Table 1-10—Atomization Parameters for 80-Degree Flat Fan Nozzle

80° FLAT FAN NOZZLE ROTARY-WING — 8002 Orifice, 0° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	306	F	0.7	301	F	0.1	298	F	0.1	297	F	0.1	298	F	0.1	300	F	0.9	305	F	2.3
30	269	F	1.6	267	F	0.7	267	F	0.3	269	F	0.4	272	F	0.9	278	F	1.9	286	F	3.4
40	238	F	1.9	239	F	1.1	242	F	0.8	246	F	0.9	253	F	1.4	261	F	2.5	272	F	4.0
50	213	F	1.8	217	F	1.0	222	F	0.7	230	F	0.8	239	F	1.4	251	F	2.5	264	F	4.0
60	194	VF	1.2	200	VF	0.4	209	VF	0.1	219	VF	0.3	232	F	0.9	246	F	2.0	262	F	3.6

80° FLAT FAN NOZZLE ROTARY-WING — 8002 Orifice, 30° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	372	M	0.1	358	M	0.1	346	M	0.1	336	F	0.1	328	F	0.5	322	F	2.0	318	F	3.9
30	339	F	0.3	328	F	0.1	319	F	0.1	312	F	0.5	307	F	1.5	303	F	3.0	302	F	4.9
40	311	F	0.7	303	F	0.3	297	F	0.4	293	F	1.0	291	F	2.0	290	F	3.5	292	F	5.5
50	289	F	0.6	284	F	0.2	281	F	0.4	280	F	1.0	281	F	2.0	283	F	3.6	288	F	5.6
60	274	F	0.1	271	F	0.1	271	F	0.1	273	F	0.4	276	F	1.5	282	F	3.1	289	F	5.1

80° FLAT FAN NOZZLE ROTARY-WING

8002 Orifice, 60° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	397	M	0.1	375	M	0.1	354	F	0.1	335	F	0.1	318	F	1.3	303	F	3.2	290	F	5.5
30	367	M	0.1	348	F	0.1	330	F	0.1	314	F	0.8	300	F	2.2	288	F	4.2	278	F	6.6
40	343	F	0.1	326	F	0.1	312	F	0.2	299	F	1.2	288	F	2.7	279	F	4.7	271	F	7.1
50	325	F	0.1	311	F	0.1	299	F	0.1	289	F	1.2	281	F	2.7	275	F	4.7	271	F	7.2
60	313	F	0.1	302	F	0.1	293	F	0.1	285	F	0.7	280	F	2.2	277	F	4.3	276	F	6.8

80° FLAT FAN NOZZLE ROTARY-WING

8002 Orifice, 90° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	382	F	0.1	350	F	0.1	321	F	0.1	293	F	0.2	268	F	2.1	244	VF	4.5	222	VF	7.3
30	355	F	0.1	327	F	0.1	300	F	0.1	275	F	1.1	253	F	3.1	232	VF	5.5	213	VF	8.3
40	335	F	0.1	309	F	0.1	285	F	0.1	264	F	1.6	244	VF	3.6	226	VF	6.0	210	VF	8.9
50	320	F	0.1	297	F	0.1	277	F	0.0	258	F	1.6	241	VF	3.6	226	VF	6.0	213	VF	9.0
60	311	F	0.1	291	F	0.1	274	F	0.1	258	VF	1.0	243	VF	3.1	231	VF	5.6	221	VF	8.5

80° FLAT FAN NOZZLE ROTARY-WING

8004 Orifice, 0° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	388	M	1.2	378	M	0.1	369	M	0.1	363	M	0.1	359	M	0.1	357	M	0.6	356	F	1.9
30	352	M	2.0	345	M	1.0	340	M	0.5	336	M	0.4	335	M	0.8	336	F	1.6	338	F	2.9
40	323	M	2.3	318	M	1.4	316	F	0.8	315	F	0.8	317	F	1.2	320	F	2.1	326	F	3.4
50	299	F	2.2	297	F	1.2	298	F	0.7	300	F	0.7	305	F	1.2	311	F	2.1	319	F	3.4
60	281	F	1.5	282	F	0.6	286	F	0.1	291	F	0.1	298	F	0.6	307	F	1.6	319	F	3.0

