



Combo-Jet® Spray Tips **Optimize your Spray Efforts** **by Balancing Coverage & Drift**

**Combo-Jet spray tips provide
a sliding scale of droplet size
to best fit your ideal application**



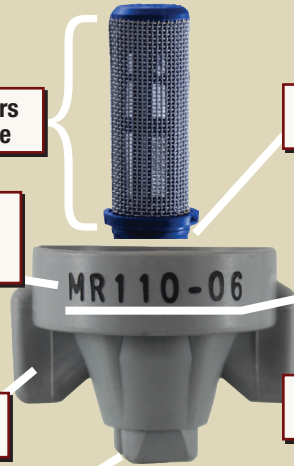
***110° Spray Tip Charts for Standard and PWM Sprayer Systems
- Litres/Hectare on 50cm Nozzle Spacing -***



COMBO-JET® Spray Tips
The Combo-Jet Advantage

We make spray tips for applicators who care about how they spray.

The COMBO-JET® Advantage



40% Longer Strainers that snap into place

Easier Handling with snap-in design

SR MR DR UR
50% 75% 90% 90%+
Drift Reduction Series

Fits all nozzle bodies
(with available adapters)

Not air induction, so spray tips work with PWM

Easy to read cap label
(MR110-06 = MR Series, 110° tip, 0.6 USGPM flow rate)

Cap Color matches ISO flow rates

Droplet Size Selective Tip Options

Permanent Stainless Steel Tip

The Best Tips for Pulse Width Modulation Systems*
(e.g. Capstan Sharpshooter®/Pinpoint® II, Case AIMCommand®, Raven Hawkeye®, and more)

*Capstan Sharpshooter®/Pinpoint® II, Case AIMCommand®, Raven Hawkeye® are not affiliated or owned by Wilger. They remain property of their respective owner(s).

Combo-Jet tips use a modern pre-orifice and closed chamber design that produces significantly less drift, while creating solid mass droplets, for maximum spray velocity and more meaningful droplets.

Without needing consistent air induction for controlling drift,

Combo-Jet spray tips have become the preferred tip for Pulse Width Modulation (PWM) spraying systems.

Easy-to-Handle Spray Tip Cleaning

SR, MR, DR & UR Series

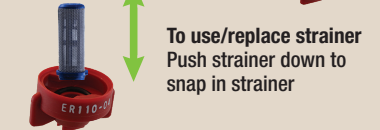
To clean stainless tip
Pull strainer (with pre-orifice) up and out



To clean plastic pre-orifice
Push strainer sideways to release from pre-orifice



ER Series
Push strainer sideways to remove



To use/replace strainer
Push strainer down to snap in strainer

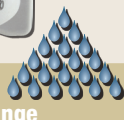
Simple as that.

COMBO-JET® ER, SR, MR, DR, & UR Spray Tips - What is the difference?

The sliding scale of droplet size means at any flow rate, you have multiple options to match your desired spray.

5 Series of Spray Tips for a Sliding Scale of Droplet Size

FINER SPRAY



BEST DRIFT REDUCTION

- patent pending -

Comparison Criteria	ER Series Extended Range	SR Series Small Reduction	MR Series Mid-Range Reduction	DR Series Drift Reduction	UR Series Ultra Reduction
Spray Tip Design	Conventional Flat Fan	Pre-orifice Drift Reduction	Pre-orifice Drift Reduction	Pre-orifice Drift Reduction	Dual Chamber Drift Red.
Droplet Size ¹ @40PSI	Smallest (246µ VMD ¹)	Medium (371µ VMD ¹)	Large (474µ VMD ¹)	Very Large (529µ VMD ¹)	Ultra Coarse
% <141µ ² % <600µ ³	20% of volume < 141µ 94% of volume <600µ	8% of volume < 141µ 89% of volume <600µ	4% of volume < 141µ 74% of volume <600µ	2% of volume < 141µ 64% of volume <600µ	UR spray tips are specialty spray tips, designed for certain chemical applications that require exceptional drift reduction. They are not to be replaced with other spray tip series that are not approved to be on the chemical label. Always follow up-to-date label information.
Drift Potential	Most likely to drift	Lower drift potential	Major reduction	Least likely to drift	Refer to chemical application label for maximum pressures, speeds and application information.
Coverage	Best	Excellent	Very good	Good	More information available at www.wilger.net

