Bulletin
PRODUCT RELEASE
COMBO-JET®
Dual-Angle Max Spray Nozzle

Bulletin Date: March 16, 2026
Bulletin Reference: 260316-01

COMBO-JET® DUAL-ANGLE MAX SPRAY NOZZLE CHART - FOR PWM SPRAYERS

These charts are provided for comparative purposes only to illustrate differences within the Combo-Jet® dual-angle spray nozzle series & sizes. The data presented is extrapolated from third-party testing conducted under controlled conditions using water as the test solution. For Dual-angle spray characteristic charts, each capsule shares the same functional design as its corresponding Combo-Jet® cap pair (e.g., DR80-015 corresponds to DC80-015). However, minor variations in spray characteristics may occur when capsules are combined in a dual-angle nozzle configuration. In most cases, this may result in slightly coarser spray. Combined specifications sum the relative value of %<141µ and %<600µ based on their respective capsules. Actual field performance may vary. Spray characteristics and nozzle performance can change when using active chemical formulations. Wilger assumes no liability for misuse or misinterpretation of this information, including but not limited to improper spray application, crop damage, or harm to humans, livestock, or the environment. Always consult the most current charts available at www.wilger.net and follow all chemical label nozzle requirements, and ensure to use only nozzles that are qualified for both capsule spray quality..

ASABE Spray Classification *(ASABE S572.1 Standard)*
Spray quality is categorized based on Dv0.1 and VMD droplet sizes. Objective testing data (by 3rd party), from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Extra data (e.g. VMD, etc.) can vary between testing equipment and method, and is provided as an educational resource only.
Tips sized up to 110-06 verified on Phase Doppler Particle Analyzer (PDPA); tips sized over 110-06 verified on Malvern.

- Fine (F)
- Medium (M)
- Coarse (C)
- Very Coarse (VC)
- Extremely Coarse (XC)
- Ultra Coarse (UC)

VMD *(Volume Median Diameter)*
The median droplet (in µ) for a sprayed volume. Half of the volume is made of droplets smaller, with half made up of droplets larger.

% <141µ *(% Driftable Fines)*
Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600µ *(% of Small Droplets)*
% of volume which is made up of 'small' droplets, useful for coverage. As % of useful droplets lowers, overall coverage is reduced.

Duty Cycle *(Effective 'on time' of a PWM solenoid)*
The duty cycle is the effective 'on time' of a PWM solenoid. Generally speed ranges are based on a 25% - 100% duty cycle. When selecting a nozzle, often a duty cycle of 60-80% is recommended at typical speeds, providing flexibility for upper speed & turning situations, as well as slower spraying speeds. It is advised to avoid spraying below 40% D/C.

Calculating Duty Cycle on Printed Charts *(Useful for nozzle sizing & selection)*
On Wilger printed charts, typically a SPEED RANGE is provided, but the duty cycle % is a dynamic factor based on the sprayers travel speed. **To calculate a duty cycle at a given travel speed, divide CURRENT sprayer speed into max nozzle speed. (e.g. 15mph / 20mph max = 75% duty cycle)**