80° FLAT FAN NOZZLE ROTARY-WING — 8004 Orifice, 30° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	448	M	0.0	429	M	0.1	412	M	0.1	397	M	0.1	384	M	0.5	373	M	1.8	363	M	3.5
30	416	M	0.8	400	M	0.3	386	M	0.2	373	M	0.6	363	M	1.4	355	M	2.8	349	M	4.5
40	389	M	1.1	376	M	0.6	365	M	0.6	356	M	1.0	349	M	1.9	343	M	3.2	340	M	5.1
50	369	M	1.0	359	M	0.5	351	M	0.5	344	M	0.9	340	M	1.8	337	M	3.2	337	F	5.1
60	355	M	0.3	347	M	0.1	342	M	0.1	338	M	0.4	337	M	1.3	337	F	2.7	340	F	4.6

80° FLAT FAN NOZZLE ROTARY-WING — 8004 Orifice, 60° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	467	M	0.1	439	M	0.1	413	M	0.1	389	M	0.0	368	M	1.3	348	F	3.1	330	F	5.3
30	438	M	0.1	413	M	0.1	391	M	0.1	370	M	0.9	351	M	2.2	334	F	4.0	318	F	6.3
40	416	M	0.1	394	M	0.0	374	M	0.5	356	M	1.3	339	F	2.7	325	F	4.5	313	F	6.8
50	399	M	0.1	380	M	0.1	363	M	0.3	347	M	1.3	334	F	2.6	323	F	4.5	314	F	6.8
60	388	M	0.1	372	M	0.1	357	M	0.1	345	F	0.7	335	F	2.1	326	F	4.0	320	F	6.3

80° FLAT FAN NOZZLE ROTARY-WING — 8004 Orifice, 90° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	445	M	0.1	409	M	0.1	374	F	0.1	341	F	0.5	311	F	2.2	282	F	4.4	255	F	7.1
30	420	M	0.1	386	M	0.1	355	F	0.0	325	F	1.4	297	F	3.1	271	F	5.4	248	F	8.1
40	401	M	0.1	370	F	0.1	341	F	0.4	315	F	1.8	290	F	3.6	267	F	5.9	246	F	8.6
50	388	M	0.1	360	F	0.1	334	F	0.3	310	F	1.7	288	F	3.5	268	F	5.9	250	F	8.6
60	380	F	0.1	355	F	0.1	332	F	0.1	311	F	1.1	292	F	3.0	275	F	5.3	260	F	8.2

80° FLAT FAN NOZZLE ROTARY-WING — 8006 Orifice, 0° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	458	M	1.5	443	M	0.3	430	M	0.1	418	M	0.1	409	M	0.1	402	M	0.2	396	M	1.3
30	424	M	2.3	411	M	1.1	401	M	0.4	393	M	0.2	386	M	0.4	382	M	1.1	379	M	2.3
40	395	M	2.6	386	M	1.4	379	M	0.8	373	M	0.6	369	M	0.8	368	M	1.6	368	M	2.8
50	373	M	2.3	366	M	1.2	362	M	0.6	359	M	0.4	359	M	0.7	360	M	1.5	363	M	2.7
60	356	M	1.6	352	M	0.6	351	M	0.1	351	M	0.1	353	M	0.1	358	M	0.9	364	M	2.2

80° FLAT FAN NOZZLE ROTARY-WING — 8006 Orifice, 30° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	512	C	0.4	488	M	0.1	466	M	0.1	446	M	0.1	427	M	0.3	411	M	1.5	397	M	3.1
30	481	M	1.2	460	M	0.5	441	M	0.3	424	M	0.5	408	M	1.2	395	M	2.4	384	M	4.0
40	456	M	1.5	438	M	0.8	422	M	0.6	407	M	0.9	395	M	1.6	385	M	2.8	376	M	4.5
50	437	M	1.2	422	M	0.6	408	M	0.4	397	M	0.7	388	M	1.5	380	M	2.7	374	M	4.4
60	424	M	0.5	411	M	0.1	401	M	0.1	392	M	0.1	386	M	0.9	381	M	2.2	379	M	3.9