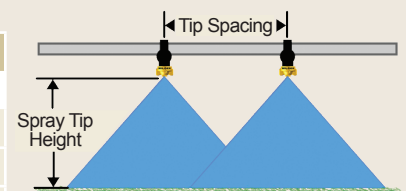
¹Based on an XX110-06 nozzle @ 2.75BAR (40PSI)

²Droplets smaller than 141µ are more likely to drift. 141µ is used as a standard for estimating driftable fines.

³Droplets smaller than 600µ provide better coverage. Droplets > 600µ consume more spray volume, reducing overall coverage.

Minimum spray tip height for each series of Combo-Jet spray tips

Tip/Nozzle Body Spacing (cm)	Minimum Spray Tip Height		
	ER80, SR80, MR80 & DR80	ER110 Series	SR110, MR110, DR110 & UR110
25cm	25cm	23cm	33cm
50cm	43cm	38cm	48cm
75cm	66cm	50cm	61cm



Not sure which tips to use? Download Tip Wizard @ www.WILGER.NET

Tip Wizard makes spray tip decisions easier using with charts.

Enter your application to receive great info that can help you make better spraying decisions.





110° COMBO-JET® Spray Tips

Charts For Standard Sprayers

Nozzle Spacing: 50cm Application Units: Litres/Hectare

⚠ **Disclaimer:** These charts are published for comparative purposes to demonstrate the differences in the series of Combo-Jet® spray tips. Data used to populate this chart is extrapolated from third party testing data from a controlled conditions test with water as the testing solution. Actual spray applications with active chemical ingredients may change the spray dynamics and spray tip performance specifications. Wilger is not liable for any misuse or misrepresentation of this information, leading to (but not limited to) incorrect spray application, crop damage, or any other harm (Not limited to human, livestock or environmental).

Tip Cap No.	Flow Rate L/Min	Bar	Litres/Hectare on 50cm Spacing								Spray Classification; VMD (Droplet Size in µ); %<141µ (Drift %); %<600µ (Small Droplets)															Spray Tip & Part No.																	
			@ Sprayer Speed - KM/H								ER110 Series				SR110 Series				MR110 Series				DR110 Series				UR110 Series			Spray Tip	Part #												
			8	12	16	20	24	28	32		Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	UR Tip Usage	Strainer Part #											
04	0.91	1.0	23.3	15.6	11.7	9.3	7.7	6.8	5.8	M	251	16%	98%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	ER110-04	40281-04									
	05	1.06	1.4	27.0	18.0	13.5	10.8	9.0	7.7	6.8	M	240	18%	97%	C	349	7%	91%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	SR110-05	40287-05							
		06	1.21	1.7	30.3	20.1	15.1	12.1	10.1	8.7	7.6	M	232	20%	97%	C	330	9%	93%	VC	441	4%	80%	-	-	-	-	-	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	MR110-06	40291-06						
			08	1.32	2.1	33.8	22.0	16.6	13.2	11.1	9.5	8.2	M	225	22%	97%	C	314	11%	94%	VC	416	5%	84%	XC	510	3%	69%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	DR110-08	40286-08					
				10	1.51	2.8	38.6	25.4	19.2	15.3	12.7	10.9	9.5	F	215	24%	96%	C	288	14%	95%	C	377	7%	89%	VC	469	4%	76%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	UR110-10	40292-10				
					12.5	1.70	3.4	43.5	28.5	21.4	17.1	14.3	12.2	10.6	F	206	26%	96%	M	269	16%	96%	C	346	8%	92%	VC	438	5%	80%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	ER110-125	40281-125			
						12.5	1.85	4.1	46.7	31.2	23.3	18.7	15.6	13.4	11.7	F	199	28%	96%	M	253	17%	96%	C	321	9%	94%	VC	412	6%	83%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	SR110-125	40287-125		
							12.5	2.01	4.8	49.9	33.8	25.3	20.3	16.9	14.5	12.7	F	194	29%	95%	M	239	19%	97%	C	300	10%	95%	C	391	6%	85%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	MR110-125	40291-125	
								12.5	2.16	5.5	54.7	35.4	27.0	21.6	18.0	15.4	13.5	F	189	30%	95%	M	228	20%	97%	C	282	11%	96%	C	372	7%	87%	UC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	DR110-125	40286-125
									12.5	2.27	6.2	57.9	38.6	28.6	23.0	19.2	16.4	14.3	F	184	31%	95%	M	217	21%	97%	M	266	12%	96%	C	355	7%	88%	XC	-	-	-	-	-	-	UR tips are specially spray tips to produce ultra coarse spray.	UR110-125

