

R1DBR10

Round Diffuser, Ring Operated Center Downblow



PERFORMANCE DATA | NO DAMPER

DIFFUSERS | ROUND

SIZE	IP DATA										METRIC DATA									
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT		HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT	
			P _s	P _t	P _s	P _t		20°F	40°F					Pa	Pa	Pa	Pa		11°C	22°C
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m
10	425	232	0.00	0.01	0.01	0.02	1-2-4	17	6	11	-	2.2	109	1	3	3	6	0.4-0.6-1.2	5.1	1.7
	555	303	0.00	0.02	0.02	0.04	2-3-5	22	7	20	17	2.8	143	1	6	5	10	0.5-0.8-1.6	6.7	2.2
	685	374	0.01	0.04	0.03	0.06	2-3-7	27	9	26	23	3.5	176	2	9	8	15	0.7-1.0-2.0	8.3	2.8
	815	445	0.01	0.05	0.05	0.09	3-4-8	32	11	32	29	4.1	210	2	13	11	22	0.8-1.2-2.4	9.8	3.3
	945	515	0.01	0.07	0.06	0.12	3-5-9	37	12	36	33	4.8	243	3	17	15	29	0.9-1.4-2.8	11.4	3.8
1075	586	0.02	0.09	0.08	0.15	3-5-10	43	14	40	37	5.5	277	4	22	20	37	1.0-1.6-3.1	13.0	4.3	
12	400	314	0.00	0.01	0.01	0.02	2-2-5	14	4	11	-	2.0	148	1	3	3	5	0.5-0.7-1.4	4.3	1.2
	530	416	0.00	0.02	0.02	0.04	2-3-6	22	7	19	16	2.7	196	1	5	5	9	0.6-0.9-1.9	6.5	2.2
	660	518	0.01	0.03	0.03	0.06	3-4-8	27	9	26	23	3.4	245	2	8	8	14	0.8-1.2-2.3	8.1	2.7
	790	620	0.01	0.05	0.04	0.08	3-5-9	32	11	32	29	4.0	293	2	12	11	21	0.9-1.4-2.8	9.7	3.2
	920	723	0.01	0.07	0.06	0.11	4-5-11	37	12	37	34	4.7	341	3	16	15	28	1.1-1.6-3.2	11.4	3.8
1050	825	0.02	0.09	0.08	0.15	4-6-12	43	14	41	38	5.3	389	4	21	19	36	1.2-1.8-3.7	13.0	4.3	
14	400	428	0.00	0.01	0.01	0.02	2-3-5	13	4	12	-	2.0	202	1	3	3	5	0.5-0.8-1.6	4.0	1.2
	530	567	0.00	0.02	0.02	0.04	2-4-7	23	7	20	17	2.7	267	1	5	5	9	0.7-1.1-2.2	6.9	2.0
	660	706	0.01	0.03	0.03	0.06	3-4-9	29	10	27	24	3.4	333	2	8	8	14	0.9-1.3-2.7	8.8	2.9
	790	845	0.01	0.05	0.04	0.08	4-5-11	35	12	33	30	4.0	399	2	12	11	21	1.1-1.6-3.2	10.5	3.5
	920	983	0.01	0.07	0.06	0.11	4-6-12	40	13	38	35	4.7	464	3	16	15	28	1.3-1.9-3.8	12.3	4.1
1050	1122	0.02	0.09	0.08	0.15	5-7-14	46	15	42	39	5.3	530	4	21	19	36	1.4-2.1-4.3	14.0	4.7	
16	380	531	0.00	0.01	0.01	0.02	2-3-6	12	3	11	-	1.9	250	1	3	3	5	0.6-0.9-1.8	3.6	1.0
	500	698	0.00	0.02	0.02	0.03	3-4-8	20	6	19	16	2.5	329	1	5	4	8	0.8-1.2-2.3	6.2	1.8
	620	866	0.01	0.03	0.03	0.05	3-5-10	30	9	26	23	3.2	409	2	7	7	13	1.0-1.4-2.9	9.0	2.8
	740	1033	0.01	0.04	0.04	0.07	4-6-11	36	12	32	29	3.8	488	2	11	10	18	1.2-1.7-3.5	10.8	3.6
