

Sly Contact:	Linus Ridge	Date:	20/09/2011
Client:		Client Contact:	
Document Title:	Impinjet Scrubbers		



Impinjet® Scrubbers

Collect Particulates and Absorb Odors, Vapors and Gases

Rugged and uncomplicated in design, Impinjet Scrubbers can realize efficiencies in excess of 99% on many types of dust or gases.

Both particle collection and absorption of gases, odors, vapors, etc. can be done at the same time.

Ready for Today... Ready for the Future

Unique flexibility is furnished by Impinjet Scrubbers. Made with the future in mind, additional stages can be added to existing installations to improve efficiency to handle tomorrow's requirements—without increasing liquid consumption. There is no need to buy complete new units.

For Cooling & Condensing, Too

The outlet gas can be cooled to less than 5°F above the temperature of the incoming liquid. Often solvents such as alcohols, pentane, hexane,

acetone, ethylene glycol, chloroform, etc. are recovered from inert gas streams such as nitrogen or carbon dioxide. Chilled solvent is used as direct contact condensing liquid and removes the heat from the gas stream as it gains heat.

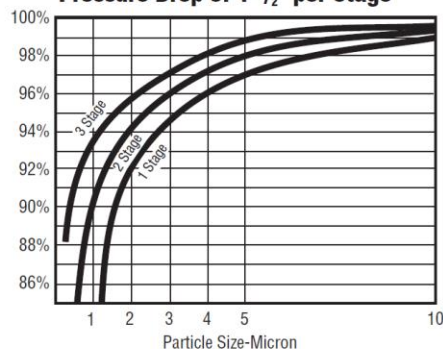
Scrubbers also recover waste heat. Heat from dryers and other processes that would normally be exhausted can be used to heat water being fed to the scrubber almost to the wet bulb temperature of the inlet gas. For cooling and condensing and for heat recovery, our designs can accommodate high hydraulic loadings.

Highlights

- High absorption efficiency for gases, odors and vapors
- Efficiencies exceeding 98% for particles 5 microns or larger
- Multiple stages can be added to improve efficiency
- Capacities from 500 to over 100,000 CFM
- Water requirements as low as 1-1/2 GPM per 1000 ACFM (typically, 3 GPM per 1000 ACFM)



Standard Impinjet Efficiency@ Pressure Drop of 1-1/2" per Stage



Pressure Drop @ 70°F.

Number on Stages	Normal Capacity (Inches, W.G.)	Max. Capacity (Inches, W.G.)
One Stage	3.0	4.25
Two Stage	4.5	6.4
Three Stage	6.0	8.5

Pressure drop is an important consideration in evaluating the efficiency expected of a scrubber in a given application and in fan, drive and motor selection.

When high efficiency is required, the use of additional stages provides a corresponding increase in pressure drop.

The above chart shows standard pressure drop in inches, w.g., across scrubber for 1 stage, 2 stages and 3 stages.

To correct pressure drop to operating conditions, multiply standard pressure drop by the ratio of outlet density to standard density.

Example: Using .0615 #/Cu. Ft. Dry Air from Density Correction example and the 1 stage average capacity pressure drop of 3" at 70°F. (density .075) the operating pressure drop is: 3" H₂O x .0615/.075 = 2.46 inches, w.g.

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Certification No. FS578090

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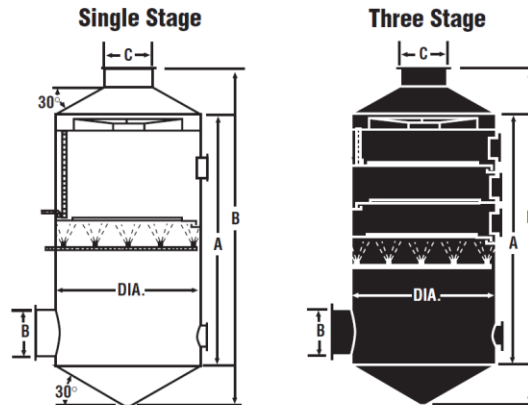
Impinjet® Scrubbers

Standard Equipment

- Stainless steel impingement baffles
- Fixed blade mist eliminator
- Conditioning spray
- Carbon steel/Stainless steel construction
- Access doors (bolted)
- Full draining design

Optional Equipment and Features

- FRP and plastic construction
- Mesh and chevron mist eliminators
- Quick opening access doors
- Integral sumps
- Complete package systems



Outlet Volume (CFM)

Normal Copy 420 FPM	Max. Copy 500 FPM	Dia
740	885	1'-6"
1350	1550	2'-0"
2100	2450	2'-6"
3000	3500	3'-0"
4050	4800	3'-6"
5300	6250	4'-0"
6700	7950	4'-6"
8250	9800	5'-0"
10000	11850	5'-6"
11900	14100	6'-0"
13950	16550	6'-6"
16200	19200	7'-0"
18600	22050	7'-6"
21150	25100	8'-0"
23850	28350	8'-6"
26750	31800	9'-0"
29800	35400	9'-6"
33000	39250	10'-0"
36400	43250	10'-6"
39950	47500	11'-0"
43650	51900	11'-6"
47550	56500	12'-0"
51550	61350	12'-6"
55750	66500	13'-0"
60150	71550	13'-6"
64700	76950	14'-0"