Droplet Categories as per ASABE S572.1 Classification (2009-current) with VMD estimate based on spray quality category

■ Extremely Fine <60µ
 ■ Very Fine 60-105µ
 ■ Fine 106-235µ
 ■ Medium 236-340µ
 ■ Coarse 341-403µ
 ■ Very Coarse 404-502µ
 ■ Extremely Coarse 503-665µ
 ■ Ultra Coarse >665µ

110° COMBO-JET® Spray Tips

Charts For PWM Sprayers

Nozzle Spacing: 50cm Application Units: Litres/Hectare



⚠ Disclaimer: These charts are published for comparative purposes to demonstrate the differences in the series of Combo-Jet® spray tips. Data used to populate this chart is extrapolated from third party testing data from a controlled conditions test with water as the testing solution. Actual spray applications with active chemical ingredients may change the spray dynamics and spray tip performance specifications. Wilger is not liable for any misuse or misrepresentation of this information, leading to (but not limited to) incorrect spray application, crop damage, or any other harm (Not limited to human, livestock or environmental).

Tip Cap No.	Flow Rate L/Min	Boom BAR	Spray Tip BAR	Sprayer Speed Range (Rounded KM/H)				Spray Classification; VMD (Droplet Size in µ); %<141µ (Drift %); %<600µ (Small Droplets)																Spray Tip & Part No.											
				① Litres/Hectare on 50cm Spacing				ER110 Series				SR110 Series				MR110 Series				DR110 Series				UR110 Series				Spray Tip	Part #						
				50L/Ha	100L/Ha	150L/Ha	200L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600			UR Tip Usage	Strainer not req'd				
04	1.20	1.8	1.7	5.8-29	2.9-14	1.9-10	1.4-7	M	233	20%	97%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specialty spray tips to produce ultra coarse spray. Refer to chemical application label for maximum pressures, speeds and application information.	ER110-04	40281-04						
	05	1.58	2.0	1.9	7.6-38	3.8-19	2.5-13	1.9-9	M	231	21%	95%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specialty spray tips to produce ultra coarse spray. Refer to chemical application label for maximum pressures, speeds and application information.	ER110-05	40281-05					
		06	1.83	2.0	1.7	8.8-44	4.4-22	2.9-15	2.2-11	M	270	16%	94%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specialty spray tips to produce ultra coarse spray. Refer to chemical application label for maximum pressures, speeds and application information.	ER110-06	40281-06				
			08	2.32	2.0	1.6	11.1-56	5.6-28	3.7-19	2.8-14	M	324	14%	91%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specialty spray tips to produce ultra coarse spray. Refer to chemical application label for maximum pressures, speeds and application information.	ER110-08	40281-08			
				10	2.94	2.3	1.6	14.1-71	7.1-35	4.7-24	3.5-18	M	347	12%	89%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR tips are specialty spray tips to produce ultra coarse spray. Refer to chemical application label for maximum pressures, speeds and application information.	ER110-10	40281-10		
					125	3.41	2.3	1.4	16.4-82	8.2-41	5.5-27	4.1-20	C	420	9%	70%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR series spray tips are currently commercially available in -04 to -10 sizes.	ER110-125	40281-125	
						15	4.16	2.8	1.4	20-100	10-50	6.7-33	5-25	C	433	9%	65%	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UR series spray tips are currently commercially available in -04 to -10 sizes.	ER110-15	40281-15

Droplet Categories as per ASABE S572.1 Classification (2009-current) with VMD estimate based on spray quality category

■ Extremely Fine <60µ ■ Very Fine 60-105µ ■ Fine 106-235µ ■ Medium 236-340µ ■ Coarse 341-403µ ■ Very Coarse 404-502µ ■ Extremely Coarse 503-665µ ■ Ultra Coarse >665µ



Spray 'Tips'

Looking for an Easier Way to Choose Spray Tips?

