzene, benzene hexachloride (B/H/C), etc.	Agricultural chemicals	×
	Petroleum components	Solvent, naphtha, gasoline		×
	Alcohols	Methyl alcohol, ethyl alcohol, cyclohexanol, benzyl alcohol	Used as antifreezing agent	×
	Phenol	Carbolic acid, cresol, naphthol, etc.	Disinfectant solution	×
	Ethers	Methyl ether, methyl ethyl ether, ethyl ether	Additive of brake oil	×
	Ketones	Acetone, methyl ethyl ketone, cyclohexanone, acetophenone, etc.		×
	Carboxylic acids	Formic acid, acetic acid, butyl acid, acrylic acid, oxalic acid, phthalic acid, etc.	Dyes; oxalic acid for aluminum processing; phthalic acid for paint base	×
	Phosphate ester	Dimethyl phthalate (DMP), diethyl phthalate (DEP), dibutyl phthalate (DBP), dioctyl phthalate (DOP)	Lubricant, synthetic coolant, rust preventing agent additive plasticizer for synthetic resin	×
	Oxyacids	Glycol acid, lactic acid, malic acid, citric acid, tartaric acid		×
	Nitro compounds	Nitromethane, nitroethane, nitroethylene, nitrobenzene, etc.		×
Amines	Methylamine, dimethylamine, ethylamine, aniline, acetanilide, etc.	Additive of brake oil	×	
Nitriles	Acetonitrile, acrylonitrile, benzonitrile, acetoisonitrile, etc.	Raw material for nitrile rubber	×	

## Mounting, installation and adjustment

### CAUTION

- Do not step onto this body.



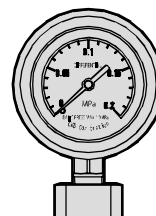
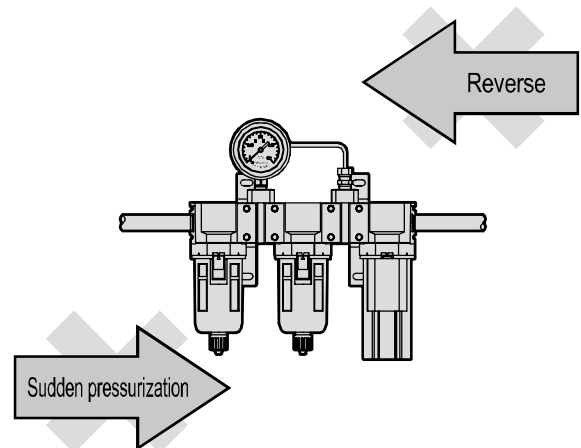
- When piping, remove cutting oil, rust preventing agents, contaminants, etc.

- Mount so that the drain outlet faces straight downward. Use a bore size  $\phi 5.7$  to  $6$  tube for drain discharge piping, and keep the length within  $5$  m. Avoid vertical piping. [SU Series]
- Install an oil removing filter (M type) near the super dryer inlet to remove all water drops and oil. If oil adheres on the membrane module, dew point performance could degrade.
- Install the regulator on the outlet side of the super dryer.
- When installing SDM (2/3 stations), fix the inlet and outlet pipes or fix the body with a bracket.
- When installing SDM (6 stations or more), place it on a solid and flat surface that does not vibrate and fix the base with anchor bolts.

## Use/maintenance

### CAUTION

- Do not use reverse airflow.  
Do not pressurize suddenly. The differential pressure gauge or mantle may be damaged. [SU Series]
- The oil mist filter life is spent when the pressure drops to  $0.07$  MPa or after one year of use, whichever is sooner. Replace the mantle with a new one at the end of its life. (Check the pressure drop with the differential pressure gauge.) (Do not touch the urethane rubber foam layer when replacing the mantle) [SU Series]
- The service life of the super dryer's membrane module differs according to the working conditions. As a guideline, replace the membrane every 3 to 5 years.
- Confirm that pressure has been released before mounting or removing the bowl and bowl guard. [SU Series]
- Be aware that adequate time is necessary to obtain a required dew point after compressed air is supplied.



**0.07 MPa**

F.R.L
F (Filtr)
R (Reg)
L (Lub)
PresSW
Shutoff
SlowStart
FmResistFR
Oil-ProhR
MedPresFR
No Cu/ PTFE FRL
Outdrs FR
F.R.L (Related)
CompFRL
LgFRL
PrescR
VacF/R
Clean FR
ElecPneuR
AirBoost
SpdContr
Silncr
CheckV/ other
Jnt/tube
AirUnt
PresCompn
Mech/ ElecPresSw
ContactSW
AirSens
PresSW Cool
AirFloSens/ Contr
WaterRtSens
TotAirSys (Total Air)
TotAirSys (Gamma)
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending