

## Performance Data – Metric

**Fixed Blade Return Grilles and Registers • 5100, 6100 and 6700 Series**  
**Models: 5145H, 6145H, 6745H, 5145V, 6145V, 6745V,**  
**51FB45, 61FB45, 67FB45**

Listed Duct Size (mm)	Alternate Size (mm)	Core Area (m <sup>2</sup> )	Ak Factor	Core Velocity, M/S VP Negative SP	30	61	91	122	152	183	213	244	274	305
					0.2	0.5	1.5	2.5	4.0	5.5	7.7	9.9	12.4	15.4
					0.7	3.5	7.7	13.7	21.4	30.8	41.8	54.7	69.1	85.5
152 x 152	203 x 102	0.02	0.23	L/S	9	19	28	38	47	57	66	76	85	94
	254 x 102			NC	—	—	—	—	—	19	24	28	32	36
203 x 152	254 x 127	0.03	0.30	L/S	13	26	40	53	66	79	92	106	119	132
	305 x 102			NC	—	—	—	—	15	20	25	29	33	37
254 x 152	305 x 127	0.03	0.37	L/S	17	33	50	66	83	99	116	132	149	165
	406 x 102			NC	—	—	—	—	16	21	26	30	34	38
203 x 203	356 x 127	0.04	0.4	L/S	18	36	54	72	90	108	126	143	161	179
				NC	—	—	—	—	17	22	27	31	35	39
305 x 152	457 x 102	0.04	0.45	L/S	20	40	59	79	99	119	139	159	178	198
				NC	—	—	—	—	18	23	27	32	36	40
305 x 203	406 x 152	0.05	0.59	L/S	27	55	82	109	137	164	192	219	246	274
	610 x 102			NC	—	—	—	—	19	24	29	34	37	41
254 x 254	356 x 178	0.06	0.62	L/S	29	58	86	115	144	173	202	230	259	288
	660 x 102			NC	—	—	—	—	19	24	29	34	37	41
457 x 152	356 x 203	0.06	0.67	L/S	31	61	92	123	153	184	215	245	276	307
	762 x 102			NC	—	—	—	15	20	25	30	34	38	41
305 x 254	406 x 203	0.07	0.74	L/S	35	70	105	140	175	210	244	279	314	349
	508 x 152			NC	—	—	—	15	20	25	30	35	39	42
305 x 305	356 x 254	0.08	0.89	L/S	42	85	127	170	212	255	297	340	382	425
	610 x 152			NC	—	—	—	16	21	26	31	36	39	42
356 x 356	406 x 305	0.12	1.22	L/S	59	117	176	234	293	351	410	468	527	585
	610 x 203			NC	—	—	—	16	21	26	31	36	40	43
457 x 305	406 x 356	0.13	1.34	L/S	65	129	194	259	323	388	453	517	582	647
	711 x 203			NC	—	—	—	17	22	27	32	37	40	43
610 x 254	508 x 305	0.14	1.49	L/S	72	143	215	287	359	430	502	574	646	717
	762 x 203			NC	—	—	—	17	22	27	32	38	41	44
406 x 406	457 x 356	0.15	1.58	L/S	77	155	232	310	387	464	542	619	697	774
	762 x 203			NC	—	—	—	18	23	28	33	38	41	44
610 x 305	457 x 406	0.17	1.78	L/S	87	175	262	349	437	524	611	698	786	873
	762 x 254			NC	—	—	—	18	23	28	33	38	41	45
457 x 457	508 x 406	0.20	2.01	L/S	99	198	297	396	495	595	694	793	892	991
	711 x 305			NC	—	—	—	18	23	28	33	38	41	45
762 x 305	508 x 457	0.22	2.23	L/S	109	219	328	438	547	657	766	876	985	1095
	660 x 356			NC	—	—	—	19	24	29	34	39	42	46
508 x 508	610 x 457	0.24	2.48	L/S	123	246	369	493	616	739	862	985	1108	1232
	762 x 356			NC	—	—	—	19	24	30	35	40	43	46
559 x 559	610 x 508	0.29	3.00	L/S	150	299	449	598	748	898	1047	1197	1346	1496
	762 x 406			NC	—	—	—	20	25	31	35	40	43	47
762 x 457	610 x 559	0.33	3.34	L/S	167	334	501	668	835	1002	1169	1336	1503	1671
	1016 x 356			NC	—	—	—	20	25	31	36	41	44	48
610 x 610	660 x 559	0.35	3.56	L/S	179	358	537	715	894	1073	1252	1431	1610	1789
	813 x 458			NC	—	—	—	20	25	31	36	41	44	48
914 x 457	711 x 508	0.40	4.01	L/S	202	403	605	806	1008	1209	1411	1612	1814	2015
	1168 x 356			NC	—	—	—	21	26	32	37	42	45	49
660 x 660	711 x 610	0.42	4.19	L/S	211	422	633	844	1055	1266	1477	1688	1898	2109
	1219 x 356			NC	—	—	—	21	26	32	37	42	45	49



