

HU-4 & HU4 with DE-2 OPEN - VERTICAL PROJECTION

Neck Size, ϕ	Nom Duct Area, ft ²	Neck Velocity																													
		1000	1100	1200	1300	1400	1500	1600	1700	1800	2000																				
10	0.545	Velocity Press	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.25																			
		CFM	550	600	650	710	760	820	870	930	980	1090																			
		Ps	0.04	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.14																			
		NC	23	26	29	32	34	37	39	41	42	46																			
Projection, ft		4	6	12	5	7	14	5	7	15	5	8	16	6	9	17	6	9	19	7	10	20	7	11	21	7	11	22	8	12	24
12	0.785	CFM	790	860	940	1020	1100	1180	1260	1330	1410	1570																			
		Ps	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.11	0.14																			
		NC	26	29	32	35	37	40	42	43	45	49																			
		Projection, ft		5	7	15	5	8	16	6	9	18	6	10	19	7	10	21	7	11	22	8	12	24	8	13	25	9	13	27	10
15	1.227	CFM	1230	1350	1470	1600	1720	1840	1960	2090	2210	2450																			
		Ps	0.04	0.05	0.05	0.06	0.07	0.08	0.10	0.11	0.12	0.15																			
		NC	32	35	38	41	43	46	48	50	52	55																			
		Projection, ft		6	9	19	7	10	21	7	11	22	8	12	24	9	13	26	9	14	28	10	15	30	11	16	32	11	17	34	12
18	1.767	CFM	1770	1940	2120	2300	2470	2650	2830	3000	3180	3530																			
		Ps	0.04	0.05	0.06	0.07	0.08	0.09	0.10	0.12	0.13	0.16																			
		NC	34	37	40	43	45	47	49	51	53	57																			
		Projection, ft		7	11	22	8	12	24	9	13	26	10	14	29	10	15	31	11	17	33	12	18	35	12	19	37	13	20	40	15
21	2.405	CFM	2400	2650	2890	3130	3370	3610	3850	4090	4330	4810																			
		Ps	0.04	0.05	0.06	0.07	0.08	0.10	0.11	0.12	0.14	0.17																			
		NC	37	40	43	46	48	51	53	55	57	60																			
		Projection, ft		8	12	23	8	13	25	9	14	28	10	15	30	11	16	32	12	17	35	12	19	37	13	20	39	14	21	42	15
24	3.141	CFM	3140	3460	3770	4080	4400	4710	5030	5340	5650	6280																			
		Ps	0.04	0.05	0.06	0.07	0.09	0.10	0.11	0.13	0.14	0.18																			
		NC	40	43	46	49	51	53	56	58	59	63																			
		Projection, ft		10	15	30	11	16	33	12	18	35	13	19	38	14	21	41	15	22	44	16	24	47	17	25	50	18	27	53	20
30	4.908	CFM	4910	5400	5890	6380	6870	7360	7850	8340	8830	9820																			
		Ps	0.05	0.06	0.07	0.08	0.10	0.11	0.13	0.14	0.16	0.20																			
		NC	44	47	50	53	55	57	60	62	63	67																			
		Projection, ft		13	19	38	14	21	42	15	23	46	17	25	50	18	27	54	19	29	57	20	31	61	22	33	65	23	34	69	26

Notes:

- Data provided with Model DE-2 Disc Deflector full open
- Neck velocity is fpm, feet per minute.

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal conditions - Adjust projection distances for temperature differentials using Graph 4, Adjustment Factors, page E-11
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

Sound Levels

- NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10⁻¹² watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

Projection

- The numbers shown are vertical projection distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150,100,& 50 fpm for a free, unbounded jet.
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.

Pressure

- P_s represents static pressure, inches of water
- P_t total pressure can be calculated by adding the Velocity pressure and Static pressure (P_s), inches of water
- All pressures are stated and calculated in inches of water.

