

(Clean Air System)

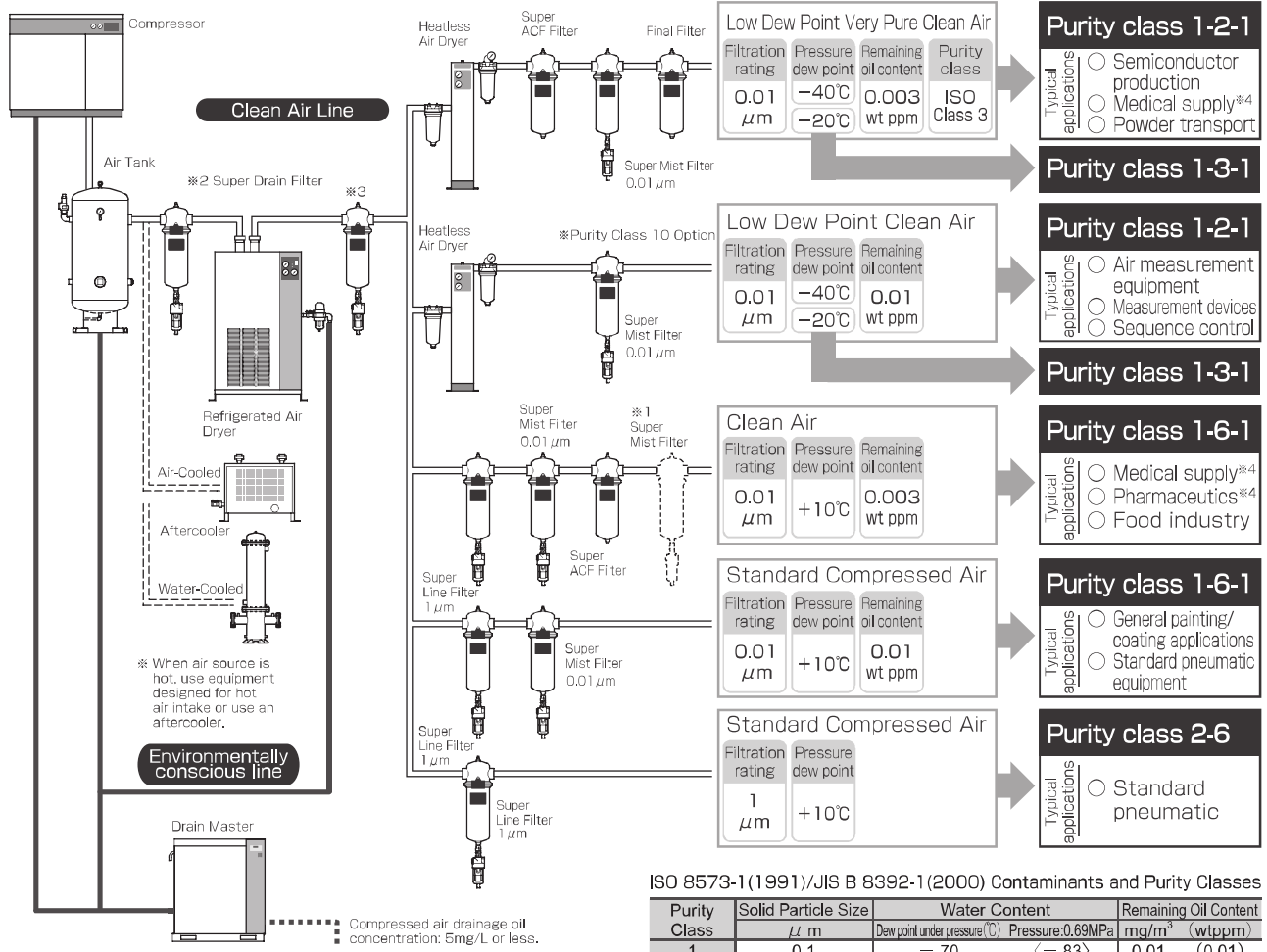
# System Configuration Examples

ORION Clean Air System supplies you with useful clean air using less energy, and also provides consistent oil/water drain separation.

**Important Information Regarding Model Choice** Equipment and model selection should be conducted by knowledgeable and experienced personnel. When choosing equipment, in addition to referring to this catalogue, be sure to match its intended purpose and the way it is to be used with the machine's specifications and performance abilities.

Diagram shows examples of typical configurations

- ※ 1 Dotted line indicates usage on an as-needed basis.
- ※ 2 When using an oil free compressor, where there may be more scaling in exhaust piping, the Super Drain Filter should be installed before the air dryer.
- ※ 3 We recommend use of the Super Drain Filter for applications where the air may be contaminated with liquid oil (oil droplet).
- ※ 4 Read the section (General Safety Precautions) on page 57, and use equipment appropriately as outlined therein.



※ When making model selections:  
Always confirm the air compressor type, discharged air quantity, temperature, pressure, ambient temperature, power source frequency, and required dew point.

ISO 8573-1(1991)/JIS B 8392-1(2000) Contaminants and Purity Classes

Purity Class	Solid Particle Size $\mu\text{m}$	Water Content		Remaining Oil Content $\text{mg}/\text{m}^3$ (wtppm)
		Dew point under pressure(°C)	Pressure:0.69MPa	
1	0.1	-70	<(-83)	0.01 (0.01)
2	1	-40	<(-58)	0.1 (0.08)
3	5	-20	<(-42)	1 (0.83)
4	15	+3	<(-23)	5 (4.2)
5	40	+7	<(-19)	25 (20.8)
6	-	+10	<(-17)	-

※ Number in ( ) indicates water content converted to dewpoint at atmospheric pressure.  
※ Solid particle collection efficiency is at least 95%.  
※ The current revised standard is ISO8573(2001) /JIS B8392-1(2003) Please refer to page 5 for further details.

## Air Purity Class

Air quality class numbers show the size and number of particulate contaminants in a volume of air. But the number used depends on the standard being referred to. Be sure not to confuse one standard with another.

Standard	ISO14644-1	Fed.Std.209D
Purity class	Class X (X: 1 ~ 9)	Class X (X: 1 ~ 100,000)
Allowable particle concentration	$10^X / \text{m}^3$	$X / \text{ft}^3$
Particulate size	$\geq 0.1 \mu\text{m}$	$\geq 0.5 \mu\text{m}$

## Comparison of ISO 14644-1 and F.S.209D

Air Purity Class Standard	Max. Concentration of particulate at designated particle diameter (no. of particles/ $\text{m}^3$ ) ※ Values based on ISO14644-1	Specified particle size				
		0.1 $\mu\text{m}$	0.2 $\mu\text{m}$	0.3 $\mu\text{m}$	0.5 $\mu\text{m}$	1 $\mu\text{m}$
ISO Class 1	Permissible particle concentration $\text{particles}/\text{m}^3$	10	2	1	1	1
ISO Class 2		100	24	10	4	1
ISO Class 3	Class1	1,000	237	102	35	8
ISO Class 4	Class10	10,000	2,370	1,020	352	83
ISO Class 5	Class100	100,000	23,700	10,200	3,520	832