Tip Wizard is a interactive spray tip selection tool, that takes your known application information, and provides you with real actionable information that will help make the best choice of spray tip for your field. It is available on the wilger.net website, as well as downloadable for any smartphone device or tablet. **Don't wait until it is too late. Try it today!**



TIP WIZARD

Download Tip Wizard



Drift vs. Efficacy

Generally speaking, smaller droplets deposit on the target more effectively than larger droplets, but larger droplets will drift less. So, when balancing drift control and efficacy, ensure to follow chemical labels and guidelines to designate the required droplet size/category.

ASABE S-572.1 Classification Category	Color Code	Estimated VMD Range for Spray Quality	Contact Insecticide & Fungicide	Systemic Insecticide & Fungicide	Contact Foliar Herbicide	Systemic Foliar Herbicide	Soil-Applied Herbicide	Incorporated Soil-Applied Herbicide	Fertilizer
Extremely Fine (XF)	Purple	Under 60							
Very Fine (VF)	Red	60-105							
Fine (F)	Orange	106-235							
Medium (M)	Yellow	236-340			e.g. Glufosinate*				
Coarse (C)	Blue	341-403				e.g. Glyphosate*			
Very Coarse (VC)	Green	404-502				e.g. 2,4D Amine*			
Extremely Coarse (XC)	White	503-665							
Ultra Coarse (UC)	Black	Over 665				e.g. Restricted use Dicamba*			

The above table provides general reference between droplet size/spray quality in many modes of applications. Listed chemical examples are for example only, and may not reflect your chemical label. ALWAYS ENSURE TO FOLLOW THE MOST RECENT CHEMICAL LABEL BEFORE APPLICATION.

Critical Importance of Spray Tip Maintenance & Proper Performance

Often, it is easy to dismiss considering replacing worn spray tips, as the pattern "still looks good" visually; but, what you often can't see can be creating a nasty mess of weed resistance due to misses or underapplication, or crop damage due to overapplication. Spray tips need to be considered the most important piece of the sprayer, as all results rely on their ability to do their job consistently.

Test Tip Flow Consistency

Flow should be within 10% of manufacturer's listed flow. (e.g. 110-04 is 0.4 US gpm @ 40PSI)
Make testing a habit.

Check Spray Pattern

Pattern should be opened up fully. Verify against a pattern check sheet. Ensure clean orifice.
A little debris makes a difference.

Verify & Calibrate Boom Height

Using the correct spray tip angle for your typical boom height is paramount. With a boom too high or too low, the droplet deposition at your target is not consistent.
Even overlap and spray deposition is crucial.

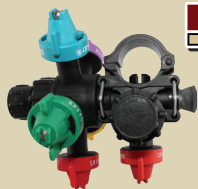
COMBO-JET® Fertilizer Streamer Tips



COMBO-JET® Nozzle Bodies



COMBO-RATE® Stacking Nozzle Bodies



O-ring Seal (ORS) Manifolds & Components



Wilger Boom End Flush Valves



Visual Ball Flow Indicators



CANADA

Wilger Industries Ltd.
Capital Circle W & Auction Mart Road
Saskatoon, SK, Canada S7K 3J7
Phone: (833)242-4121 / (306)242-4121
Fax: (306)242-4122
E-Mail: info@wilger.net

UNITED STATES

Wilger Inc.
255 Seahorse Drive
Lexington, TN, USA 38351-6538
Phone: (877)968-7695 / (731)968-7695
Fax: (877)968-7613 / (731)968-7613
E-Mail: WilgerESC@WilgerESC.com

ARGENTINA

Wilger Argentina
Mitre 697, San Nicolas (2900)
Buenos Aires, Argentina
Phone: +54 9 336 4596710
Email: cjpurras@gmail.com

Publication #10200-LHA
Printed In Canada