

9S80

Stainless Steel Return Grille, Fixed Blades



INTRODUCTION

The 9S80 series stainless steel fixed-blade grilles may be set to either 0° or 45° deflection for performance and aesthetic versatility. These grilles feature 3/4" on center blade spacing and are available for surface mount or lay-in T-bar applications.

MODEL

9S80 - Fixed Blade Return Grille

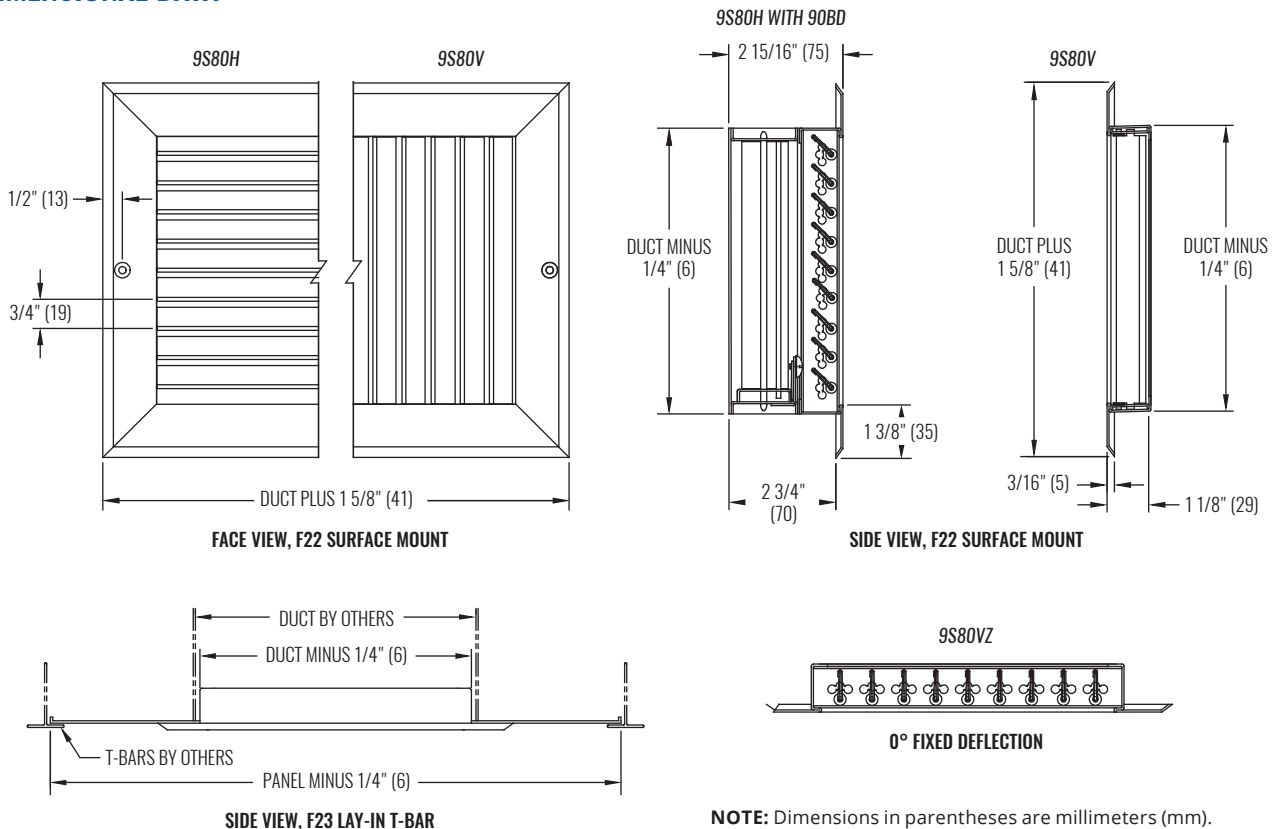
FEATURES

- 304 Stainless steel construction (316 optional)
- Sturdy deflection blades spaced on 3/4" centers
- Countersunk screw holes in mounting frame
- Horizontal or vertical blades at 45° (H or V)
- Horizontal or vertical blades at 0° (HZ or VZ)
- Standard finish is 90 - #4 Satin Polish or 44 - British White

ACCESSORIES

- Stainless steel OBD welded to unit, adjustable from face of grille (model 9OBD).
- Plaster frame (model 98PF).
- Square to round adapter (model 9SRA).

DIMENSIONAL DATA



NOTE: Dimensions in parentheses are millimeters (mm).

PERFORMANCE DATA

IP DATA					SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps							
in	sq ft	fpm	cfm	in wg		cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7	
6 x 6	0.25	300	57	-0.013	-	15.2 x 15.2	0.02	1.52	27	-3.1	38	23	19	-	-	-	
		400	77	-0.022	-			2.03	36	-5.6	37	27	23	13	-	-	
		500	96	-0.035	-			2.54	45	-8.7	36	30	26	17	12	-	
		600	115	-0.051	13			3.05	54	-12.6	36	33	29	20	15	-	
		700	134	-0.069	15			3.56	63	-17.1	36	35	31	23	17	12	
		800	153	-0.090	17			4.06	72	-22.4	35	36	33	26	20	14	
		900	172	-0.114	19			4.57	81	-28.3	35	38	35	28	22	16	
		1000	191	-0.141	21			5.08	90	-35.0	35	39	36	30	24	18	
		1100	211	-0.170	22			5.59	99	-42.3	35	41	38	32	25	20	
8 x 6	0.33	300	79	-0.013	-	20.3 x 15.2	0.03	1.52	37	-3.1	39	25	20	-	-	-	
		400	106	-0.022	-			2.03	50	-5.6	38	29	24	14	-	-	
		500	132	-0.035	12			2.54	62	-8.7	38	32	28	18	13	-	
		600	159	-0.051	14			3.05	75	-12.6	37	34	30	22	16	-	
		700	185	-0.069	17			3.56	87	-17.1	37	36	33	25	19	13	
		800	211	-0.090	19			4.06	100	-22.4	37	38	35	27	21	15	
		900	238	-0.114	21			4.57	112	-28.3	36	39	36	29	23	17	
		1000	264	-0.141	22			5.08	125	-35.0	36	41	38	31	25	19	
		1100	291	-0.170	24			5.59	137	-42.3	36	42	39	33	27	21	
10 x 6	0.42	300	101	-0.013	-	25.4 x 15.2	0.04	1.52	48	-3.1	40	26	21	-	-	-	
		400	135	-0.022	-			2.03	64	-5.6	39	30	25	15	-	-	
		500	169	-0.035	13			2.54	80	-8.7	39	33	29	19	14	-	
		600	202	-0.051	15			3.05	95	-12.6	38	35	31	23	17	11	
		700	236	-0.069	18			3.56	111	-17.1	38	37	34	26	20	14	
		800	270	-0.090	20			4.06	127	-22.4	38	39	36	28	22	16	
		900	304	-0.114	22			4.57	143	-28.3	37	40	37	30	24	19	
		1000	337	-0.141	23			5.08	159	-35.0	37	42	39	32	26	20	
		1100	371	-0.170	25			5.59	175	-42.3	37	43	40	34	28	22	
8 x 8	0.44	300	110	-0.013	-	20.3 x 20.3	0.04	1.52	52	-3.1	40	26	21	-	-	-	
		400	146	-0.022	-			2.03	69	-5.6	40	30	26	15	11	-	
		500	183	-0.035	13			2.54	86	-8.7	39	33	29	20	14	-	
		600	219	-0.051	16			3.05	103	-12.6	39	35	32	23	18	12	
		700	256	-0.069	18			3.56	121	-17.1	38	37	34	26	20	14	
		800	292	-0.090	20			4.06	138	-22.4	38	39	36	28	22	17	
		900	329	-0.114	22			4.57	155	-28.3	38	41	38	31	24	19	
		1000	365	-0.141	24			5.08	172	-35.0	38	42	39	33	26	21	
		1100	402	-0.170	25			5.59	189	-42.3	37	43	41	34	28	22	
12 x 6	0.50	300	123	-0.013	-	30.5 x 15.2	0.05	1.52	58	-3.1	41	27	22	-	-	-	
		400	164	-0.022	-			2.03	77	-5.6	40	30	26	16	11	-	
		500	205	-0.035	13			2.54	97	-8.7	40	33	29	20	15	-	
		600	246	-0.051	16			3.05	116	-12.6	39	36	32	23	18	12	
		700	287	-0.069	19			3.56	136	-17.1	39	38	34	26	21	15	
		800	328	-0.090	21			4.06	155	-22.4	39	40	36	29	23	17	
		900	369	-0.114	23			4.57	174	-28.3	38	41	38	31	25	19	
		1000	410	-0.141	24			5.08	194	-35.0	38	43	40	33	27	21	
		1100	451	-0.170	26			5.59	213	-42.3	38	44	41	35	28	23	
14 x 6	0.58	300	145	-0.013	-	35.6 x 15.2	0.05	1.52	68	-3.1	41	27	22	11	-	-	
		400	193	-0.022	11			2.03	91	-5.6	41	31	27	16	12	-	
		500	242	-0.035	14			2.54	114	-8.7	40	34	30	21	16	-	
		600	290	-0.051	17			3.05	137	-12.6	40	37	33	24	19	13	
		700	338	-0.069	19			3.56	160	-17.1	40	39	35	27	21	16	
		800	386	-0.090	21			4.06	182	-22.4	39	40	37	30	24	18	
		900	435	-0.114	23			4.57	205	-28.3	39	42	39	32	26	20	
		1000	483	-0.141	25			5.08	228	-35.0	39	43	40	34	27	22	
		1100	531	-0.170	26			5.59	251	-42.3	38	45	42	36	29	24	

