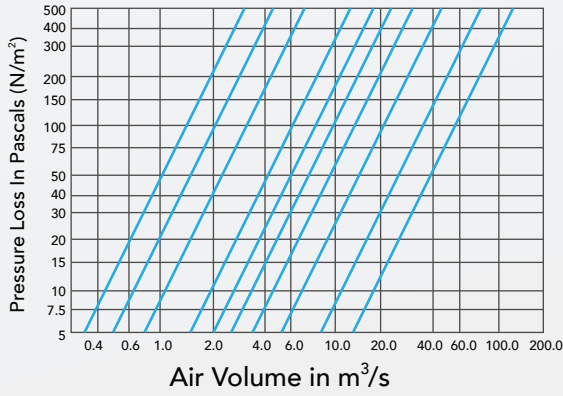




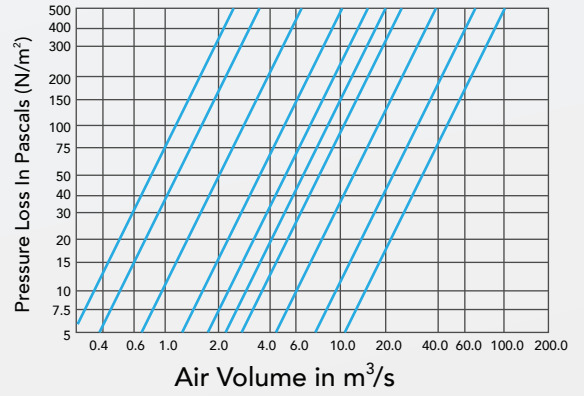
Sound Absorption Licensed

CA and CPA attenuator

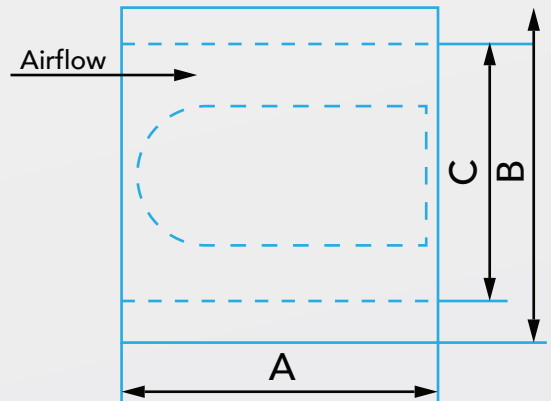
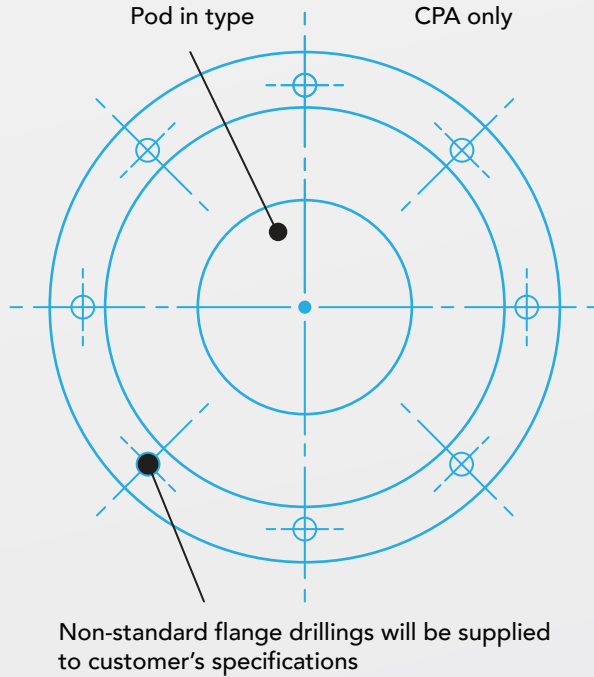
Pressure Loss Chart: CPA - 1D



Pressure Loss Chart: CPA - 2D



The pressure loss data applies to types CPA - 1D and CPA - 2D only. The type CA (without concentric pod) has a negligible pressure loss.



Dimensions and Weights

Nominal

fan

Diam. D
Inches

A

A

B

C

CA
1D

CA
2D

CPA
1D

CPA
2D

Diam. D Inches	A 1D	A 2D	B	C	CA 1D	CA 2D	CPA 1D	CPA 2D
305	305	610	445	318	10	16	11	20
355	355	710	490	361	10	17	12	21
380	380	760	521	393	11	19	13	23
400	400	800	540	408	12	21	14	26
450	450	900	614	458	16	25	19	30
480	480	960	648	495	17	29	21	84
500	500	1000	664	508	18	32	23	39
535	535	1070	698	546	19	34	25	43
560	560	1120	714	566	21	37	27	46
610	610	1220	775	622	24	43	32	55
630	630	1260	794	636	27	49	39	70
710	710	1420	864	716	35	63	44	78
760	760	1520	927	775	40	72	52	83
800	800	1600	964	808	43	79	56	101
900	900	1800	1053	906	78	120	99	158
965	965	1935	1156	978	101	150	134	203
1000	1000	2000	1190	1008	113	161	143	216
1220	1220	2440	1413	1232	152	213	193	283
1400	1400	2800	1625	1410	250	500	320	640
1525	1525	3050	1740	1537	291	580	375	720
1600	1600	3200	1825	1610	305	610	400	800
1910	1910	3920	2121	1918	362	724	455	910
1800	1800	3600	2025	1810	340	680	435	870
1910	1910	3820	2121	1918	362	724	455	910
2000	2000	4000	2225	2010	435	870	550	1095

