ISO 8573.1 Quality Classes

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 solid contaminants, -40° F (-40° C) dew point, and 0.008 ppm (0.01 mg/m^3) oil content 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.

QUALITY CLASSES	SOLID CONTAMINANTS (MAX. PARTICLE SIZE) MICRONS	MAXIMUM PRESSURE DEW POINTS °F (°C)	MAXIMUM OIL CONTENT (DROPLETS, AEROSOLS, VAPOR) PPM W/W (MG/M^3)
1	0.1	-94 (-70)	0.008 (0,01)
2	1	-40 (-40)	0.08 (0,1)
3	5	-4 (-20)	0.8 (1)
4	15	38 (3)	4 (5)
5	40	45 (7)	21 (25)
6	–	50 (10)	–

SEVEN FILTRATION GRADES PROVIDE ISO 8573.1 STANDARD AIR QUALITY

FILTER GRADE	DESCRIPTION	FILTRATION[1]			ISO 8573.1 QUALITY CLASSES	
		WATER DROPLETS[2] PPM W/W	SOLID PARTICULATES MICRON	OIL REMOVAL PPM W/W	SOLIDS	OIL
A	Water Separator	30,000	-	-	-	-
B	Separator/Filter	25,000	3	5	3	5
C	General Purpose	2,000	1	1	2	4
D	Dry Particulate	-	1	-	2	-
E	High Efficiency Oil Removal	1,000	0.01	0.008	1	1
F	Maximum Efficiency Oil Removal	100	0.01	0.0008	1	1
G	Oil Vapor Removal	-	0.01	0.003	1	1

1)Tested to CAGI ADF400 & ADF500. 2)Maximum inlet liquid load.

	REPLACEMENT MODEL GRADE-FEATURES	CAPACITY SCFM	CAPACITY M³/MIN	CONNECTIONS NPT/ANSI FLG.	STANDARD FEATURES FILTER GRADES A	B	C,E,F	D	G	MAX PRESSURE PSIG [KGF/CM²] & TEMP °F (°C) MANUAL DRAIN	WITH D OR L	DIMENSIONS HEIGHT IN	HEIGHT MM	WIDTH IN	WIDTH MM	WEIGHT LB	WEIGHT KG
MODULAR TYPE HOUSINGS	CFL20-11	20	0.57	⅜" NPTF	A	A P	A P	P	NONE	300 psig 21 kgf/cm² 150° F 66° C	250 psig 17.6 kgf/cm² 150° F 66° C	8.15	207	4.13	105	4.2	1.9
	CFL35-13	35	1.00	½" NPTF								11.05	281	4.13	105	8.1	3.7
	CFL60-13	60	1.72	½" NPTF								13.4	340	4.13	105	8.5	3.9
	CFL100-15	100	2.9	¾" NPTF	A	A G	A G	G				15.32	389	5.25	133	6.3	2.9
	CFL170-17	170	4.9	1" NPTF								19.57	497	5.25	133	6.9	3.1
	CFL250-21	250	7.2	1½" NPTF		G						22.8	579	6.44	164	10.2	4.6
	CFL375-21	375	11	1½" NPTF	(1)	(1)						27.29	693	6.44	164	11.3	5.1
	CFL485-23	485	14	2" NPTF	(1)	G (1)	A G					31.08	789	7.63	194	28	12.7
	CFL625-25	625	18	2½" NPTF								36.83	935	7.63	194	33	15.0
	CFL780-25	780	22	2½" NPTF								42.96	1091	7.63	194	38	17.2
	CFL625-27	625	18	3" NPTM	A	A G	A G	G	NONE	300 psig 21 kgf/cm²	300 psig 21 kgf/cm²	40.88	1038	10.25	260	36	16.3
PRESSURE VESSELS	CFL1000-27	1,000	29	3" NPTM	(1)	G (1)	G (1)	G	NONE (1)	225 psig 15.8 kgf/cm² 150° F 66° C	225 psig 15.8 kgf/cm² 150° F 66° C	48.00	1219	16.00	406	91	41.3
	CFL1250-27	1,250	36	3" NPTM								48.00	1219	16.00	406	91	41.3
	CFL1875-27	1,875	54	3" NPTM								49.00	1245	16.25	413	120	54.4
	CFL2500-29	2,500	72	4" FLG.								52.25	1327	20.00	508	179	81.2
	CFL3125-29	3,125	89	4" FLG.								52.25	1327	20.00	508	182	82.6
	CFL5000-31	5,000	143	6" FLG.								54.63	1387	24.00	610	271	123
	CFL6875-31	6,875	197	6" FLG.								62.56	1589	28.00	711	518	235
	CFL8750-31	8,750	250	6" FLG.								62.56	1589	28.00	711	527	239
	CFL 11875-33	11,875	340	8" FLG.								69.13	1756	33.00	838	709	322
	CFL16250-33	16,250	465	8" FLG.								67.94	1726	39.00	991	918	416
	CFL21250-35	21,250	608	10" FLG.								70.94	1802	45.88	1165	1412	640

(1) Drain plugs standard. Externally mounted automatic drains are available.
A – Internal Automatic Drain; E – Electronic Demand Drain; P – Differential Pressure Slide; G – Differential Pressure Gauge; L – Liquid Level Indicator

Sizing Correction Factors

To find the maximum flow at pressures other than 100 psig [7 kgf/cm²], multiply the flow by the Correction Factor corresponding to the minimum pressure at the inlet of the filter. Do not select filters by pipe size; use flow rate and operating pressure.

PSIG	20	30	40	60	80	100	125	150	175	200	250	300
KGF/CM²	1.4	2.1	2.8	4.2	5.6	7.0	8.8	10.6	12.3	14.1	17.6	21.1
CORRECTION FACTOR	0.30	0.39	0.48	0.65	0.82	1	1.22	1.43	1.65	1.87	2.31	2.74