



ENGINEERING DATA

950 and 951 Series		See Footnotes A & C																										
SIZE	Velocity	400	500	600	700	800	1000	1200	1400																			
	Duct Pt	.011	.017	.024	.034	.044	.055	.068	.100																			
8x4	Eff.Area .155 ft ²	CFM	67	90	106	123	140	168	207	246																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	5.5	6	7	7	8	9	8.5	10	12	10	12	14	11	13	15	13.5	17	20	16	20	24	19	24	29		
10x4	Eff.Area .198 ft ²	CFM	90	112	134	157	179	224	269	314																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	7	8	9	9	10	11	10	12	14	11	13	15	13.5	16	18	15	19	23	19	24	29	22	27	32		
12x4	Eff.Area .241 ft ²	CFM	106	134	162	190	213	269	325	375																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	7	8	9	9	10	11	10	12	14	13	15	17	14.5	17	20	14.5	18	22	18	22	26	23	29	35		
14x4	Eff.Area .280 ft ²	CFM	129	157	190	218	252	314	381	443																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	8	9	10	10	11	12	11	13	15	13.5	16	18	15.5	18	21	15	19	23	19	24	29	25	31	37		
10x6	Eff.Area .313 ft ²	CFM	140	174	213	246	280	353	420	493																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	8	9	10	11	12	13	13	15	17	14.5	17	20	17	20	23	20	25	30	24	30	36	28	35	42		
12x6	Eff.Area .380 ft ²	CFM	168	213	213	297	342	426	510	594																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	9	10	11	11.5	13	15	13.5	16	18	15.5	18	21	17	21	24	22	27	32	26	32	38	30	38	46		
14x6	Eff.Area .446 ft ²	CFM	202	252	302	347	398	498	599	700																		
		NC	20	25	30	30	30	35	35	40																		
		Throw	10	11	12	13.5	15	17	15.5	18	21	17	20	23	20	24	28	24	30	36	28	35	42	34	43	52		
16x6	Eff.Area .510 ft ²	CFM	230	286	342	403	459	571	689	801																		
		NC	20	25	30	35	35	35	35	40																		
		Throw	10	11	12	13.5	15	17	15.5	18	21	17	21	24	20	24	28	24	30	36	30	37	44	34	43	52		
20x6	Eff.Area .645 ft ²	CFM	291	364	431	504	577	722	868	1014																		
		NC	20	25	30	35	35	35	35	40																		
		Throw	11.5	13	15	16	18	20	18	21	24	20	24	28	24	28	32	26	32	38	32	40	48	36	45	54		
14x8	Eff.Area .590 ft ²	CFM	269	330	398	465	526	661	795	924																		
		NC	20	25	30	35	35	40	40	40																		
		Throw	11	12	13	14.5	16	18	16	19	22	19	22	25	22	26	30	25	31	37	30	38	46	35	44	53		
16x8	Eff.Area .660 ft ²	CFM	297	370	448	515	588	739	885	1036																		
		NC	20	25	30	35	35	40	40	45																		
		Throw	13.5	15	17	17	19	21	19	22	25	22	26	30	25	30	35	30	37	45	34	43	52	38	47	56		
20x8	Eff.Area .880 ft ²	CFM	398	493	594	689	790	986	1187	1383																		
		NC	20	25	30	35	35	40	40	45																		
		Throw	15.5	17	19	18	20	22	20	24	28	23	28	32	27	32	37	32	40	48	37	46	55	42	52	62		
20x12	Eff.Area 1.620 ft ²	CFM	517	644	770	902	1028	1288	1546	1805																		
		NC	20	25	30	35	35-40	40	40-45	45-50																		
		Throw	18	20	23	23	25	27	25	30	34	30	36	41	34	40	46	40	50	60	48	60	71	56	70	84		

ENGINEERING FOOTNOTES

Footnote A:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Pt: The total pressure behind the register in the duct forcing that air through the register.

Throw: The throws noted in the tables are the distance from the register to where the air stream velocity has dropped to not under 100/75/50 F.P.M.

Footnote B:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Ps: The static pressure in the duct behind the grille. The static load on the fan chargeable against that grille. Velometer readings are taken between grille vanes giving actual velocity.

Footnote C:

Noise Criteria: NC "A" scale. (1) Below NC25 extremely quiet. (2) Below NC30 Quiet Office.

(3) Below NC35 Conference Rooms; normal voice 10-30 ft. (4) Below NC40 Conference Rooms; 6-12 ft. normal voice.

(5) NC45 Conference Rooms; 3-6 ft. normal voice.

Footnote D:

1) Tested without filters. Typical disposable 1" capacity is 2 cfm per square inch of gross filter area. Recommended velocity is 300-400 fpm. Velocities higher than 500 fpm will decrease filter performance. Increase flow resistance, and possibly blow off agglomerates of collected dirt. Velocity measured 1" from face.

2) Generally the more surface area of media you have in an air filter the lower pressure drop you will have across the filter.

3) Lower face velocities (the air speed at the face of the filter) will also produce less pressure drop across the filter while higher return air velocities cause higher pressure drop and can cause the filter to blow off agglomerates. Ashrae calls out for 300 FPM face velocity across the filter face. This is the ideal return air velocity. Actual face velocities will vary depending on the system design."

Example: 20x25 filter = 3.47 SF x 300 FPM face velocity = 1041 CFM

20x25 filter = 3.47 SF x 500 FPM face velocity = 1736 CFM

Footnote E:

Size: Nominal size or the duct opening.

Effective Area: The space between the vanes actually utilized by the air.

Velocity: The actual velocity of the air through the vanes measured with a velometer or similar device.

Duct Pt: The total pressure behind the register in the duct forcing that air through the register.

Throw: The throws noted in the tables are the distance from the register to where the air stream velocity has dropped to not under 100/75/50 F.P.M.

Noise Criteria: NC "A" scale. (1) Below NC25 extremely quiet. (2) Below NC30 Quiet Office. (3) Below NC35 Conference Rooms; normal voice 10-30 ft. (4) Below NC40 Conference Rooms; 6-12 ft. normal voice. (5) NC45 Conference Rooms; 3-6 ft. normal voice.