Technical Reference to

ISO standard 8573.1

compressed air treatment systems

Global Leader

In Efficiently Treating Compressed Air

HANKISON INTERNATIONAL

hankisonintl.com

A Global Unit of Measure for Compressed Air

ISO 8573.1 was developed in 1992 by ISO (International Organization for Standardization) to help plant engineers specify desired compressed air quality globally by providing "Quality Classes" for solid particulates, humidity and oil. Quality classes provide engineers with an internationally accepted unit of measure. A typical pharmaceutical plant, for example, would have a compressed air specification of ISO Quality Classes 1.2.1. This is equivalent to 0.1 micron particulate filtration, -40°F (-40°C) dew point, and 0.008 ppm (0.01 mg/m³) oil filtration.

No matter what language is spoken and what unit of measure is used, using ISO 8573.1 Air Quality Classes ensures that your factory will get the compressed air quality you specified.

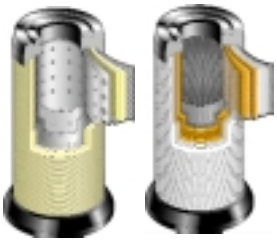
ISO 8573.1 Quality Classes

Quality Classes	Solids max. particle size in microns	Moisture Dew Point °C	°F	Oil Liquid & Gas mg/m³	ppm$_{w/w}$
0	as specified	as specified		as specified	
1	0.1	-70	-94	0.01	0.008
2	1	-40	-40	0.1	0.08
3	5	-20	-4	1	0.8
4	15	3	38	5	4
5	40	7	45	>5	>4
6	–	10	50	–	–

SOLID PARTICULATE FILTRATION

Solid particulates are common in compressed air systems since dusty, contaminated ambient air is what enters the compressor intake manifold. Pipe scaling downstream is also a major contributor.

HANKISON Grade 9 and Grade 7 elements provide 3 and 1 micron filtration.



Grade 9
Class 3

Grade 7
Class 2

HF Series Filters

DRYING

All compressed air applications require different dew points. Specify the ISO Quality Class you require & then select your dryer type.

Quality Class	Water Content g/m³	Water Content ppmw
1	0.0002	0.2
2	0.01	10
3	0.1	80
4	0.7	589
5	0.9	779
6	1.1	954

@100 psig, 7 barg

HIT Series
Refrigerated Dryers
Class 6

HPR*plus* Series
Refrigerated Dryers
Class 4

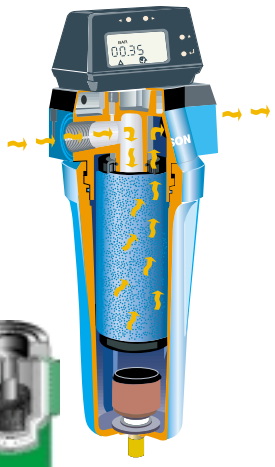
HMD Series
Membrane Dryers
Class 2 - 5

DH, DHW, DBP Series Heatless and Heated Desiccant Dryers
Class 1 - 2

OIL FILTRATION

Oil is introduced to compressed air streams due to the presence of hydrocarbons in the ambient air and lubricants in the compressor.

HANKiSON Grade 5, Grade 3, and Grade 1 elements provide superior oil and oil vapor filtration.



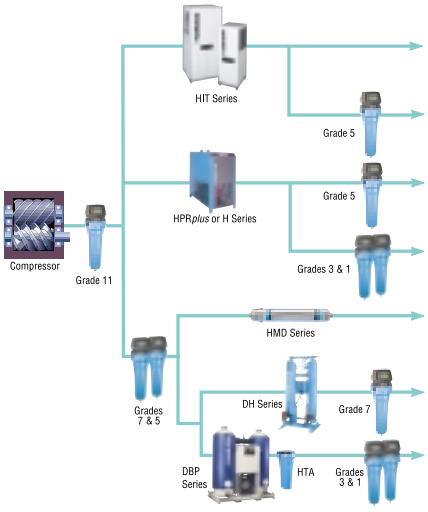
Grade 5
Class 1

Grade 3
Class 1

Grade 1
Oil Vapors/Class 1

Typical Air Treatment Systems

Design a system to provide the air quality your application requires



ISO 8573.1 Air Quality Class			System △P*	
Solids	Moisture	Oil	psi	bar
3	6	5		
Body shops, sand blasting			<5	<0.35
1	6	1		
Large pneumatic tools, spray painting			<8	<0.56
1	4	1		
Powder painting, fine pneumatic tools, air gauging & conveying, pneumatic instruments & controls			<8	<0.56
1	4	1		
Food packaging, cosmetics, photo labs, textile looms			<11	<0.92
1	2-5	1		
Telephone cable, printing, photo labs, spray painting, dental, laboratory instruments			<10	<0.35
1	1-3	1		
Air lines exposed to freezing, ambient conditions, pharmaceutical, chemical, powder paint			<10	<0.68
1	1-3	1		
Food processing, dairies, breweries, air in direct contact with foods, microchips, optics, medicines			<15	<1.02

HIT Series Refrigerated Dryers
Dries to 50°F (10°C) dew point, 3 micron integral filter

HPR*plus* Series Refrigerated Dryers
Dries to 38°F (3°C) dew point, 3 micron integral filter

HMD Series Membrane Dryers
Dries to 40°F (4°C) to -40°F (-40°C) dew point

DH Series Heatless Desiccant Dryers
Dries to -100°F (-73°C) dew point

DBP Series Heated Blower Purge Desiccant Dryers
Dries to -40°F (-40°C) dew point

HF Series Filters

Grade 11 – 99% bulk water removal
Grade 9 – 99% bulk water removal 3 micron particulate
Grade 7 – 1 micron particulate
Grade 5 – 0.008 ppm (0.01 mg/m³) oil removal
Grade 3 – 0.001 ppm (0.001 mg/m³) oil removal
Grade 1 – oil vapor and 0.003 ppm (0.003 mg/m³) oil removal
HTA – 1 micron particulate, high temperature filter

*Efficiencies per CAGI Standards ADF100 and 400 with wetted element conditions.