Table 1-17—Atomization Parameters for Disc Orifice Straight Stream Nozzle

DISC ORIFICE STRAIGHT STREAM NOZZLE D4 Orifice, 0° Angle ROTARY-WING

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	847	VC	1.0	884	VC	0.8	902	VC	0.6	900	VC	0.5	878	VC	0.6	836	VC	0.6	774	VC	0.8
30	737	VC	1.2	787	VC	1.0	817	VC	0.8	828	VC	0.7	819	VC	0.7	790	VC	0.8	742	VC	1.0
40	642	VC	1.4	705	VC	1.1	748	VC	1.0	772	VC	0.9	776	VC	0.8	760	VC	0.9	725	VC	1.0
50	562	VC	1.5	638	VC	1.2	695	VC	1.0	731	VC	0.9	748	EC	0.9	746	VC	0.9	723	VC	1.1
60	498	C	1.5	587	VC	1.2	657	VC	1.0	706	EC	0.9	736	EC	0.8	746	EC	0.9	737	EC	1.0

DISC ORIFICE STRAIGHT STREAM NOZZLE D4 Orifice, 10° Angle ROTARY-WING

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	838	VC	1.3	874	VC	1.1	891	VC	1.0	887	VC	1.0	864	VC	1.1	821	VC	1.2	759	VC	1.5
30	721	VC	1.6	770	VC	1.4	800	VC	1.3	809	VC	1.3	799	VC	1.3	769	VC	1.5	720	VC	1.7
40	620	VC	1.8	682	VC	1.6	724	VC	1.5	747	VC	1.5	750	VC	1.5	733	VC	1.6	696	VC	1.8
50	534	VC	2.0	609	VC	1.8	664	VC	1.6	700	VC	1.6	716	VC	1.6	712	VC	1.7	688	VC	1.9
60	464	C	2.1	552	VC	1.8	620	VC	1.7	668	VC	1.6	697	EC	1.6	706	EC	1.7	695	VC	1.9

DISC ORIFICE STRAIGHT STREAM NOZZLE D4 Orifice, 20° Angle
ROTARY-WING

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	836	VC	1.1	871	VC	1.0	886	VC	0.9	882	VC	1.0	858	VC	1.1	814	VC	1.3	750	VC	1.6
30	713	VC	1.5	761	VC	1.3	789	VC	1.3	797	VC	1.3	786	VC	1.4	755	VC	1.6	704	VC	1.8
40	605	VC	1.7	666	VC	1.6	707	VC	1.5	728	VC	1.5	730	VC	1.6	712	VC	1.8	674	VC	2.0
50	513	C	1.9	586	VC	1.8	641	VC	1.7	675	VC	1.7	690	VC	1.8	684	VC	1.9	660	VC	2.1
60	436	C	2.1	522	C	1.9	590	VC	1.8	637	VC	1.8	665	VC	1.8	672	VC	2.0	661	VC	2.2

DISC ORIFICE STRAIGHT STREAM NOZZLE D6 Orifice, 0° Angle
ROTARY-WING

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	884	VC	0.8	911	VC	0.6	917	VC	0.5	904	VC	0.5	871	VC	0.5	819	VC	0.7	746	VC	0.9
30	787	VC	1.0	827	VC	0.8	846	VC	0.7	846	VC	0.6	826	VC	0.7	786	VC	0.8	727	VC	1.0
40	706	VC	1.1	758	VC	0.9	790	VC	0.7	803	EC	0.7	796	EC	0.7	770	VC	0.8	723	VC	1.0
50	640	VC	1.1	705	VC	0.9	750	EC	0.7	776	EC	0.7	782	EC	0.7	769	EC	0.7	735	VC	0.9
60	589	VC	1.1	667	VC	0.8	726	EC	0.7	765	EC	0.6	784	EC	0.6	783	EC	0.6	762	EC	0.8

DISC ORIFICE STRAIGHT STREAM NOZZLE D6 Orifice, 10° Angle
ROTARY-WING

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	876	VC	1.2	901	VC	1.0	906	EC	1.0	892	VC	1.0	858	VC	1.1	804	VC	1.3	731	VC	1.5
30	772	VC	1.4	810	VC	1.2	829	VC	1.2	827	VC	1.2	806	VC	1.2	766	VC	1.4	705	VC	1.7
40	684	VC	1.5	735	VC	1.4	766	VC	1.3	778	EC	1.3	770	VC	1.3	742	VC	1.5	695	VC	1.7
50	611	VC	1.6	675	VC	1.4	720	VC	1.3	744	EC	1.3	749	EC	1.4	735	EC	1.5	700	VC	1.7
60	554	VC	1.6	631	VC	1.4	689	EC	1.3	726	EC	1.3	744	EC	1.3	742	EC	1.5	721	EC	1.7