Dual Angled Size & Angles	Flow Rate USGPM	Boom PSI	Tip psi	Application Rate in US Gallons / Acre on 20" Nozzle Spacing @ Sprayer Speed in Miles / Hour				Dual-Angle Max Assembly Spray Classification		%<141 Drift	%<600 Coverage	Tip Capsules included in Dual-Angle Max Nozzle Assembly: 110° Tip Capsule 1 [30° front]				80° Tip Capsule 2 [50° back]			
	Flow us gpm	Boom psi	Tip psi	4gpa	5gpa	6gpa	7gpa	Tip 1	Tip 2	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
				Sprayer Speed (on 20" spacing) @				DAM110-03		#44001-03		DC110-015		#44411-015		DC80-015		#44480-015	
DAM110-03 30° & 50° Dual Angled ASSY PART# #44001-03	0.26	**30**	29	5.4-22	3.8-15	3.2-13	2.7-11	C	VC	5%	89%	C	371	7%	91%	VC	423	4%	86%
	0.28	**35**	34	5.9-23	4.1-16	3.4-14	2.9-12	C	C	6%	91%	C	350	8%	93%	C	402	5%	88%
	0.29	**40**	39	6.3-25	4.4-18	3.7-15	3.1-13	C	C	7%	92%	C	333	9%	94%	C	384	5%	90%
	0.31	**45**	43	6.6-27	4.7-19	3.9-16	3.3-13	C	C	8%	93%	C	318	11%	94%	C	370	6%	91%
	0.33	**50**	48	7-28	4.9-20	4.1-16	3.5-14	C	C	9%	93%	C	305	12%	95%	C	357	7%	92%
	0.36	**60**	58	7.7-31	5.4-21	4.5-18	3.8-15	C	C	11%	95%	C	285	13%	96%	C	336	8%	93%
	0.38	**65**	63	8-32	5.6-22	4.7-19	4-16	M	C	11%	95%	M	276	14%	96%	C	328	8%	94%
	0.39	**70**	68	8.3-33	5.8-23	4.8-19	4.1-17	M	C	12%	95%	M	268	15%	96%	C	320	9%	94%
	0.42	**80**	77	8.9-35	6.2-25	5.2-21	4.4-18	M	C	13%	96%	M	255	16%	97%	C	306	9%	95%
	Flow us gpm	Boom psi	Tip psi	Sprayer Speed (on 20" spacing) @				DAM110-035		#44001-035		DC110-02		#44411-02		DC80-015		#44480-015	
				4gpa	5gpa	6gpa	7.5gpa	Tip 1	Tip 2	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
DAM110-035 30° & 50° Dual Angled ASSY PART# #44001-035	0.30	**30**	29	5.5-22	4.4-18	3.7-15	2.9-12	VC	VC	4%	83%	VC	438	4%	81%	VC	425	4%	86%
	0.32	**35**	33	5.9-24	4.8-19	4-16	3.2-13	C	C	5%	86%	C	417	5%	84%	C	404	5%	88%
	0.34	**40**	38	6.3-25	5.1-20	4.2-17	3.4-14	C	C	6%	88%	C	399	6%	86%	C	386	5%	90%
	0.36	**45**	43	6.7-27	5.4-22	4.5-18	3.6-14	C	C	7%	89%	C	383	7%	88%	C	372	6%	91%
	0.38	**50**	48	7.1-28	5.7-23	4.7-19	3.8-15	C	C	7%	90%	C	368	8%	89%	C	359	7%	92%
	0.42	**60**	57	7.8-31	6.2-25	5.2-21	4.2-17	C	C	8%	92%	C	343	9%	91%	C	338	8%	93%
	0.43	**65**	62	8.1-32	6.5-26	5.4-22	4.3-17	C	C	9%	93%	C	332	9%	92%	C	329	8%	94%
	0.45	**70**	67	8.4-34	6.7-27	5.6-22	4.5-18	C	C	9%	93%	C	322	10%	92%	C	321	9%	94%
	0.48	**80**	76	9-35.8	7.2-29	6-24	4.8-19	C	C	10%	94%	C	304	11%	93%	C	307	9%	95%
	Flow us gpm	Boom psi	Tip psi	Sprayer Speed (on 20" spacing) @				DAM110-04		#44001-04		MC110-025		#44311-025		DC80-015		#44480-015	
				5gpa	6gpa	7gpa	7.5gpa	Tip 1	Tip 2	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
DAM110-04 30° & 50° Dual Angled ASSY PART# #44001-04	0.34	**30**	28	5-20	4.2-17	3.6-14	3.3-13	C	VC	6%	88%	C	357	8%	90%	VC	427	4%	86%
	0.36	**35**	33	5.4-22	4.5-18	3.9-15	3.6-14	C	C	8%	90%	C	341	10%	92%	C	406	4%	88%
	0.39	**40**	37	5.8-23	4.8-19	4.1-16	3.8-15	C	C	9%	92%	C	327	11%	93%	C	388	5%	90%
	0.41	**45**	42	6.1-24	5.1-20	4.4-17	4.1-16	C	C	10%	93%	C	314	12%	94%	C	373	6%	91%
	0.43	**50**	47	6.4-26	5.4-21	4.6-18	4.3-17	C	C	10%	93%	C	303	13%	94%	C	361	7%	92%
	0.47	**60**	56	7.1-28	5.9-24	5-20	4.7-19	C	C	12%	95%	C	284	15%	95%	C	340	8%	93%
	0.49	**65**	61	7.3-29	6.1-24	5.2-21	4.9-20	M	C	13%	95%	M	275	15%	96%	C	331	8%	94%
	0.51	**70**	66	7.6-30	6.4-25	5.4-22	5.1-20	M	C	13%	95%	M	268	16%	96%	C	323	9%	94%
	0.55	**80**	75	8.1-33	6.8-27	5.8-23	5.4-22	M	C	14%	96%	M	253	17%	97%	C	309	9%	95%
	Flow us gpm	Boom psi	Tip psi	Sprayer Speed (on 20" spacing) @				DAM110-045		#44001-045		MC110-025		#44311-025		MC80-02		#44380-02	
				5gpa	6gpa	7gpa	7.5gpa	Tip 1	Tip 2	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
DAM110-045 30° & 50° Dual Angled ASSY PART# #44001-045	0.37	**30**	28	5.6-22	4.6-19	4-16	3.7-15	C	C	8%	91%	C	359	8%	90%	C	334	7%	93%
	0.40	**35**	32	6-24	5-20	4.3-17	4-16	C	C	9%	92%	C	342	9%	91%	C	318	9%	94%
	0.43	**40**	37	6.4-26	5.4-21	4.6-18	4.3-17	C	C	10%	93%	C	328	11%	93%	C	305	10%	94%
	0.46	**45**	41	6.8-27	5.7-23	4.9-19	4.5-18	C	C	12%	94%	C	316	12%	94%	C	294	12%	94%
	0.48	**50**	46	7.2-29	6-24	5.1-21	4.8-19	C	C	13%	94%	C	305	13%	94%	C	285	13%	94%
	0.53	**60**	55	7.9-31	6.6-26	5.6-22	5.2-21	C	M	15%	95%	C	286	14%	95%	M	269	15%	95%
	0.55	**65**	60	8.2-33	6.8-27	5.9-23	5.5-22	M	M	15%	95%	M	277	15%	96%	M	262	16%	95%
	0.57	**70**	64	8.5-34	7.1-28	6.1-24	5.7-23	M	M	16%	96%	M	269	16%	96%	M	256	16%	95%
	0.61	**80**	74	9.1-36	7.6-30	6.5-26	6.1-24	M	M	17%	96%	M	255	17%	97%	M	245	18%	95%

Copyright© 2026 Wilger Industries Ltd.