80° FLAT FAN NOZZLE ROTARY-WING — 8006 Orifice, 60° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	525	M	0.1	492	M	0.1	461	M	0.1	432	M	0.1	405	M	1.2	380	M	2.8	357	F	4.9
30	498	M	0.2	468	M	0.1	440	M	0.2	414	M	0.9	390	M	2.1	368	M	3.7	347	F	5.8
40	476	M	0.5	449	M	0.3	424	M	0.5	401	M	1.3	380	M	2.5	361	M	4.1	343	M	6.3
50	461	M	0.2	437	M	0.1	414	M	0.4	394	M	1.2	376	M	2.4	360	M	4.1	345	M	6.2
60	451	M	0.1	430	M	0.1	410	M	0.1	393	M	0.5	378	M	1.8	364	M	3.5	353	M	5.7

80° FLAT FAN NOZZLE ROTARY-WING

8006 Orifice, 90° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	497	M	0.1	455	M	0.1	416	M	0.1	378	F	0.6	342	F	2.2	309	F	4.3	277	F	6.8
30	473	M	0.1	435	M	0.1	398	M	0.3	363	F	1.4	330	F	3.1	299	F	5.2	270	F	7.7
40	456	M	0.1	420	M	0.1	386	M	0.6	354	F	1.8	324	F	3.5	296	F	5.6	270	F	8.2
50	443	M	0.1	411	M	0.1	380	M	0.4	351	F	1.7	323	F	3.4	298	F	5.5	275	F	8.2
60	437	M	0.1	407	M	0.1	379	M	0.1	353	F	1.0	329	F	2.8	307	F	5.0	286	F	7.6

80° FLAT FAN NOZZLE ROTARY-WING

8008 Orifice, 0° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	517	C	1.7	496	M	0.4	478	M	0.1	462	M	0.1	447	M	0.1	435	M	0.1	424	M	0.6
30	484	C	2.4	466	M	1.1	451	M	0.3	437	M	0.1	426	M	0.1	416	M	0.5	409	M	1.5
40	457	M	2.6	442	M	1.4	430	M	0.5	419	M	0.2	410	M	0.3	404	M	0.9	399	M	1.9
50	435	M	2.4	424	M	1.1	414	M	0.3	407	M	0.0	401	M	0.2	397	M	0.8	395	M	1.8
60	420	M	1.6	411	M	0.4	405	M	0.1	400	M	0.1	397	M	0.1	396	M	0.2	397	M	1.3

80° FLAT FAN NOZZLE ROTARY-WING

8008 Orifice, 30° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	564	VC	0.7	535	C	0.1	508	M	0.1	483	M	0.1	460	M	0.1	438	M	1.0	419	M	2.4
30	535	C	1.4	509	C	0.6	485	M	0.2	462	M	0.3	442	M	0.8	424	M	1.8	407	M	3.3
40	511	C	1.6	488	C	0.8	467	M	0.5	447	M	0.6	430	M	1.2	414	M	2.2	401	M	3.7
50	494	C	1.4	473	M	0.6	455	M	0.3	438	M	0.4	424	M	1.0	411	M	2.1	401	M	3.6
60	482	C	0.6	464	M	0.1	449	M	0.1	435	M	0.1	423	M	0.4	414	M	1.5	406	M	3.0

80° FLAT FAN NOZZLE ROTARY-WING

8008 Orifice, 60° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	571	C	0.1	533	M	0.1	497	M	0.1	464	M	0.1	431	M	0.9	401	M	2.4	373	M	4.3
30	545	C	0.5	510	M	0.1	477	M	0.2	446	M	0.8	417	M	1.8	390	M	3.3	365	M	5.2
40	525	C	0.7	493	M	0.4	463	M	0.5	435	M	1.1	409	M	2.1	384	M	3.6	362	M	5.6
50	511	C	0.4	482	M	0.1	455	M	0.3	429	M	0.9	406	M	2.0	385	M	3.5	365	M	5.5
60	503	C	0.1	476	M	0.1	452	M	0.1	430	M	0.2	409	M	1.3	391	M	2.9	374	M	4.9