GRILLES AND REGISTERS

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Listed Duct Size (mm)	Alternate Size (mm)	Core Area (m <sup>2</sup> )	Ak Factor	Core Velocity, M/S	30	61	91	122	152	183	213	244	274	305	
					VP	0.2	0.5	1.5	2.5	4.0	5.5	7.7	9.9	12.4	15.4
					Negative SP	0.7	3.5	7.7	13.7	21.4	30.8	41.8	54.7	69.1	85.5
762 x 610	711 x 660 914 x 508 812 x 559 1016 x 457	0.02	4.46	L/S	225	450	675	900	1125	1351	1576	1801	2026	2251	
				NC	—	—	15	22	27	33	38	42	46	50	
711 x 711	762 x 660 1016 x 508 914 x 559	0.03	4.85	L/S	245	491	736	982	1227	1472	1718	1963	2208	2454	
				NC	—	—	15	22	27	33	38	43	46	50	
914 x 610	762 x 711 1118 x 508 1016 x 559	0.03	5.35	L/S	271	542	813	1083	1354	1625	1896	2167	2438	2709	
				NC	—	—	15	22	28	34	38	43	47	51	
762 x 762	864 x 660 1219 x 508 965 x 610	0.04	5.57	L/S	283	565	848	1131	1413	1696	1979	2261	2544	2827	
				NC	—	—	15	22	28	34	39	43	47	51	
813 x 813	914 x 559 1168 x 559 965 x 711	0.04	6.34	L/S	323	646	968	1291	1614	1937	2259	2582	2905	3228	
				NC	—	—	16	23	29	35	39	44	48	52	
1219 x 610	864 x 864 965 x 762 914 x 813 1219 x 711	0.05	7.13	L/S	363	726	1089	1452	1814	2177	2540	2903	3266	3629	
				NC	—	—	17	23	29	35	40	44	48	52	
914 x 914	965 x 865 1168 x 711 1067 x 762 1219 x 660	0.06	8.02	L/S	410	820	1230	1640	2050	2460	2871	3281	3691	4101	
				NC	—	—	17	24	29	36	41	45	49	53	
965 x 965	1067 x 914 1219 x 762 1117 x 864	0.06	8.94	L/S	458	915	1373	1831	2289	2746	3204	3662	4120	4577	
				NC	—	—	18	24	30	36	41	45	49	53	
1016 x 1016	1067 x 914 1219 x 813 1168 x 965	0.07	9.90	L/S	508	1016	1525	2033	2541	3049	3558	4066	4574	5082	
				NC	—	—	18	24	30	36	42	45	50	54	
1067 x 1067	1118 x 1016 1219 x 914 1168 x 965	0.08	10.92	L/S	561	1122	1683	2244	2805	3367	3928	4489	5050	5611	
				NC	—	—	19	25	31	37	42	46	50	54	
1118 x 1118	1168 x 1067	0.12	11.98	L/S	617	1234	1850	2467	3084	3701	4317	4934	5551	6168	
				NC	—	—	19	25	31	37	42	46	50	54	
1168 x 1168		0.13	13.10	L/S	675	1350	2024	2699	3374	4049	4724	5399	6073	6748	
				NC	—	—	20	26	32	38	43	47	51	55	
1219 x 1219		0.14	14.26	L/S	736	1471	2207	2943	3678	4414	5150	5886	6621	7357	
				NC	—	—	20	26	32	38	43	47	51	55	

GRILLES AND REGISTERS

- L/S** - liters per second
- M/S** - meters per second (velocity)
- VP** - velocity pressure - Pa
- Neg. SP** - negative static pressure - Pa
- NC** - Noise Criteria (values) based on 10 dB room absorption, re 10<sup>-12</sup> watts.

**Performance Notes:**

1. Performance data is for grille with opposed blade damper. Apply the following correction factors for grille without damper.

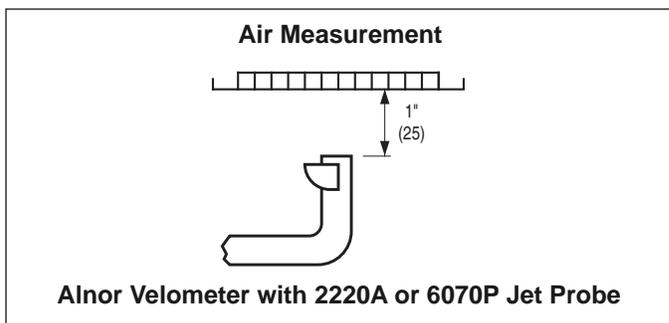
**Neg. SP** Listed Value x 0.91.

**NC** Listed value – 4.

2. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2023.

**Airflow Measurements**

1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.



2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.
3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in M/S).
4. Calculate the airflow (L/S) by multiplying the average velocity by the appropriate Ak factor.  
 Airflow (L/S) = Average velocity (Vk) x Ak.