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

		IP DATA				SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIR FLOW	Ps	2	3	4	5	6	7		
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa								
12 x 8	0.67	300	170	-0.013	-	30.5 x 20.3	0.06	1.52	80	-3.1	42	28	23	12	-	-		
		400	227	-0.022	11			2.03	107	-5.6	41	32	27	17	12	-		
		500	283	-0.035	15			2.54	134	-8.7	41	35	31	21	16	-		
		600	340	-0.051	18			3.05	160	-12.6	41	37	33	25	19	14		
		700	396	-0.069	20			3.56	187	-17.1	40	39	36	28	22	16		
		800	453	-0.090	22			4.06	214	-22.4	40	41	38	30	24	19		
		900	510	-0.114	24			4.57	241	-28.3	40	43	39	33	26	21		
		1000	566	-0.141	26			5.08	267	-35.0	39	44	41	34	28	23		
		1100	623	-0.170	27			5.59	294	-42.3	39	45	42	36	30	24		
10 x 10	0.69	300	178	-0.013	-	25.4 x 25.4	0.06	1.52	84	-3.1	42	28	23	12	-	-		
		400	238	-0.022	12			2.03	112	-5.6	42	32	28	17	13	-		
		500	297	-0.035	15			2.54	140	-8.7	41	35	31	22	16	11		
		600	357	-0.051	18			3.05	168	-12.6	41	37	34	25	20	14		
		700	416	-0.069	20			3.56	196	-17.1	40	39	36	28	22	17		
		800	475	-0.090	22			4.06	224	-22.4	40	41	38	30	25	19		
		900	535	-0.114	24			4.57	252	-28.3	40	43	40	33	27	21		
		1000	594	-0.141	26			5.08	280	-35.0	40	44	41	35	28	23		
		1100	654	-0.170	27			5.59	308	-42.3	39	45	43	36	30	24		
18 x 6	0.75	300	189	-0.013	-	45.7 x 15.2	0.07	1.52	89	-3.1	43	28	24	12	-	-		
		400	252	-0.022	12			2.03	119	-5.6	42	32	28	18	13	-		
		500	314	-0.035	15			2.54	148	-8.7	41	35	31	22	17	11		
		600	377	-0.051	18			3.05	178	-12.6	41	38	34	25	20	14		
		700	440	-0.069	21			3.56	208	-17.1	41	40	36	28	22	17		
		800	503	-0.090	23			4.06	237	-22.4	40	41	38	31	25	19		
		900	566	-0.114	24			4.57	267	-28.3	40	43	40	33	27	21		
		1000	629	-0.141	26			5.08	297	-35.0	40	44	42	35	29	23		
		1100	692	-0.170	28			5.59	326	-42.3	40	46	43	37	30	25		
12 x 10	0.83	300	217	-0.013	-	30.5 x 25.4	0.08	1.52	102	-3.1	43	29	24	13	-	-		
		400	289	-0.022	12			2.03	136	-5.6	43	33	28	18	13	-		
		500	361	-0.035	16			2.54	171	-8.7	42	36	32	22	17	11		
		600	434	-0.051	19			3.05	205	-12.6	42	38	34	26	20	15		
		700	506	-0.069	21			3.56	239	-17.1	41	40	37	29	23	17		
		800	578	-0.090	23			4.06	273	-22.4	41	42	39	31	25	20		
		900	650	-0.114	25			4.57	307	-28.3	41	44	41	34	27	22		
		1000	723	-0.141	27			5.08	341	-35.0	40	45	42	36	29	24		
		1100	795	-0.170	28			5.59	375	-42.3	40	46	44	37	31	25		
22 x 6	0.92	300	232	-0.013	-	55.9 x 15.2	0.09	1.52	110	-3.1	43	29	24	13	-	-		
		400	310	-0.022	13			2.03	146	-5.6	43	33	29	18	14	-		
		500	387	-0.035	16			2.54	183	-8.7	42	36	32	23	18	12		
		600	465	-0.051	19			3.05	219	-12.6	42	39	35	26	21	15		
		700	542	-0.069	21			3.56	256	-17.1	42	41	37	29	23	18		
		800	620	-0.090	24			4.06	293	-22.4	41	42	39	32	26	20		
		900	697	-0.114	25			4.57	329	-28.3	41	44	41	34	28	22		
		1000	775	-0.141	27			5.08	366	-35.0	41	45	42	36	29	24		
		1100	852	-0.170	28			5.59	402	-42.3	40	47	44	38	31	26		
12 x 12	1.00	300	264	-0.013	-	30.5 x 30.5	0.09	1.52	124	-3.1	44	30	25	14	-	-		
		400	352	-0.022	13			2.03	166	-5.6	43	34	29	19	14	-		
		500	439	-0.035	17			2.54	207	-8.7	43	37	33	23	18	12		
		600	527	-0.051	20			3.05	249	-12.6	42	39	35	27	21	16		
		700	615	-0.069	22			3.56	290	-17.1	42	41	38	30	24	18		
		800	703	-0.090	24			4.06	332	-22.4	42	43	40	32	26	21		
		900	791	-0.114	26			4.57	373	-28.3	41	44	41	34	28	23		
		1000	879	-0.141	28			5.08	415	-35.0	41	46	43	36	30	24		
		1100	967	-0.170	29			5.59	456	-42.3	41	47	44	38	32	26		

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

IP DATA					SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps							
in	sq ft	fpm	cfm	in wg		cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7	
18 x 10	1.25	300	332	-0.013	-	45.7 x 25.4	0.12	1.52	157	-3.1	45	31	26	15	-	-	
		400	443	-0.022	14			2.03	209	-5.6	44	35	30	20	15	-	
		500	554	-0.035	18			2.54	261	-8.7	44	38	34	24	19	13	
		600	665	-0.051	21			3.05	314	-12.6	43	40	36	28	22	16	
		700	776	-0.069	23			3.56	366	-17.1	43	42	39	31	25	19	
		800	886	-0.090	25			4.06	418	-22.4	43	44	41	33	27	22	
		900	997	-0.114	27			4.57	471	-28.3	42	45	42	35	29	24	
		1000	1108	-0.141	29			5.08	523	-35.0	42	47	44	37	31	25	
		1100	1219	-0.170	30			5.59	575	-42.3	42	48	45	39	33	27	
14 x 14	1.36	300	366	-0.013	-	35.6 x 35.6	0.13	1.52	173	-3.1	45	31	26	15	11	-	
		400	488	-0.022	15			2.03	230	-5.6	45	35	31	20	16	-	
		500	610	-0.035	18			2.54	288	-8.7	44	38	34	25	19	14	
		600	732	-0.051	21			3.05	345	-12.6	44	40	37	28	23	17	
		700	853	-0.069	23			3.56	403	-17.1	43	43	39	31	25	20	
		800	975	-0.090	25			4.06	460	-22.4	43	44	41	34	28	22	
		900	1097	-0.114	27			4.57	518	-28.3	43	46	43	36	30	24	
		1000	1219	-0.141	29			5.08	575	-35.0	43	47	44	38	31	26	
		1100	1341	-0.170	30			5.59	633	-42.3	42	49	46	40	33	27	
27 x 8	1.50	300	396	-0.013	11	68.6 x 20.3	0.14	1.52	187	-3.1	46	32	27	15	11	-	
		400	529	-0.022	15			2.03	249	-5.6	45	35	31	21	16	-	
		500	661	-0.035	19			2.54	312	-8.7	45	38	34	25	20	14	
		600	793	-0.051	21			3.05	374	-12.6	44	41	37	28	23	17	
		700	925	-0.069	24			3.56	437	-17.1	44	43	39	31	26	20	
		800	1057	-0.090	26			4.06	499	-22.4	43	45	41	34	28	22	
		900	1189	-0.114	28			4.57	561	-28.3	43	46	43	36	30	24	
		1000	1322	-0.141	29			5.08	624	-35.0	43	48	45	38	32	26	
		1100	1454	-0.170	31			5.59	686	-42.3	43	49	46	40	33	28	
22 x 10	1.53	300	410	-0.013	11	55.9 x 25.4	0.14	1.52	193	-3.1	46	32	27	15	11	-	
		400	546	-0.022	15			2.03	258	-5.6	45	36	31	21	16	-	
		500	683	-0.035	19			2.54	322	-8.7	45	38	34	25	20	14	
		600	819	-0.051	22			3.05	387	-12.6	44	41	37	29	23	17	
		700	956	-0.069	24			3.56	451	-17.1	44	43	39	31	26	20	
		800	1092	-0.090	26			4.06	515	-22.4	44	45	41	34	28	22	
		900	1229	-0.114	28			4.57	580	-28.3	43	46	43	36	30	24	
		1000	1365	-0.141	29			5.08	644	-35.0	43	48	45	38	32	26	
		1100	1502	-0.170	31			5.59	709	-42.3	43	49	46	40	34	28	
24 x 10	1.67	300	448	-0.013	11	61.0 x 25.4	0.15	1.52	211	-3.1	46	32	27	16	12	-	
		400	597	-0.022	16			2.03	282	-5.6	46	36	32	21	16	11	
		500	747	-0.035	19			2.54	352	-8.7	45	39	35	25	20	15	
		600	896	-0.051	22			3.05	423	-12.6	45	41	38	29	23	18	
		700	1045	-0.069	24			3.56	493	-17.1	44	43	40	32	26	20	
		800	1195	-0.090	26			4.06	564	-22.4	44	45	42	34	28	23	
		900	1344	-0.114	28			4.57	634	-28.3	44	47	44	37	30	25	
		1000	1493	-0.141	30			5.08	705	-35.0	43	48	45	39	32	27	
		1100	1643	-0.170	31			5.59	775	-42.3	43	49	47	40	34	28	
18 x 14	1.75	300	476	-0.013	11	45.7 x 35.6	0.16	1.52	225	-3.1	47	32	27	16	12	-	
		400	635	-0.022	16			2.03	300	-5.6	46	36	32	22	17	11	
		500	794	-0.035	19			2.54	375	-8.7	45	39	35	26	21	15	
		600	952	-0.051	22			3.05	449	-12.6	45	42	38	29	24	18	
		700	1111	-0.069	25			3.56	524	-17.1	45	44	40	32	26	21	
		800	1270	-0.090	27			4.06	599	-22.4	44	45	42	35	29	23	
		900	1429	-0.114	28			4.57	674	-28.3	44	47	44	37	31	25	
		1000	1587	-0.141	30			5.08	749	-35.0	44	48	45	39	33	27	
		1100	1746	-0.170	32			5.59	824	-42.3	44	50	47	41	34	29	

NOTE: See notes and correction factors on page P1-69.

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PERFORMANCE DATA

		IP DATA				SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIR FLOW	Ps								
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7		
16 x 16	1.78	300	485	-0.013	12	40.6 x 40.6	0.17	1.52	229	-3.1	47	32	28	16	12	-		
		400	646	-0.022	16			2.03	305	-5.6	46	36	32	22	17	11		
		500	808	-0.035	19			2.54	381	-8.7	45	39	35	26	21	15		
		600	969	-0.051	22			3.05	457	-12.6	45	42	38	29	24	18		
		700	1131	-0.069	25			3.56	534	-17.1	45	44	40	32	26	21		
		800	1292	-0.090	27			4.06	610	-22.4	44	45	42	35	29	23		
		900	1454	-0.114	29			4.57	686	-28.3	44	47	44	37	31	25		
		1000	1615	-0.141	30			5.08	762	-35.0	44	48	46	39	33	27		
		1100	1777	-0.170	32			5.59	838	-42.3	44	50	47	41	34	29		
24 x 12	2.00	300	545	-0.013	12	61.0 x 30.5	0.19	1.52	257	-3.1	47	33	28	17	12	-		
		400	727	-0.022	16			2.03	343	-5.6	46	37	32	22	17	12		
		500	908	-0.035	20			2.54	429	-8.7	46	40	36	26	21	15		
		600	1090	-0.051	23			3.05	514	-12.6	45	42	38	30	24	19		
		700	1271	-0.069	25			3.56	600	-17.1	45	44	41	33	27	21		
		800	1453	-0.090	27			4.06	686	-22.4	45	46	43	35	29	24		
		900	1635	-0.114	29			4.57	772	-28.3	45	48	44	37	31	26		
		1000	1816	-0.141	31			5.08	857	-35.0	44	49	46	39	33	27		
		1100	1998	-0.170	32			5.59	943	-42.3	44	50	47	41	35	29		
18 x 18	2.25	300	620	-0.013	13	45.7 x 45.7	0.21	1.52	293	-3.1	48	33	29	17	13	-		
		400	827	-0.022	17			2.03	390	-5.6	47	37	33	23	18	12		
		500	1033	-0.035	21			2.54	488	-8.7	46	40	36	27	22	16		
		600	1240	-0.051	23			3.05	585	-12.6	46	43	39	30	25	19		
		700	1446	-0.069	26			3.56	683	-17.1	46	45	41	33	28	22		
		800	1653	-0.090	28			4.06	780	-22.4	45	47	43	36	30	24		
		900	1860	-0.114	30			4.57	878	-28.3	45	48	45	38	32	26		
		1000	2066	-0.141	31			5.08	975	-35.0	45	49	47	40	34	28		
		1100	2273	-0.170	33			5.59	1073	-42.3	45	51	48	42	35	30		
24 x 14	2.33	300	642	-0.013	13	61.0 x 35.6	0.22	1.52	303	-3.1	48	34	29	17	13	-		
		400	856	-0.022	17			2.03	404	-5.6	47	37	33	23	18	12		
		500	1070	-0.035	21			2.54	505	-8.7	47	40	36	27	22	16		
		600	1284	-0.051	23			3.05	606	-12.6	46	43	39	30	25	19		
		700	1498	-0.069	26			3.56	707	-17.1	46	45	41	33	28	22		
		800	1711	-0.090	28			4.06	808	-22.4	46	47	43	36	30	24		
		900	1925	-0.114	30			4.57	909	-28.3	45	48	45	38	32	26		
		1000	2139	-0.141	31			5.08	1010	-35.0	45	50	47	40	34	28		
		1100	2353	-0.170	33			5.59	1111	-42.3	45	51	48	42	35	30		
30 x 12	2.50	300	686	-0.013	13	76.2 x 30.5	0.23	1.52	324	-3.1	48	34	29	18	13	-		
		400	914	-0.022	17			2.03	431	-5.6	47	38	33	23	18	12		
		500	1143	-0.035	21			2.54	539	-8.7	47	41	37	27	22	16		
		600	1371	-0.051	24			3.05	647	-12.6	46	43	39	31	25	20		
		700	1600	-0.069	26			3.56	755	-17.1	46	45	42	34	28	22		
		800	1828	-0.090	28			4.06	863	-22.4	46	47	44	36	30	25		
		900	2057	-0.114	30			4.57	971	-28.3	46	49	45	38	32	27		
		1000	2285	-0.141	32			5.08	1078	-35.0	45	50	47	40	34	28		
		1100	2514	-0.170	33			5.59	1186	-42.3	45	51	48	42	36	30		
24 x 16	2.67	300	739	-0.013	13	61.0 x 40.6	0.25	1.52	349	-3.1	48	34	29	18	14	-		
		400	985	-0.022	18			2.03	465	-5.6	48	38	34	23	19	13		
		500	1231	-0.035	21			2.54	581	-8.7	47	41	37	28	22	17		
		600	1477	-0.051	24			3.05	697	-12.6	47	43	40	31	26	20		
		700	1724	-0.069	26			3.56	813	-17.1	46	45	42	34	28	23		
		800	1970	-0.090	29			4.06	930	-22.4	46	47	44	36	31	25		
		900	2216	-0.114	30			4.57	1046	-28.3	46	49	46	39	33	27		
		1000	2462	-0.141	32			5.08	1162	-35.0	46	50	47	41	34	29		
		1100	2708	-0.170	33			5.59	1278	-42.3	45	52	49	43	36	30		

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

IP DATA					SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps							
in	sq ft	fpm	cfm	in wg		cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7	
20 x 20	2.78	300	772	-0.013	14	50.8 x 50.8	0.26	1.52	364	-3.1	49	34	30	18	14	-	
		400	1029	-0.022	18			2.03	486	-5.6	48	38	34	24	19	13	
		500	1287	-0.035	21			2.54	607	-8.7	47	41	37	28	23	17	
		600	1544	-0.051	24			3.05	729	-12.6	47	44	40	31	26	20	
		700	1801	-0.069	27			3.56	850	-17.1	47	46	42	34	28	23	
		800	2059	-0.090	29			4.06	972	-22.4	46	47	44	37	31	25	
		900	2316	-0.114	31			4.57	1093	-28.3	46	49	46	39	33	27	
		1000	2573	-0.141	32			5.08	1214	-35.0	46	50	47	41	35	29	
		1100	2831	-0.170	34			5.59	1336	-42.3	46	52	49	43	36	31	
24 x 18	3.00	300	836	-0.013	14	61.0 x 45.7	0.28	1.52	394	-3.1	46	32	27	16	12	-	
		400	1114	-0.022	18			2.03	526	-5.6	46	36	32	21	16	11	
		500	1393	-0.035	22			2.54	657	-8.7	45	39	35	25	20	15	
		600	1671	-0.051	25			3.05	789	-12.6	45	41	38	29	23	18	
		700	1950	-0.069	27			3.56	920	-17.1	44	43	40	32	26	20	
		800	2228	-0.090	29			4.06	1052	-22.4	44	45	42	34	28	23	
		900	2507	-0.114	31			4.57	1183	-28.3	44	47	44	37	30	25	
		1000	2785	-0.141	33			5.08	1314	-35.0	43	48	45	39	32	27	
		1100	3064	-0.170	34			5.59	1446	-42.3	43	49	47	40	34	28	
30 x 16	3.33	300	929	-0.013	14	76.2 x 40.6	0.31	1.52	439	-3.1	47	32	27	16	12	-	
		400	1239	-0.022	19			2.03	585	-5.6	46	36	32	22	17	11	
		500	1549	-0.035	22			2.54	731	-8.7	45	39	35	26	21	15	
		600	1859	-0.051	25			3.05	877	-12.6	45	42	38	29	24	18	
		700	2168	-0.069	27			3.56	1023	-17.1	45	44	40	32	26	21	
		800	2478	-0.090	30			4.06	1170	-22.4	44	45	42	35	29	23	
		900	2788	-0.114	31			4.57	1316	-28.3	44	47	44	37	31	25	
		1000	3098	-0.141	33			5.08	1462	-35.0	44	48	45	39	33	27	
		1100	3407	-0.170	34			5.59	1608	-42.3	44	50	47	41	34	29	
22 x 22	3.36	200	627	-0.006	-	55.9 x 55.9	0.31	1.02	296	-1.4	50	30	24	11	-	-	
		300	941	-0.013	14			1.52	444	-3.1	49	35	30	19	15	-	
		400	1254	-0.022	19			2.03	592	-5.6	49	39	35	24	20	14	
		500	1568	-0.035	22			2.54	740	-8.7	48	42	38	29	23	18	
		600	1882	-0.051	25			3.05	888	-12.6	48	44	41	32	27	21	
		800	2509	-0.090	30			4.06	1184	-22.4	47	48	45	38	32	26	
		900	2822	-0.114	31			4.57	1332	-28.3	47	50	47	40	34	28	
		1000	3136	-0.141	33			5.08	1480	-35.0	47	51	48	42	35	30	
		1100	3449	-0.170	35			5.59	1628	-42.3	46	53	50	44	37	31	
36 x 14	3.50	200	649	-0.006	-	91.4 x 35.6	0.33	1.02	306	-1.4	50	30	24	11	-	-	
		300	973	-0.013	15			1.52	459	-3.1	50	35	31	19	15	-	
		400	1297	-0.022	19			2.03	612	-5.6	49	39	35	25	20	14	
		500	1622	-0.035	22			2.54	765	-8.7	48	42	38	29	24	18	
		600	1946	-0.051	25			3.05	918	-12.6	48	45	41	32	27	21	
		800	2595	-0.090	30			4.06	1225	-22.4	47	48	45	38	32	26	
		900	2919	-0.114	32			4.57	1378	-28.3	47	50	47	40	34	28	
		1000	3243	-0.141	33			5.08	1531	-35.0	47	51	48	42	36	30	
		1100	3568	-0.170	35			5.59	1684	-42.3	47	53	50	44	37	32	
24 x 22	3.67	200	686	-0.006	-	61.0 x 55.9	0.34	1.02	324	-1.4	51	30	25	12	-	-	
		300	1029	-0.013	15			1.52	486	-3.1	50	36	31	19	15	-	
		400	1372	-0.022	19			2.03	648	-5.6	49	39	35	25	20	14	
		500	1715	-0.035	23			2.54	810	-8.7	49	42	38	29	24	18	
		600	2059	-0.051	26			3.05	972	-12.6	48	45	41	32	27	21	
		800	2745	-0.090	30			4.06	1295	-22.4	48	49	45	38	32	26	
		900	3088	-0.114	32			4.57	1457	-28.3	47	50	47	40	34	28	
		1000	3431	-0.141	33			5.08	1619	-35.0	47	52	49	42	36	30	
		1100	3774	-0.170	35			5.59	1781	-42.3	47	53	50	44	37	32	

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

		IP DATA				SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIR FLOW	Ps	2	3	4	5	6	7		
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa								
30 x 18	3.75	200	701	-0.006	-	76.2 x 45.7	0.35	1.02	331	-1.4	51	30	25	12	-	-		
		300	1051	-0.013	15			1.52	496	-3.1	50	36	31	19	15	-		
		400	1402	-0.022	19			2.03	661	-5.6	49	40	35	25	20	14		
		500	1752	-0.035	23			2.54	827	-8.7	49	42	38	29	24	18		
		600	2102	-0.051	26			3.05	992	-12.6	48	45	41	33	27	21		
		800	2803	-0.090	30			4.06	1323	-22.4	48	49	45	38	32	26		
		900	3154	-0.114	32			4.57	1488	-28.3	47	50	47	40	34	28		
		1000	3504	-0.141	34			5.08	1654	-35.0	47	52	49	42	36	30		
		1100	3854	-0.170	35			5.59	1819	-42.3	47	53	50	44	38	32		
36 x 16	4.00	200	747	-0.006	-	91.4 x 40.6	0.37	1.02	352	-1.4	51	31	25	12	-	-		
		300	1120	-0.013	15			1.52	529	-3.1	50	36	31	20	15	-		
		400	1493	-0.022	20			2.03	705	-5.6	49	40	35	25	20	15		
		500	1867	-0.035	23			2.54	881	-8.7	49	43	39	29	24	18		
		600	2240	-0.051	26			3.05	1057	-12.6	49	45	41	33	27	22		
		800	2986	-0.090	30			4.06	1409	-22.4	48	49	46	38	32	27		
		900	3360	-0.114	32			4.57	1586	-28.3	48	51	47	40	34	29		
		1000	3733	-0.141	34			5.08	1762	-35.0	47	52	49	42	36	31		
		1100	4106	-0.170	35			5.59	1938	-42.3	47	53	50	44	38	32		
36 x 18	4.50	200	845	-0.006	-	91.4 x 45.7	0.42	1.02	399	-1.4	52	31	26	13	-	-		
		300	1267	-0.013	16			1.52	598	-3.1	51	36	32	20	16	-		
		400	1689	-0.022	20			2.03	797	-5.6	50	40	36	26	21	15		
		500	2111	-0.035	24			2.54	996	-8.7	49	43	39	30	25	19		
		600	2534	-0.051	26			3.05	1196	-12.6	49	46	42	33	28	22		
		800	3378	-0.090	31			4.06	1594	-22.4	48	50	46	39	33	27		
		900	3800	-0.114	33			4.57	1794	-28.3	48	51	48	41	35	29		
		1000	4223	-0.141	34			5.08	1993	-35.0	48	53	50	43	37	31		
		1100	4645	-0.170	36			5.59	2192	-42.3	48	54	51	45	38	33		
30 x 24	5.00	200	945	-0.006	-	76.2 x 61.0	0.46	1.02	446	-1.4	52	32	26	13	-	-		
		300	1417	-0.013	16			1.52	669	-3.1	51	37	32	21	16	11		
		400	1889	-0.022	21			2.03	892	-5.6	50	41	36	26	21	16		
		500	2361	-0.035	24			2.54	1114	-8.7	50	44	40	30	25	19		
		600	2834	-0.051	27			3.05	1337	-12.6	50	46	42	34	28	23		
		800	3778	-0.090	31			4.06	1783	-22.4	49	50	47	39	33	28		
		900	4250	-0.114	33			4.57	2006	-28.3	49	52	48	41	35	30		
		1000	4723	-0.141	35			5.08	2229	-35.0	48	53	50	43	37	32		
		1100	5195	-0.170	36			5.59	2452	-42.3	48	54	51	45	39	33		
42 x 18	5.25	200	988	-0.006	-	106.7 x 45.7	0.49	1.02	466	-1.4	47	27	21	-	-	-		
		300	1482	-0.013	16			1.52	700	-3.1	46	32	27	16	12	-		
		400	1977	-0.022	21			2.03	933	-5.6	46	36	32	21	16	11		
		500	2471	-0.035	24			2.54	1166	-8.7	45	39	35	25	20	15		
		600	2965	-0.051	27			3.05	1399	-12.6	45	41	38	29	23	18		
		800	3953	-0.090	32			4.06	1866	-22.4	44	45	42	34	28	23		
		900	4447	-0.114	33			4.57	2099	-28.3	44	47	44	37	30	25		
		1000	4941	-0.141	35			5.08	2332	-35.0	43	48	45	39	32	27		
		1100	5436	-0.170	37			5.59	2565	-42.3	43	49	47	40	34	28		
28 x 28	5.44	200	1031	-0.006	-	71.1 x 71.1	0.51	1.02	487	-1.4	47	27	21	-	-	-		
		300	1547	-0.013	17			1.52	730	-3.1	47	32	27	16	12	-		
		400	2063	-0.022	21			2.03	973	-5.6	46	36	32	22	17	11		
		500	2578	-0.035	24			2.54	1217	-8.7	45	39	35	26	21	15		
		600	3094	-0.051	27			3.05	1460	-12.6	45	42	38	29	24	18		
		800	4125	-0.090	32			4.06	1947	-22.4	44	45	42	35	29	23		
		900	4641	-0.114	34			4.57	2190	-28.3	44	47	44	37	31	25		
		1000	5157	-0.141	35			5.08	2434	-35.0	44	48	45	39	33	27		
		1100	5672	-0.170	37			5.59	2677	-42.3	44	50	47	41	34	29		

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

IP DATA					SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	OCTAVE BAND, dB						
in	sq ft	fpm	cfm	in wg		cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7	
30 x 28	5.83	200	1107	-0.006	11	76.2 x 71.1	0.54	1.02	522	-1.4	53	32	27	14	-	-	
		300	1661	-0.013	17			1.52	784	-3.1	52	38	33	21	17	11	
		400	2214	-0.022	21			2.03	1045	-5.6	51	41	37	27	22	16	
		600	3321	-0.051	28			3.05	1567	-12.6	50	47	43	34	29	23	
		700	3875	-0.069	30			3.56	1829	-17.1	50	49	45	37	32	26	
		800	4428	-0.090	32			4.06	2090	-22.4	50	51	47	40	34	28	
		900	4982	-0.114	34			4.57	2351	-28.3	49	52	49	42	36	30	
		1000	5535	-0.141	36			5.08	2612	-35.0	49	54	51	44	38	32	
		1100	6089	-0.170	37			5.59	2874	-42.3	49	55	52	46	39	34	
36 x 24	6.00	200	1138	-0.006	11	91.4 x 61.0	0.56	1.02	537	-1.4	53	32	27	14	-	-	
		300	1707	-0.013	17			1.52	806	-3.1	52	38	33	22	17	11	
		400	2277	-0.022	21			2.03	1074	-5.6	51	42	37	27	22	16	
		600	3415	-0.051	28			3.05	1612	-12.6	50	47	43	35	29	23	
		700	3984	-0.069	30			3.56	1880	-17.1	50	49	46	38	32	26	
		800	4553	-0.090	32			4.06	2149	-22.4	50	51	48	40	34	28	
		900	5122	-0.114	34			4.57	2417	-28.3	49	52	49	42	36	30	
		1000	5691	-0.141	36			5.08	2686	-35.0	49	54	51	44	38	32	
		1100	6261	-0.170	37			5.59	2955	-42.3	49	55	52	46	40	34	
30 x 30	6.25	200	1188	-0.006	11	76.2 x 76.2	0.58	1.02	561	-1.4	53	32	27	14	-	-	
		300	1782	-0.013	17			1.52	841	-3.1	52	38	33	22	17	12	
		400	2377	-0.022	22			2.03	1122	-5.6	51	42	37	27	22	17	
		600	3565	-0.051	28			3.05	1682	-12.6	51	47	43	35	29	24	
		700	4159	-0.069	30			3.56	1963	-17.1	50	49	46	38	32	26	
		800	4753	-0.090	32			4.06	2243	-22.4	50	51	48	40	34	29	
		900	5347	-0.114	34			4.57	2524	-28.3	50	53	49	42	36	31	
		1000	5941	-0.141	36			5.08	2804	-35.0	49	54	51	44	38	33	
		1100	6536	-0.170	37			5.59	3084	-42.3	49	55	52	46	40	34	
36 x 28	7.00	200	1334	-0.006	11	91.4 x 71.1	0.65	1.02	630	-1.4	54	33	28	15	11	-	
		300	2001	-0.013	18			1.52	944	-3.1	53	38	34	22	18	12	
		400	2668	-0.022	22			2.03	1259	-5.6	52	42	38	28	23	17	
		600	4002	-0.051	28			3.05	1889	-12.6	51	48	44	35	30	24	
		700	4669	-0.069	31			3.56	2204	-17.1	51	50	46	38	32	27	
		800	5336	-0.090	33			4.06	2519	-22.4	50	51	48	41	35	29	
		900	6004	-0.114	35			4.57	2833	-28.3	50	53	50	43	37	31	
		1000	6671	-0.141	36			5.08	3148	-35.0	50	54	52	45	39	33	
		1100	7338	-0.170	38			5.59	3463	-42.3	50	56	53	47	40	35	
46 x 22	7.03	200	1336	-0.006	11	116.8 x 55.9	0.65	1.02	630	-1.4	54	33	28	15	11	-	
		300	2003	-0.013	18			1.52	945	-3.1	53	38	34	22	18	12	
		400	2671	-0.022	22			2.03	1261	-5.6	52	42	38	28	23	17	
		600	4007	-0.051	28			3.05	1891	-12.6	51	48	44	35	30	24	
		700	4674	-0.069	31			3.56	2206	-17.1	51	50	46	38	32	27	
		800	5342	-0.090	33			4.06	2521	-22.4	50	51	48	41	35	29	
		900	6010	-0.114	35			4.57	2836	-28.3	50	53	50	43	37	31	
		1000	6678	-0.141	36			5.08	3151	-35.0	50	54	52	45	39	33	
		1100	7345	-0.170	38			5.59	3467	-42.3	50	56	53	47	40	35	
32 x 32	7.11	200	1356	-0.006	11	81.3 x 81.3	0.66	1.02	640	-1.4	54	33	28	15	11	-	
		300	2035	-0.013	18			1.52	960	-3.1	53	38	34	22	18	12	
		400	2713	-0.022	22			2.03	1280	-5.6	52	42	38	28	23	17	
		600	4069	-0.051	28			3.05	1920	-12.6	51	48	44	35	30	24	
		700	4747	-0.069	31			3.56	2240	-17.1	51	50	46	38	33	27	
		800	5425	-0.090	33			4.06	2560	-22.4	50	52	48	41	35	29	
		900	6104	-0.114	35			4.57	2881	-28.3	50	53	50	43	37	31	
		1000	6782	-0.141	36			5.08	3201	-35.0	50	55	52	45	39	33	
		1100	7460	-0.170	38			5.59	3521	-42.3	50	56	53	47	40	35	

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

		IP DATA				SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIR FLOW	Ps	2	3	4	5	6	7		
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa								
36 x 30	7.50	200	1432	-0.006	12	91.4 x 76.2	0.70	1.02	676	-1.4	54	33	28	15	11	-		
		300	2148	-0.013	18			1.52	1014	-3.1	53	39	34	22	18	12		
		400	2864	-0.022	22			2.03	1352	-5.6	52	43	38	28	23	17		
		600	4296	-0.051	29			3.05	2028	-12.6	51	48	44	36	30	24		
		700	5012	-0.069	31			3.56	2365	-17.1	51	50	46	38	33	27		
		800	5728	-0.090	33			4.06	2703	-22.4	51	52	48	41	35	29		
		900	6444	-0.114	35			4.57	3041	-28.3	50	53	50	43	37	31		
		1000	7160	-0.141	37			5.08	3379	-35.0	50	55	52	45	39	33		
		1100	7876	-0.170	38			5.59	3717	-42.3	50	56	53	47	41	35		
36 x 32	8.00	200	1530	-0.006	12	91.4 x 81.3	0.74	1.02	722	-1.4	47	27	21	-	-	-		
		300	2295	-0.013	18			1.52	1083	-3.1	46	32	27	16	12	-		
		400	3060	-0.022	23			2.03	1444	-5.6	46	36	32	21	16	11		
		600	4590	-0.051	29			3.05	2166	-12.6	45	41	38	29	23	18		
		700	5355	-0.069	31			3.56	2527	-17.1	44	43	40	32	26	20		
		800	6120	-0.090	33			4.06	2888	-22.4	44	45	42	34	28	23		
		900	6885	-0.114	35			4.57	3249	-28.3	44	47	44	37	30	25		
		1000	7650	-0.141	37			5.08	3610	-35.0	43	48	45	39	32	27		
		1100	8415	-0.170	38			5.59	3971	-42.3	43	49	47	40	34	28		
34 x 34	8.03	200	1536	-0.006	12	86.4 x 86.4	0.75	1.02	725	-1.4	47	27	21	-	-	-		
		300	2303	-0.013	18			1.52	1087	-3.1	47	32	27	16	12	-		
		400	3071	-0.022	23			2.03	1449	-5.6	46	36	32	22	17	11		
		600	4607	-0.051	29			3.05	2174	-12.6	45	42	38	29	24	18		
		700	5374	-0.069	31			3.56	2536	-17.1	45	44	40	32	26	21		
		800	6142	-0.090	33			4.06	2899	-22.4	44	45	42	35	29	23		
		900	6910	-0.114	35			4.57	3261	-28.3	44	47	44	37	31	25		
		1000	7678	-0.141	37			5.08	3623	-35.0	44	48	45	39	33	27		
		1100	8445	-0.170	38			5.59	3986	-42.3	44	50	47	41	34	29		
36 x 34	8.50	100	814	-0.001	-	91.4 x 86.4	0.79	0.51	384	-0.3	56	25	18	-	-	-		
		200	1628	-0.006	12			1.02	768	-1.4	54	34	28	15	12	-		
		300	2442	-0.013	19			1.52	1152	-3.1	53	39	34	23	19	13		
		400	3256	-0.022	23			2.03	1537	-5.6	53	43	39	28	24	18		
		500	4070	-0.035	26			2.54	1921	-8.7	52	46	42	33	28	22		
		600	4884	-0.051	29			3.05	2305	-12.6	52	48	45	36	31	25		
		800	6511	-0.090	34			4.06	3073	-22.4	51	52	49	42	36	30		
		1000	8139	-0.141	37			5.08	3841	-35.0	51	55	52	46	39	34		
		1100	8953	-0.170	39			5.59	4225	-42.3	50	57	54	48	41	36		
42 x 30	8.75	100	838	-0.001	-	106.7 x 76.2	0.81	0.51	395	-0.3	56	25	18	-	-	-		
		200	1676	-0.006	12			1.02	791	-1.4	55	34	28	15	12	-		
		300	2514	-0.013	19			1.52	1186	-3.1	54	39	35	23	19	13		
		400	3352	-0.022	23			2.03	1582	-5.6	53	43	39	29	24	18		
		500	4189	-0.035	27			2.54	1977	-8.7	52	46	42	33	28	22		
		600	5027	-0.051	29			3.05	2373	-12.6	52	49	45	36	31	25		
		800	6703	-0.090	34			4.06	3164	-22.4	51	52	49	42	36	30		
		1000	8379	-0.141	37			5.08	3954	-35.0	51	55	52	46	40	34		
		1100	9217	-0.170	39			5.59	4350	-42.3	51	57	54	48	41	36		
36 x 36	9.00	100	863	-0.001	-	91.4 x 91.4	0.84	0.51	407	-0.3	56	25	18	-	-	-		
		200	1726	-0.006	13			1.02	814	-1.4	55	34	29	16	12	-		
		300	2589	-0.013	19			1.52	1222	-3.1	54	39	35	23	19	13		
		400	3452	-0.022	23			2.03	1629	-5.6	53	43	39	29	24	18		
		500	4314	-0.035	27			2.54	2036	-8.7	53	46	42	33	28	22		
		600	5177	-0.051	30			3.05	2443	-12.6	52	49	45	36	31	25		
		800	6903	-0.090	34			4.06	3258	-22.4	51	53	49	42	36	30		
		1000	8629	-0.141	37			5.08	4072	-35.0	51	56	53	46	40	34		
		1100	9492	-0.170	39			5.59	4480	-42.3	51	57	54	48	41	36		

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

IP DATA					SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	OCTAVE BAND, dB						
in	sq ft	fpm	cfm	in wg		cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7	
48 x 30	10.00	100	960	-0.001	-	121.9 x 76.2	0.93	0.51	453	-0.3	57	25	19	-	-	-	
		200	1920	-0.006	13			1.02	906	-1.4	55	35	29	16	12	-	
		300	2879	-0.013	19			1.52	1359	-3.1	54	40	35	24	19	14	
		400	3839	-0.022	24			2.03	1812	-5.6	53	44	39	29	24	19	
		500	4799	-0.035	27			2.54	2265	-8.7	53	47	43	33	28	22	
		600	5759	-0.051	30			3.05	2718	-12.6	53	49	45	37	31	26	
		800	7678	-0.090	34			4.06	3624	-22.4	52	53	50	42	36	31	
		1000	9598	-0.141	38			5.08	4530	-35.0	51	56	53	46	40	35	
		1100	10557	-0.170	39			5.59	4983	-42.3	51	57	54	48	42	36	
38 x 38	10.03	100	964	-0.001	-	96.5 x 96.5	0.93	0.51	455	-0.3	57	25	19	-	-	-	
		200	1927	-0.006	13			1.02	910	-1.4	55	35	29	16	12	-	
		300	2891	-0.013	19			1.52	1364	-3.1	54	40	35	24	19	14	
		400	3854	-0.022	24			2.03	1819	-5.6	53	44	39	29	24	19	
		500	4818	-0.035	27			2.54	2274	-8.7	53	47	43	33	28	22	
		600	5782	-0.051	30			3.05	2729	-12.6	53	49	45	37	31	26	
		800	7709	-0.090	34			4.06	3638	-22.4	52	53	50	42	36	31	
		1000	9636	-0.141	38			5.08	4548	-35.0	51	56	53	46	40	35	
		1100	10599	-0.170	39			5.59	5002	-42.3	51	57	54	48	42	36	
42 x 36	10.50	100	1010	-0.001	-	106.7 x 91.4	0.98	0.51	477	-0.3	57	25	19	-	-	-	
		200	2020	-0.006	13			1.02	953	-1.4	55	35	29	16	13	-	
		300	3029	-0.013	19			1.52	1430	-3.1	54	40	35	24	20	14	
		400	4039	-0.022	24			2.03	1906	-5.6	54	44	40	29	25	19	
		500	5049	-0.035	27			2.54	2383	-8.7	53	47	43	34	28	23	
		600	6059	-0.051	30			3.05	2859	-12.6	53	49	46	37	32	26	
		800	8078	-0.090	35			4.06	3812	-22.4	52	53	50	42	37	31	
		1000	10098	-0.141	38			5.08	4766	-35.0	52	56	53	47	40	35	
		1100	11107	-0.170	40			5.59	5242	-42.3	51	57	55	48	42	36	
46 x 34	10.86	100	1045	-0.001	-	116.8 x 86.4	1.01	0.51	493	-0.3	57	26	19	-	-	-	
		200	2090	-0.006	13			1.02	986	-1.4	55	35	29	16	13	-	
		300	3135	-0.013	20			1.52	1479	-3.1	55	40	35	24	20	14	
		400	4179	-0.022	24			2.03	1972	-5.6	54	44	40	30	25	19	
		500	5224	-0.035	28			2.54	2466	-8.7	53	47	43	34	29	23	
		600	6269	-0.051	30			3.05	2959	-12.6	53	50	46	37	32	26	
		800	8359	-0.090	35			4.06	3945	-22.4	52	53	50	43	37	31	
		1000	10448	-0.141	38			5.08	4931	-35.0	52	56	53	47	41	35	
		1100	11493	-0.170	40			5.59	5424	-42.3	51	58	55	49	42	37	
42 x 38	11.08	100	1067	-0.001	-	106.7 x 96.5	1.03	0.51	504	-0.3	49	17	11	-	-	-	
		200	2134	-0.006	13			1.02	1007	-1.4	47	27	21	-	-	-	
		300	3201	-0.013	20			1.52	1511	-3.1	46	32	27	16	12	-	
		400	4268	-0.022	24			2.03	2014	-5.6	46	36	32	21	16	11	
		500	5335	-0.035	28			2.54	2518	-8.7	45	39	35	25	20	15	
		600	6402	-0.051	30			3.05	3022	-12.6	45	41	38	29	23	18	
		800	8536	-0.090	35			4.06	4029	-22.4	44	45	42	34	28	23	
		1000	10671	-0.141	38			5.08	5036	-35.0	43	48	45	39	32	27	
		1100	11738	-0.170	40			5.59	5540	-42.3	43	49	47	40	34	28	
40 x 40	11.11	100	1070	-0.001	-	101.6 x 101.6	1.03	0.51	505	-0.3	49	18	11	-	-	-	
		200	2140	-0.006	13			1.02	1010	-1.4	47	27	21	-	-	-	
		300	3210	-0.013	20			1.52	1515	-3.1	47	32	27	16	12	-	
		400	4279	-0.022	24			2.03	2020	-5.6	46	36	32	22	17	11	
		500	5349	-0.035	28			2.54	2525	-8.7	45	39	35	26	21	15	
		600	6419	-0.051	30			3.05	3029	-12.6	45	42	38	29	24	18	
		800	8559	-0.090	35			4.06	4039	-22.4	44	45	42	35	29	23	
		1000	10698	-0.141	38			5.08	5049	-35.0	44	48	45	39	33	27	
		1100	11768	-0.170	40			5.59	5554	-42.3	44	50	47	41	34	29	