HU4 with DE-2 CLOSED - HORIZONTAL PATTERN

Neck Size, ϕ	Nom Duct Area, ft ²	Neck Velocity											
		1000	1100	1200	1300	1400	1500	1600	1700	1800	2000		
10	0.545	Velocity Press	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.25	
		CFM	550	600	650	710	760	820	870	930	980	1090	
		Ps	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.25	
		NC	25	28	31	34	36	39	41	43	44	48	
		Throw	5 8 15	6 8 17	6 9 18	7 10 20	7 11 21	8 11 23	8 12 24	9 13 26	9 14 27	10 15 30	
12	0.785	CFM	790	860	940	1020	1100	1180	1260	1330	1410	1570	
		Ps	0.06	0.08	0.09	0.11	0.12	0.14	0.16	0.18	0.20	0.25	
		NC	28	31	34	37	39	42	44	45	47	51	
		Throw	6 9 18	7 10 20	7 11 22	8 12 24	9 13 26	9 14 27	10 15 29	10 15 31	11 16 33	12 18 36	
		15	1.227	CFM	1230	1350	1470	1600	1720	1840	1960	2090	2210
Ps	0.07			0.08	0.10	0.12	0.13	0.15	0.17	0.20	0.22	0.27	
NC	32			35	38	41	43	45	47	49	51	55	
Throw	8 11 23			8 12 25	9 14 27	10 15 30	11 16 32	11 17 34	12 18 36	13 19 39	14 20 41	15 23 45	
18	1.767			CFM	1770	1940	2120	2300	2470	2650	2830	3000	3180
		Ps	0.07	0.09	0.10	0.12	0.14	0.16	0.19	0.21	0.24	0.29	
		NC	36	39	42	45	47	49	51	53	55	59	
		Throw	9 14 27	10 15 30	11 16 32	12 18 35	13 19 38	14 20 41	14 22 43	15 23 46	16 24 49	18 27 54	
		21	2.405	CFM	2400	2650	2890	3130	3370	3610	3850	4090	4330
Ps	0.08			0.09	0.11	0.13	0.15	0.17	0.20	0.22	0.25	0.31	
NC	39			42	45	48	50	53	55	57	59	62	
Throw	9 14 28			10 16 31	11 17 34	12 19 37	13 20 40	14 21 43	15 23 46	16 24 49	17 26 51	19 29 57	
24	3.141			CFM	3140	3460	3770	4080	4400	4710	5030	5340	5650
		Ps	0.08	0.10	0.12	0.14	0.16	0.18	0.21	0.23	0.26	0.32	
		NC	42	45	48	51	53	55	58	60	61	65	
		Throw	12 18 36	13 20 40	15 22 44	16 24 47	17 26 51	18 27 55	19 29 58	21 31 62	22 33 66	24 36 73	
		30	4.908	CFM	4910	5400	5890	6380	6870	7360	7850	8340	8830
Ps	0.09			0.11	0.13	0.15	0.18	0.20	0.23	0.26	0.29	0.36	
NC	46			49	52	55	57	59	62	64	65	69	
Throw	16 23 47			17 26 52	19 28 56	20 30 61	22 33 66	23 35 70	25 37 75	27 40 80	28 42 84	31 47 91	

Notes:

- Data provided with Model DE-2 Disc Deflector closed
- Neck velocity is fpm, feet per minute.

Test Standard

- ANSI / ASHRAE standard 70
- Isothermal conditions
- Non-uniform air flow into diffusers increase sound levels, operating pressures, and can distort the air distribution pattern into the space

Sound Levels

- NC is noise criteria curve that will not be exceeded at the operating point. This is determined by assuming a 10dB (ref: 10⁻¹² watts) room attenuation that is subtracted from the power levels in each of the 2nd thru 7th octave bands

Throw

- The numbers shown are throw distances, in feet, measured along the jet trajectory axis relating to terminal velocities of 150,100,& 50 fpm and include a surface effect.
- Terminal velocity is the air speed, in feet per minute, measured in the supply air stream.
- For exposed duct installations, throws are 70% of the table values above.

Pressure

- P_s represents static pressure, inches of water
- P_t total pressure can be calculated by adding the Velocity pressure and Static pressure (P_s), inches of water
- All pressures are stated and calculated in inches of water.