	860	1201	0.01	0.06	0.05	0.10	4-7-13	41	14	36	33	4.4	567	3	14	13	24	1.3-2.0-4.0	12.6	4.2
980	1368	0.02	0.08	0.07	0.13	5-8-15	47	16	40	37	5.0	646	4	19	17	32	1.5-2.3-4.6	14.3	4.8	
18	370	654	0.00	0.01	0.01	0.02	2-3-6	12	3	11	-	1.9	309	1	3	2	5	0.6-1.0-1.9	3.5	1.0
	490	866	0.00	0.02	0.02	0.03	3-4-8	20	6	19	16	2.5	409	1	5	4	8	0.9-1.3-2.6	6.2	1.8
	610	1078	0.01	0.03	0.03	0.05	4-5-11	31	9	26	23	3.1	509	1	7	7	12	1.1-1.6-3.2	9.5	2.8
	730	1290	0.01	0.04	0.04	0.07	4-6-13	38	13	32	29	3.7	609	2	10	9	18	1.3-1.9-3.8	11.7	3.9
	850	1502	0.01	0.06	0.05	0.10	5-7-15	45	15	37	34	4.3	709	3	14	13	24	1.5-2.2-4.5	13.6	4.5
970	1714	0.01	0.07	0.07	0.13	6-8-17	51	17	41	38	4.9	809	4	18	17	31	1.7-2.5-5.1	15.5	5.2	
20	370	807	0.00	0.01	0.01	0.02	2-4-7	12	4	11	-	1.9	381	1	3	2	5	0.7-1.1-2.2	3.7	1.1
	490	1069	0.00	0.02	0.02	0.03	3-5-9	21	6	20	17	2.5	505	1	5	4	8	1.0-1.4-2.9	6.5	1.9
	610	1331	0.01	0.03	0.03	0.05	4-6-12	33	10	27	24	3.1	628	1	7	7	12	1.2-1.8-3.6	10.0	2.9
	730	1593	0.01	0.04	0.04	0.07	5-7-14	42	14	32	29	3.7	752	2	10	9	18	1.4-2.1-4.3	12.7	4.2
	850	1854	0.01	0.06	0.05	0.10	5-8-16	49	16	37	34	4.3	875	3	14	13	24	1.7-2.5-5.0	14.8	4.9
970	2116	0.01	0.07	0.07	0.13	6-9-19	56	19	41	38	4.9	999	4	18	17	31	1.9-2.8-5.7	16.9	5.6	
24	360	1131	0.00	0.01	0.01	0.02	3-4-8	13	4	11	-	1.8	534	1	3	2	4	0.8-1.3-2.5	3.9	1.1
	470	1477	0.00	0.02	0.02	0.03	4-5-11	22	6	20	17	2.4	697	1	4	4	7	1.1-1.6-3.3	6.6	1.9
	580	1822	0.01	0.03	0.02	0.04	4-7-13	33	10	26	23	2.9	860	1	7	6	11	1.4-2.0-4.1	10.1	3.0
	690	2168	0.01	0.04	0.03	0.06	5-8-16	46	14	32	29	3.5	1023	2	9	8	16	1.6-2.4-4.8	14.1	4.2
	800	2513	0.01	0.05	0.05	0.09	6-9-18	54	18	36	33	4.1	1186	3	12	11	21	1.9-2.8-5.6	16.3	5.4
910	2859	0.01	0.06	0.06	0.11	7-10-21	61	20	40	37	4.6	1349	3	16	15	27	2.1-3.2-6.4	18.6	6.2	
30	340	1669	0.00	0.01	0.01	0.02	3-5-10	14	4	11	-	1.7	788	0	2	2	4	1.0-1.5-3.0	4.1	1.2
	450	2209	0.00	0.02	0.01	0.03	4-6-13	24	7	20	17	2.3	1042	1	4	4	7	1.3-2.0-3.9	7.2	2.1
	560	2749	0.01	0.02	0.02	0.04	5-8-16	37	11	27	24	2.8	1297	1	6	6	10	1.6-2.5-4.9	11.1	3.3
	670	3289	0.01	0.04	0.03	0.06	6-10-19	52	15	32	29	3.4	1552	2	9	8	15	2.0-2.9-5.9	16.0	4.7
	780	3829	0.01	0.05	0.04	0.08	7-11-22	64	21	37	34	4.0	1807	2	12	11	20	2.3-3.4-6.8	19.5	6.3
890	4369	0.01	0.06	0.06	0.11	9-13-26	73	24	41	38	4.5	2062	3	15	14	26	2.6-3.9-7.8	22.3	7.4	