DISC ORIFICE STRAIGHT STREAM NOZZLE D6 Orifice, 20° Angle
ROTARY-WING

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	874	EC	0.9	898	EC	0.9	902	EC	0.9	887	EC	0.9	851	VC	1.1	797	VC	1.3	722	VC	1.6
30	764	VC	1.2	801	VC	1.1	818	EC	1.1	815	EC	1.2	793	VC	1.3	751	VC	1.5	690	VC	1.8
40	669	VC	1.5	719	VC	1.3	749	VC	1.3	760	VC	1.3	751	VC	1.5	722	VC	1.7	673	VC	2.0
50	590	VC	1.6	653	VC	1.5	696	VC	1.4	720	VC	1.4	723	VC	1.6	707	VC	1.7	672	VC	2.0
60	526	C	1.7	602	VC	1.5	659	VC	1.5	695	VC	1.5	712	EC	1.6	709	VC	1.7	686	VC	2.0

DISC ORIFICE STRAIGHT STREAM NOZZLE D8 Orifice, 0° Angle
ROTARY-WING

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	915	VC	0.7	931	EC	0.5	926	EC	0.5	902	VC	0.5	859	VC	0.6	795	VC	0.7	712	VC	1.0
30	831	VC	0.8	860	VC	0.6	869	EC	0.5	857	EC	0.5	827	VC	0.6	776	VC	0.8	706	VC	1.0
40	763	VC	0.8	805	VC	0.6	826	EC	0.5	828	EC	0.5	810	EC	0.6	773	VC	0.7	716	VC	0.9
50	711	VC	0.8	765	VC	0.6	800	EC	0.5	814	EC	0.4	810	EC	0.5	785	EC	0.6	741	VC	0.8
60	673	VC	0.7	741	EC	0.5	788	EC	0.3	816	EC	0.3	824	EC	0.3	813	EC	0.4	781	EC	0.6

DISC ORIFICE STRAIGHT STREAM NOZZLE D8 Orifice, 10° Angle
ROTARY-WING

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	906	EC	1.0	921	EC	0.9	915	EC	0.9	890	EC	1.0	845	VC	1.1	781	VC	1.3	696	VC	1.6
30	816	VC	1.2	843	EC	1.1	851	EC	1.0	839	EC	1.1	807	VC	1.2	755	VC	1.4	684	VC	1.7
40	742	VC	1.3	782	EC	1.1	802	EC	1.1	803	EC	1.1	784	EC	1.2	745	VC	1.4	687	VC	1.7
50	682	VC	1.3	736	VC	1.1	769	EC	1.1	783	EC	1.1	777	EC	1.2	751	EC	1.4	706	VC	1.6
60	639	VC	1.2	705	VC	1.1	751	EC	1.0	778	EC	1.0	785	EC	1.1	772	EC	1.2	740	EC	1.5

DISC ORIFICE STRAIGHT STREAM NOZZLE D8 Orifice, 20° Angle
ROTARY-WING

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	904	EC	0.8	918	EC	0.8	911	EC	0.8	885	EC	0.9	839	EC	1.1	773	VC	1.4	688	VC	1.7
30	808	EC	1.0	834	EC	1.0	840	EC	1.0	827	EC	1.1	794	VC	1.3	741	VC	1.5	669	VC	1.9
40	727	VC	1.2	766	EC	1.1	785	EC	1.1	785	EC	1.2	765	VC	1.4	725	VC	1.6	665	VC	1.9
50	661	VC	1.3	713	VC	1.2	745	EC	1.2	758	EC	1.2	751	VC	1.4	724	VC	1.6	677	VC	1.9
60	611	VC	1.3	676	VC	1.2	721	VC	1.1	747	EC	1.2	752	EC	1.3	739	VC	1.5	705	VC	1.8

DISC ORIFICE STRAIGHT STREAM NOZZLE D10 Orifice, 0° Angle
ROTARY-WING

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	939	EC	0.6	944	EC	0.5	929	EC	0.4	894	EC	0.5	839	VC	0.6	765	VC	0.8	671	VC	1.1
30	869	VC	0.6	887	EC	0.5	884	EC	0.4	863	EC	0.5	821	VC	0.6	759	VC	0.8	678	VC	1.0
40	814	VC	0.6	845	EC	0.4	856	EC	0.4	847	EC	0.4	818	EC	0.5	769	VC	0.6	701	VC	0.9
50	775	VC	0.5	819	EC	0.3	842	EC	0.2	846	EC	0.2	830	EC	0.3	795	EC	0.5	740	VC	0.7
60	751	VC	0.3	808	EC	0.1	844	EC	0.0	861	EC	0.1	859	EC	0.1	836	EC	0.2	794	EC	0.4