80° FLAT FAN NOZZLE ROTARY-WING

8008 Orifice, 90° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	537	M	0.1	491	M	0.1	446	M	0.1	403	M	0.6	362	F	2.0	324	F	3.9	287	F	6.3
30	515	M	0.1	471	M	0.1	429	M	0.3	390	M	1.4	352	F	2.8	316	F	4.8	282	F	7.2
40	499	M	0.1	458	M	0.0	419	M	0.6	382	M	1.7	347	F	3.2	314	F	5.2	282	F	7.6
50	488	M	0.1	450	M	0.1	414	M	0.4	380	M	1.5	348	F	3.0	317	F	5.1	289	F	7.5
60	483	M	0.1	448	M	0.1	415	M	0.1	383	M	0.8	354	F	2.4	327	F	4.4	301	F	6.9

80° FLAT FAN NOZZLE ROTARY-WING

8010 Orifice, 0° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	564	VC	1.7	538	C	0.2	515	C	0.1	494	M	0.1	474	M	0.1	457	M	0.1	441	M	0.1
30	532	C	2.4	510	C	0.9	489	C	0.1	471	M	0.1	454	M	0.1	439	M	0.1	427	M	0.6
40	506	C	2.6	487	C	1.1	469	C	0.2	454	M	0.1	440	M	0.1	428	M	0.1	418	M	0.9
50	486	C	2.2	470	C	0.8	455	M	0.1	442	M	0.1	432	M	0.1	423	M	0.1	416	M	0.8
60	472	C	1.4	459	C	0.1	447	M	0.1	437	M	0.1	429	M	0.1	423	M	0.1	419	M	0.2

80° FLAT FAN NOZZLE ROTARY-WING

8010 Orifice, 30° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	605	VC	0.8	571	VC	0.1	539	C	0.1	509	M	0.1	480	M	0.1	454	M	0.3	430	M	1.6
30	577	VC	1.5	546	VC	0.5	517	C	0.1	489	M	0.1	464	M	0.3	441	M	1.1	419	M	2.5
40	555	VC	1.6	527	C	0.7	500	C	0.2	476	M	0.1	453	M	0.6	433	M	1.5	414	M	2.8
50	539	VC	1.3	513	C	0.4	490	C	0.1	468	M	0.1	448	M	0.4	431	M	1.3	415	M	2.7
60	528	C	0.5	505	C	0.1	485	C	0.1	466	M	0.1	449	M	0.1	435	M	0.6	422	M	2.0

80° FLAT FAN NOZZLE ROTARY-WING

8010 Orifice, 60° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	606	VC	0.1	563	C	0.1	522	M	0.1	483	M	0.1	446	M	0.5	411	M	1.8	378	M	3.6
30	582	VC	0.6	542	C	0.1	503	M	0.0	467	M	0.4	433	M	1.3	401	M	2.6	371	M	4.4
40	563	VC	0.8	526	C	0.3	491	M	0.3	457	M	0.7	426	M	1.6	397	M	3.0	369	M	4.8
50	550	VC	0.5	516	C	0.0	483	M	0.0	453	M	0.5	425	M	1.4	398	M	2.8	374	M	4.7
60	543	VC	0.1	511	C	0.1	482	M	0.1	455	M	0.1	429	M	0.7	406	M	2.1	384	M	4.0

80° FLAT FAN NOZZLE ROTARY-WING

8010 Orifice, 90° Angle

PSI	Airspeed, mph																				
	30			40			50			60			70			80			90		
	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100	$D_{V0.5}$	DSC	%<100
20	566	M	0.1	515	M	0.1	465	M	0.1	417	M	0.4	371	F	1.7	327	F	3.4	285	F	5.7
30	545	M	0.1	496	M	0.1	449	M	0.3	405	M	1.1	362	F	2.5	320	F	4.3	281	F	6.5
40	530	M	0.1	484	M	0.1	440	M	0.5	398	M	1.4	358	F	2.8	320	F	4.6	283	F	6.9
50	521	M	0.1	478	M	0.1	436	M	0.2	397	M	1.2	360	M	2.6	325	F	4.4	291	F	6.7
60	517	M	0.1	477	M	0.1	439	M	0.1	402	M	0.4	368	M	1.9	336	F	3.7	305	F	6.1