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

PERFORMANCE DATA | NO DAMPER

SIZE	IP DATA										METRIC DATA									
	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT		HZ	VT	NECK VEL	AIR FLOW	HZ		VT		HZ THROW	VT	
			P _s	P _t	P _s	P _t		20°F	40°F					NC	NC	P _s	P _t		P _s	P _t
in	fpm	cfm	in wg	in wg	in wg	in wg	ft	ft	ft	NC	NC	m/s	L/s	Pa	Pa	Pa	Pa	m	m	m
36	330	2333	0.00	0.01	0.01	0.01	4 - 6 - 11	15	4	11	-	1.7	1101	0	2	2	4	1.2 - 1.7 - 3.5	4.5	1.3
	440	3110	0.00	0.02	0.01	0.03	5 - 8 - 15	26	8	20	17	2.2	1468	1	4	3	6	1.5 - 2.3 - 4.6	8.0	2.3
	550	3888	0.00	0.02	0.02	0.04	6 - 10 - 19	41	12	27	24	2.8	1835	1	6	5	10	1.9 - 2.9 - 5.8	12.5	3.7
	660	4665	0.01	0.03	0.03	0.06	8 - 11 - 23	59	17	33	30	3.4	2202	2	8	8	14	2.3 - 3.5 - 6.9	18.0	5.3
	770	5443	0.01	0.05	0.04	0.08	9 - 13 - 27	75	24	38	35	3.9	2569	2	12	10	20	2.7 - 4.0 - 8.1	22.9	7.2
	880	6220	0.01	0.06	0.05	0.10	10 - 15 - 30	86	29	42	39	4.5	2936	3	15	14	26	3.1 - 4.6 - 9.2	26.2	8.7

NOTES: Throw values are given terminal velocities of 150, 100, and 50 FPM (0.75, 0.50, and 0.25 m/s). Horizontal throw values are given for isothermal conditions. Vertical throw values are for a terminal velocity of 50 FPM, free jet, at the temperature differences shown. NC values are based on octave band 2 - 7 sound power levels minus a room absorption of 10dB, re 10⁻¹² Watts. Dash in space denotes a NC value of less than 10. Data was obtained from tests conducted in accordance with ANSI/ASHRAE Standard 70, ISO Standard 5219, and ISO Standard 3741. See selection software for performance data not shown, including octave band data.

ENGINEERING SPECIFICATION & CONFIGURATION

R1DBR10

The round ceiling diffuser shall be Krueger model R1DBR10. The R1DBR10 model shall be constructed of a contoured outer cone for reduction of smudging and an adjustable inner vane assembly. The inner vane assembly shall be fully adjustable by rotating a ring operator to modify the discharge air setting from horizontal to vertical and be easily removable. The ring operator shall be adjustable with a pole operator for remote access. Diffusers shall be constructed of 18 gauge steel.

Optional round damper shall be constructed of heavy gauge steel. Damper shall be operable from the face of the diffuser.

PERFORMANCE

The manufacturer shall provide published (printed or electronic) performance data for the diffuser. Performance data shall include 2 - 7 octave band sound power levels. The diffuser shall be tested in accordance to the data standards at the time of product introduction or ANSI/ASHRAE Standard 70.

FINISH

The paint finish shall be #44 British White and be an anodic acrylic paint, baked at 315°F for 30 minutes. The paint thickness shall be 0.8 - 1.0 mils, gloss at 60° per ASTM D523-89 of 50 - 85%, pencil hardness per ASTM D3363-92A of HB - H, crosshatch adhesion per ASTM D3359-83 of 4B - 5B, impact per ASTM D2794-93 of direct impact >100 in/lb and reverse impact >80 in/lb, salt spray per ASTM B117-9048 of 96 hours, humidity per ASTM D2247-92 of >500 hours and water soak per ASTM D870-92 of 250 hours.

1. SERIES: (XXXXXXX)

R1DBR10 - Heavy Duty, Ring Operator Round Steel Diffuser

2. INLET: (XX)

10" - 20" in 2" Increments, 24", 30", or 36"

3. DAMPER: (XX)

00 - NONE
03 - PR10
04 - PRD10
06 - PR12
08 - PRN100

4. ACCESSORIES: (X)

0 - No Accessories
R - Round Straightening Grid

5. FINISH: (XX)

01 - Mill
10 - Alumican
35 - Black
44 - British White

SAMPLE CONFIGURATION: R1DBR10 - 14 - 00 - 0 - 44