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

		IP DATA				SOUND	METRIC DATA					OCTAVE BAND, dB						
NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	NOM DUCT		DUCT AREA	NECK VEL	AIR FLOW	Ps								
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa	2	3	4	5	6	7		
48 x 36	12.00	100	1157	-0.001	-	121.9 x 91.4	1.11	0.51	546	-0.3	57	26	20	-	-	-		
		200	2313	-0.006	14			1.02	1092	-1.4	56	35	30	17	13	-		
		300	3470	-0.013	20			1.52	1638	-3.1	55	41	36	25	20	14		
		400	4627	-0.022	25			2.03	2183	-5.6	54	45	40	30	25	19		
		500	5783	-0.035	28			2.54	2729	-8.7	54	48	44	34	29	23		
		600	6940	-0.051	31			3.05	3275	-12.6	53	50	46	38	32	26		
		800	9253	-0.090	35			4.06	4367	-22.4	53	54	51	43	37	31		
		1000	11566	-0.141	39			5.08	5459	-35.0	52	57	54	47	41	35		
		1100	12723	-0.170	40			5.59	6005	-42.3	52	58	55	49	43	37		
42 x 42	12.25	100	1182	-0.001	-	106.7 x 106.7	1.14	0.51	558	-0.3	58	26	20	-	-	-		
		200	2363	-0.006	14			1.02	1115	-1.4	56	35	30	17	13	-		
		300	3545	-0.013	20			1.52	1673	-3.1	55	41	36	25	20	14		
		400	4727	-0.022	25			2.03	2231	-5.6	54	45	40	30	25	19		
		500	5908	-0.035	28			2.54	2788	-8.7	54	48	44	34	29	23		
		600	7090	-0.051	31			3.05	3346	-12.6	53	50	46	38	32	27		
		800	9453	-0.090	35			4.06	4461	-22.4	53	54	51	43	37	32		
		1000	11816	-0.141	39			5.08	5577	-35.0	52	57	54	47	41	35		
		1100	12998	-0.170	40			5.59	6134	-42.3	52	58	55	49	43	37		
44 x 44	13.44	100	1299	-0.001	-	111.8 x 111.8	1.25	0.51	613	-0.3	58	27	20	-	-	-		
		200	2598	-0.006	14			1.02	1226	-1.4	56	36	30	17	14	-		
		300	3897	-0.013	21			1.52	1839	-3.1	55	41	36	25	21	15		
		400	5196	-0.022	25			2.03	2452	-5.6	55	45	41	30	26	20		
		500	6495	-0.035	28			2.54	3065	-8.7	54	48	44	35	29	24		
		600	7794	-0.051	31			3.05	3678	-12.6	54	50	47	38	33	27		
		800	10392	-0.090	36			4.06	4904	-22.4	53	54	51	44	38	32		
		1000	12990	-0.141	39			5.08	6131	-35.0	53	57	54	48	41	36		
		1100	14289	-0.170	41			5.59	6744	-42.3	52	59	56	50	43	37		
48 x 42	14.00	100	1354	-0.001	-	121.9 x 106.7	1.30	0.51	639	-0.3	58	27	20	-	-	-		
		200	2707	-0.006	14			1.02	1278	-1.4	57	36	31	18	14	-		
		300	4061	-0.013	21			1.52	1916	-3.1	56	41	37	25	21	15		
		400	5414	-0.022	25			2.03	2555	-5.6	55	45	41	31	26	20		
		500	6768	-0.035	29			2.54	3194	-8.7	54	48	44	35	30	24		
		600	8121	-0.051	31			3.05	3833	-12.6	54	51	47	38	33	27		
		800	10828	-0.090	36			4.06	5110	-22.4	53	54	51	44	38	32		
		1000	13535	-0.141	39			5.08	6388	-35.0	53	57	55	48	42	36		
		1100	14889	-0.170	41			5.59	7027	-42.3	53	59	56	50	43	38		
46 x 46	14.69	100	1422	-0.001	-	116.8 x 116.8	1.37	0.51	671	-0.3	58	27	20	-	-	-		
		200	2844	-0.006	15			1.02	1342	-1.4	57	36	31	18	14	-		
		300	4266	-0.013	21			1.52	2013	-3.1	56	42	37	25	21	15		
		400	5688	-0.022	25			2.03	2684	-5.6	55	45	41	31	26	20		
		500	7110	-0.035	29			2.54	3355	-8.7	55	48	44	35	30	24		
		600	8532	-0.051	32			3.05	4026	-12.6	54	51	47	38	33	27		
		800	11375	-0.090	36			4.06	5369	-22.4	54	55	51	44	38	32		
		1000	14219	-0.141	40			5.08	6711	-35.0	53	58	55	48	42	36		
		1100	15641	-0.170	41			5.59	7382	-42.3	53	59	56	50	43	38		
48 x 46	15.33	100	1485	-0.001	-	121.9 x 116.8	1.42	0.51	701	-0.3	59	27	21	-	-	-		
		200	2970	-0.006	15			1.02	1401	-1.4	57	36	31	18	14	-		
		300	4454	-0.013	21			1.52	2102	-3.1	56	42	37	26	21	15		
		400	5939	-0.022	25			2.03	2803	-5.6	55	46	41	31	26	20		
		500	7424	-0.035	29			2.54	3504	-8.7	55	49	45	35	30	24		
		600	8909	-0.051	32			3.05	4204	-12.6	54	51	47	39	33	27		
		800	11878	-0.090	36			4.06	5606	-22.4	54	55	52	44	38	32		
		1000	14848	-0.141	40			5.08	7007	-35.0	53	58	55	48	42	36		
		1100	16332	-0.170	41			5.59	7708	-42.3	53	59	56	50	44	38		

NOTE: See notes and correction factors on page P1-69.

PERFORMANCE DATA

NOM DUCT	DUCT AREA	IP DATA			SOUND	METRIC DATA					OCTAVE BAND, dB					
		NECK VEL	AIR FLOW	Ps		NOM DUCT	DUCT AREA	NECK VEL	AIR FLOW	Ps	2	3	4	5	6	7
in	sq ft	fpm	cfm	in wg	NC	cm	sq m	m/s	l/s	Pa						
48 x 48	16.00	100	1550	-0.001	-	121.9 x 121.9	1.49	0.51	732	-0.3	59	27	21	-	-	-
		200	3101	-0.006	15			1.02	1463	-1.4	57	37	31	18	14	-
		300	4651	-0.013	21			1.52	2195	-3.1	56	42	37	26	21	16
		400	6202	-0.022	26			2.03	2927	-5.6	56	46	41	31	26	21
		500	7752	-0.035	29			2.54	3659	-8.7	55	49	45	35	30	24
		600	9302	-0.051	32			3.05	4390	-12.6	55	51	47	39	33	28
		800	12403	-0.090	37			4.06	5854	-22.4	54	55	52	44	38	33
		1000	15504	-0.141	40			5.08	7317	-35.0	53	58	55	49	42	37
		1100	17054	-0.170	41			5.59	8049	-42.3	53	59	57	50	44	38

NOTES: Performance data includes damper. Data was obtained from test conducted in accordance with ANSI / ASHRAE Standard 70-1991. All pressures are in inches of water (Pascals). NC values are based on Octave Band 2 - 7 sound power levels minus a room absorption of 10dB.

9S80

Stainless Steel Return Grille, Fixed Blades



ENGINEERING SPECIFICATION & CONFIGURATION

9S80

The return grille shall be a Krueger model 9S80. This grille must have fixed 45° deflection (H and V models) or 0° deflection (HZ and VZ models) blades on 3/4" centers constructed of roll formed 304 stainless steel with minimum 0.050" thickness. The frame of the grille must be constructed of 20 gage 304 stainless steel with countersunk screw holes (#6x1 1/4" stainless sheet metal screws provided by manufacturer). This frame must also produce a border of 1 3/8" around all sides of the grille with mitered corners. Optional 304 stainless steel damper available made of 20 gage stainless steel welded to the return grille and operable from the face.

Optional 316 stainless steel construction available.

FINISH

The finish shall be 90 - #4 Satin Polish, obtained by finishing with a 120-grit abrasive, or 44 - British White.

1. SERIES: (XXXX)

9S80 - Single Deflection Return Grille with Blades on 3/4" Centers

2. PATTERN: (XX)

H - 45° Horizontal Blades
V - 45° Vertical Blades
HZ - 0° Horizontal Blades
VZ - 0° Vertical Blades

3. WIDTH: (XX)

4" - 48" in 1" Increments

4. HEIGHT: (XX)

4" - 60" in 1" Increments

5. MATERIAL: (XXX)

304 - Stainless Steel Grade 304
316 - Stainless Steel Grade 316

6. FRAME STYLE: (XXX)

F22 - Surface Mount
F23 - Lay-in T-Bar

7. PANEL: (XX)x(XX)

None
24"x24" *
24"x48" *

8. FASTENING METHOD: (XX)

00 - No Screw Holes
01 - Countersunk Screw Holes **

9. DAMPER: (XX)

00 - No Damper
01 - Stainless Steel OBD †

10. ACCESSORIES: (XX) (XX)

00 - No Accessories
01 - Plaster Frame
XX - Square to Round Adapter ‡
(Specify size from 04 - 18" in increments of 2", depending on neck size)

11. FINISH: (XX)

90 - #4 Satin Polish
44 - British White

* Only available with Frame 23.

** Unit shipped with #6x1 1/4" stainless steel sheet metal screws.

† Damper is welded to unit.

‡ Square to Round Adapter is not available with OBD.

SAMPLE CONFIGURATION: 9S80 - HZ - 30x60 - 316 - F22 - NONE - 01 - 00 - 00 - 00 - 90