DISC ORIFICE STRAIGHT STREAM NOZZLE D10 Orifice, 10° Angle
ROTARY-WING

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	931	EC	0.9	934	EC	0.8	918	EC	0.9	882	EC	1.0	826	VC	1.1	750	VC	1.4	655	VC	1.7
30	854	EC	1.0	870	EC	0.9	867	EC	0.9	844	EC	1.0	801	VC	1.2	738	VC	1.4	656	VC	1.7
40	793	VC	1.0	822	EC	0.9	832	EC	0.9	821	EC	1.0	792	EC	1.1	742	VC	1.4	673	VC	1.7
50	747	VC	1.0	789	EC	0.9	812	EC	0.8	815	EC	0.9	798	EC	1.0	761	VC	1.2	705	VC	1.5
60	717	VC	0.9	772	VC	0.7	807	EC	0.7	823	EC	0.7	819	EC	0.8	796	EC	1.0	752	VC	1.3

DISC ORIFICE STRAIGHT STREAM NOZZLE D10 Orifice, 20° Angle
ROTARY-WING

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	929	EC	0.7	931	EC	0.7	914	EC	0.8	876	EC	0.9	820	EC	1.1	743	VC	1.5	646	VC	1.9
30	845	EC	0.9	861	EC	0.8	856	EC	0.9	832	EC	1.0	788	VC	1.2	724	VC	1.5	641	VC	1.9
40	778	VC	0.9	806	EC	0.9	814	EC	0.9	803	EC	1.1	772	VC	1.3	721	VC	1.5	651	VC	1.9
50	725	VC	0.9	767	VC	0.9	788	EC	0.9	790	EC	1.0	772	VC	1.2	734	VC	1.5	676	VC	1.8
60	689	VC	0.9	743	VC	0.8	777	VC	0.8	792	EC	0.9	787	VC	1.1	762	VC	1.3	717	VC	1.7

DISC ORIFICE STRAIGHT STREAM NOZZLE D12 Orifice, 0° Angle
ROTARY-WING

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	957	EC	0.5	951	EC	0.4	925	EC	0.4	879	VC	0.5	814	VC	0.6	728	VC	0.9	623	VC	1.2
30	900	VC	0.4	907	EC	0.4	894	EC	0.3	861	VC	0.4	809	VC	0.6	736	VC	0.8	644	VC	1.1
40	859	VC	0.3	879	EC	0.2	878	EC	0.2	859	EC	0.3	819	VC	0.4	760	VC	0.6	681	VC	0.9
50	833	VC	0.2	866	EC	0.0	878	EC	0.1	872	EC	0.0	845	EC	0.2	799	VC	0.4	732	VC	0.6
60	823	VC	0.1	868	EC	0.1	894	EC	0.1	900	EC	0.1	886	EC	0.1	853	EC	0.0	800	VC	0.3

DISC ORIFICE STRAIGHT STREAM NOZZLE D12 Orifice, 10° Angle
ROTARY-WING

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	949	EC	0.8	941	EC	0.8	914	EC	0.8	867	EC	1.0	800	VC	1.2	714	VC	1.5	608	VC	1.9
30	885	EC	0.8	891	EC	0.8	876	EC	0.8	842	EC	1.0	789	VC	1.2	715	VC	1.4	622	VC	1.8
40	837	VC	0.8	856	EC	0.7	854	EC	0.8	833	EC	0.9	793	VC	1.1	732	VC	1.3	652	VC	1.7
50	805	VC	0.7	836	VC	0.6	848	EC	0.6	840	EC	0.7	812	VC	0.9	765	VC	1.1	697	VC	1.5
60	788	VC	0.5	832	VC	0.4	857	EC	0.4	862	EC	0.5	847	EC	0.6	813	VC	0.9	758	VC	1.2

DISC ORIFICE STRAIGHT STREAM NOZZLE D12 Orifice, 20° Angle
ROTARY-WING

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	947	EC	0.6	938	EC	0.6	910	EC	0.8	862	EC	0.9	794	VC	1.2	706	VC	1.6	599	VC	2.0
30	877	EC	0.7	881	EC	0.7	866	EC	0.8	831	EC	1.0	776	VC	1.2	701	VC	1.6	607	VC	2.0
40	822	VC	0.7	840	EC	0.7	837	EC	0.8	815	VC	1.0	773	VC	1.2	712	VC	1.5	630	VC	1.9
50	783	VC	0.7	814	VC	0.6	824	VC	0.7	815	VC	0.8	786	VC	1.1	737	VC	1.4	669	VC	1.8
60	760	VC	0.5	803	VC	0.5	827	VC	0.5	831	VC	0.7	815	VC	0.9	779	VC	1.2	723	VC	1.6