Nozzle Sizes

Plate Water Inlet I.P.S. Inches	Spray Water Inlet I.P.S. Inches	Bottom Drain I.P.S. Inches	Inlet Flange Dia. B	Outlet Flange Dia. C
1/2	1/2	1	6"	7"
3/4	1/2	1	8"	8"
1	3/4	1 1/4	10"	11"
1	3/4	1 1/4	1'-0"	1'-1"
1 1/4	1	1 1/2	1'-2"	1'-3"
1 1/4	1	1 1/2	1'-4"	1'-5"
1 1/4	1	1 1/2	1'-6"	1'-7"
1 1/2	1 1/4	2	1'-7"	1'-9"
1 1/2	1 1/4	2	1'-9"	1'-11"
1 1/2	1 1/4	2	2'-0"	2'-2"
2	1 1/4	2 1/2	2'-2"	2'-4"
2	1 1/2	2 1/2	2'-4"	2'-6"
2	1 1/2	2 1/2	2'-6"	2'-8"
2	1 1/2	2 1/2	2'-8"	2'-10"
2 1/2	2	3	2'-10"	3'-0"
2 1/2	2	3	3'-0"	3'-2"
2 1/2	2	3	3'-2"	3'-4"
2 1/2	2	3	3'-0x3'-2"	3'-7"
2 1/2	2	3	3'-0x3'-6"	3'-9"
3	2	4	3'-0x3'-10"	3'-11"
3	2	4	3'-0x4'-2"	4'-1"
3	2 1/2	4	3'-0x4'-6"	4'-4"
3	2 1/2	4	3'-0x5'-0"	4'-6"
3	2 1/2	4	3'-0x5'-4"	4'-8"
3	2 1/2	4	3'-0x5'-10"	4'-10"
4	2 1/2	4	3'-0x6'-4"	5'-0"

Single Stage Dimensions

Two Stage Dimensions

Three Stage Dimensions

Impinjet Number	Straight Side A	Overall Height B	Impinjet Number	Straight Side A	Overall Height B	Impinjet Number	Straight Side A	Overall Height B
115	5'-4"	6'-4"	215	7'-4"	8'-4"	315	9'-4"	10'-4"
120	5'-6"	6'-9"	220	7'-6"	8'-9"	320	9'-6"	10'-9"
125	5'-9"	7'-2"	225	7'-9"	9'-2"	325	9'-9"	11'-2"
130	6'-0"	7'-8"	230	8'-0"	9'-8"	330	10'-0"	11'-8"
135	6'-3"	8'-2"	235	8'-3"	10'-2"	335	10'-3"	12'-2"
140	6'-6"	8'-7"	240	8'-6"	10'-7"	340	10'-6"	12'-7"
145	6'-9"	9'-1"	245	8'-9"	11'-1"	345	10'-9"	13'-1"
150	7'-3"	9'-10"	250	9'-3"	11'-10"	350	11'-3"	13'-10"
155	7'-6"	10'-3"	255	9'-6"	12'-3"	355	11'-6"	14'-3"
160	7'-9"	10'-9"	260	9'-9"	12'-9"	360	11'-9"	14'-9"
165	8'-0"	11'-3"	265	10'-0"	13'-3"	365	12'-0"	15'-3"
170	8'-3"	11'-10"	270	10'-3"	13'-10"	370	12'-3"	15'-10"
175	8'-6"	12'-3"	275	10'-6"	14'-3"	375	12'-6"	16'-3"
180	9'-3"	13'-3"	280	11'-3"	15'-3"	380	13'-3"	17'-3"
185	9'-9"	13'-11"	285	11'-9"	15'-11"	385	13'-9"	17'-11"
190	10'-0"	14'-5"	290	12'-0"	16'-5"	390	14'-0"	18'-5"
195	10'-6"	15'-2"	295	12'-6"	17'-2"	395	14'-6"	19'-2"
1100	10'-9"	15'-8"	2100	12'-9"	17'-8"	3100	14'-9"	19'-8"
1105	11'-0"	16'-1"	2105	13'-0"	18'-1"	3105	15'-0"	20'-1"
1110	11'-6"	16'-10"	2110	13'-6"	18'-10"	3110	15'-6"	20'-10"
1115	13'-0"	18'-7"	2115	15'-0"	20'-7"	3115	17'-0"	22'-7"
1120	13'-3"	19'-1"	2120	15'-3"	21'-1"	3120	17'-3"	23'-1"
1125	13'-6"	19'-7"	2125	15'-6"	21'-7"	3125	17'-6"	23'-7"
1130	13'-9"	20'-1"	2130	15'-9"	22'-1"	3130	17'-9"	24'-1"
1135	14'-0"	20'-6"	2135	16'-0"	22'-6"	3135	18'-0"	24'-6"
1140	14'-3"	21'-0"	2140	16'-3"	23'-0"	3140	18'-3"	25'-0"

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