

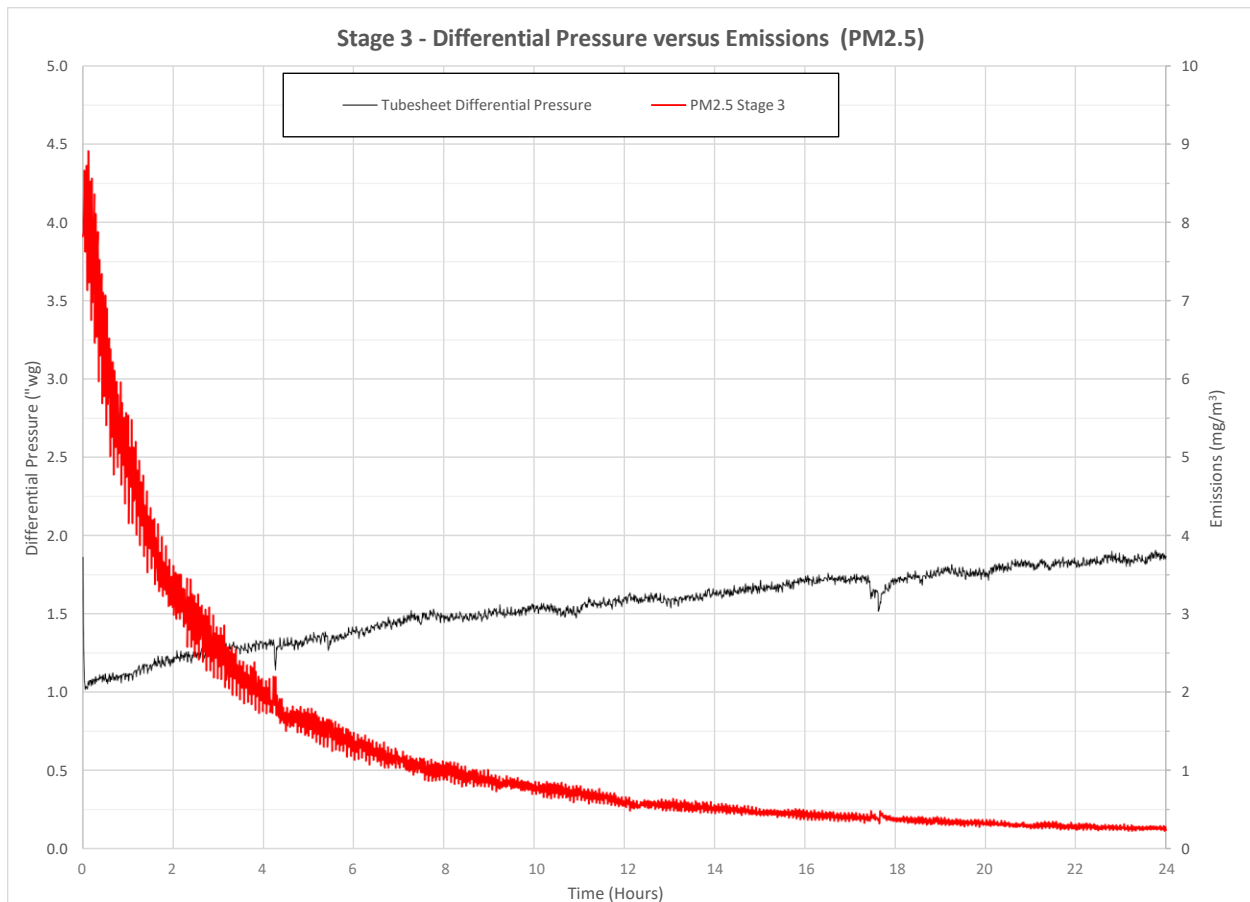


SCIENTIFIC DUST COLLECTORS

ASHRAE STD 199 TEST REPORT

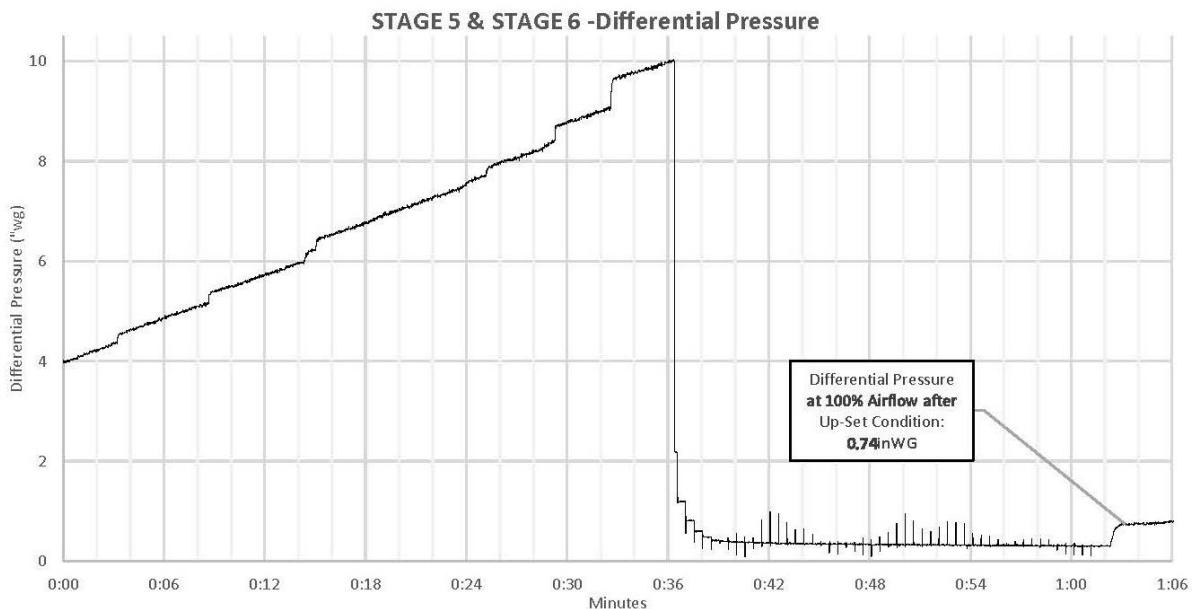
ASHRAE Standard 199 is a method of testing the performance of industrial pulse jet cleaned dust collectors. The purpose of this standard is to provide a quantitative laboratory test method using a uniform testing procedure and documenting the results during six stages of testing using the same test dust.

Performance Summary			
Emissions PM 2.5	Differential Pressure Avg	Compressed Air Consumption	Air to Cloth Ratio
1.214 mg/M ³ 0.00053 gr/Ft ³	1.54" wg	1.19 Ft ³ /1000Ft ³	10.6:1



Test Results						
	Stage 1	Stage 2	Stage 3	Stage 4	Stage 5	Stage 6
	Initial Dust Loading	Initial On-Demand Cleaning	Continuous Cleaning	Final On-Demand Cleaning	Up-Set Condition	Post Up-Set Condition
Duration (hrs)	0.58	4.00	24.00	20.13	0.61	1.06
Dust Fed (lbs)	14.86	102.51	616.20	512.54	15.44	13.92
No. of Pulses	-	42	2875	405	-	55
Avg. Differential Pressure	-	-	1.54" wg	3.78" wg	-	-
PM10 Avg (mg/m3)	3.816	1.313	1.215	0.029	0.010	0.049
PM10 Avg (gr/ft3)	0.00167	0.00057	0.00053	0.00001	0.00000	0.00002
PM2.5 Avg (mg/m3)	3.763	1.309	1.214	0.029	0.010	0.049
PM2.5 Avg (gr/ft3)	0.00164	0.00057	0.00053	0.00001	0.00000	0.00002
PM1 Avg (mg/m3)	3.555	1.292	1.211	0.029	0.01	0.049
PM1 Avg (gr/ft3)	0.00155	0.00056	0.00053	0.00001	0.00000	0.00002

The results clearly indicate superior efficiency collection at all three levels (PM10, PM2.5 and PM1). These efficiency levels were achieved in a collector using an air to cloth ratio of 10.6 to 1 and median dust particle size of 3.0 microns.



In these two last stages, the purpose is to simulate an upset condition. Material is fed until a DP of 10"wg is reached. The cleaning is then turned on to observe how well the system "recovers". For our test, the system successfully cleaned down to 0.74"wg.

The ASHRAE Standard 199 test data clearly indicates that Scientific Dust Collectors' patented cleaning system and collector design results in superior performance even at higher air to cloth ratios. Contact Scientific Dust Collectors for a copy of the complete detailed test results.