Fan Connected Performance Data

Dynamic Insertion Loss, dB

Nominal Fan diam. mm	Attenuator Length	Type	Approx Pitch Angle Setting*	Band Number and Octave Band Mid Frequency Hz								
				1 63	2 125	3 250	4 500	5 1k	6 2k	7 4k	8 8k	
305	1D	CA	ALL	2	4	6	10	14	10	7	8	
355			CPA	LOW	4	6	8	13	20	21	18	16
380				MED	4	6	8	12	18	19	16	14
400	HIGH	4		6	8	11	13	16	12	11		
450	2D	CA	LOW	4	7	12	18	22	17	13	13	
480			MED	4	7	11	17	21	17	13	12	
500			HIGH	4	7	10	15	19	16	12	10	
535		CPA	LOW	7	10	15	24	32	35	30	28	
560			MED	7	10	15	21	26	26	24	22	
			HIGH	7	10	15	16	15	17	13	13	

610	1D	CA	ALL	3	4	8	14	14	9	8	7	
630			CPA	LOW	4	6	9	17	26	21	18	12
710				MED	4	6	9	17	23	20	18	11
760	HIGH	4		6	9	16	17	16	14	11		
800	2D	CA	LOW	6	8	14	23	24	15	13	10	
			MED	6	8	13	22	22	14	13	8	
			HIGH	6	8	12	20	18	13	11	9	
		CPA	LOW	8	11	16	30	39	35	32	22	
			MED	8	11	16	27	32	32	29	19	
			HIGH	8	11	16	24	23	23	24	17	

900	1D	CA	ALL	3	4	9	14	12	8	7	7	
965			CPA	LOW	4	6	11	22	21	16	14	11
1000				MED	4	6	11	20	19	15	13	11
1220	HIGH	4		6	11	17	17	14	12	11		
	2D	CA	LOW	6	8	14	22	20	13	12	10	
			MED	6	8	13	21	18	12	11	10	
			HIGH	6	8	12	19	15	11	10	9	
		CPA	LOW	8	11	19	30	32	30	24	17	
			MED	8	11	19	26	27	26	22	17	
			HIGH	8	11	19	21	20	22	20	16	

1400	1D	CA	ALL	4	5	10	14	11	7	6	6	
1525			CPA	LOW	5	7	12	21	20	14	18	9
1600				MED	5	7	12	19	18	13	11	9
1800	HIGH	5		7	12	15	16	12	10	8		
1910	2D	CA	LOW	8	9	15	20	19	12	11	9	
2000			MED	8	9	14	20	17	11	10	9	
			HIGH	8	9	13	19	14	10	9	8	
		CPA	LOW	10	14	22	28	32	29	18	15	
			MED	10	14	22	25	27	25	16	15	
			HIGH	10	14	22	21	21	21	15	14	

Free Field End Reflection Correction

Nominal Fan diam. mm	Band Number and Octave							
	Band Mid Frequency Hz							
	1	2	3	4	5	6	7	8
	63	125	250	500	1K	2K	4K	8K
305/355/380	14	8	4	1	0	0	0	0
400	13	8	4	1	0	0	0	0
450/480	12	7	3	0	0	0	0	0
500	11	6	2	0	0	0	0	0
535/560	10	5	2	0	0	0	0	0
610/630	9	5	1	0	0	0	0	0
710/760	8	4	1	0	0	0	0	0
800/900	7	3	1	0	0	0	0	0
965/1000	5	2	0	0	0	0	0	0
1220	5	1	0	0	0	0	0	0
1400/1600	2	1	0	0	0	0	0	0
1800/1910/2000	2	0	0	0	0	0	0	0

Notes

Most fan manufacturers now quote in-duct acoustic performance data in their publications in accordance with BS.848, Part 2: in-duct data should be used where the fan is connected to a duct distribution system. When a type **CA** or **CPA** attenuator is direct-connected to the free inlet or discharge of an axial flow fan whose performance data is quoted only in-duct terms, the above additional figures in attenuation may be added to the values given in the dynamic insertion loss table.

Dynamic insertion loss is not significantly affected by fan speed on either type of attenuator: as fan speed is lowered for a given diameter so incident sound power level reduces together with volume flow. Very conveniently, regeneration reduces approximately in step with the fan sound power level.

Dynamic insertion loss is mainly affected by pitch angle setting on the type **CPA** with the type **CA** the velocities are greatly reduced and regeneration then becomes less important.

*The pitch angle setting --low, mid and high correspond to settings of approximately 10°, 20° and 30° on axial flow fans with adjustable pitch blades. Figures for other blade angle settings may be obtained by interpolation.