

COMBO-JET ER80° & ER110° Series Spray Tips

The ER series spray tip is a conventional flat fan nozzle, emphasizing consistent spray pattern with relatively fine spray. All ER nozzles are manufactured with a stainless steel tip.



Longer
Lasting
Stainless
Tips



Less
Plugged
Nozzles



Perfect
for PWM
Sprayers



Consistent
Pattern at
Lower pres.



Solid Mass
Spray
Droplets



Acid
Resistant
Nozzles

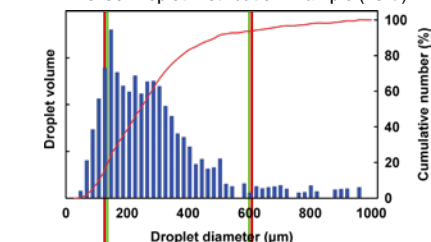
A DETAILED LOOK AT: ER110-06



Balance of Drift Control
& Coverage



ER110-06 Droplet Distribution Example (40psi)



ER series is designed to produce finer spray with a consistent pattern.

COMBO-JET® ER80° ASABE S572.1 Spray Quality Chart

Pressure (bar)	1.5	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6
ER80-01	F	F	F	F	F	F	F	F	F	F	F
ER80-015	F	F	F	F	F	F	F	F	F	F	F
ER80-02	F	F	F	F	F	F	F	F	F	F	F
ER80-025	M	M	F	F	F	F	F	F	F	F	F
ER80-03	M	M	F	F	F	F	F	F	F	F	F
ER80-04	M	M	M	M	F	F	F	F	F	F	F
ER80-05	C	C	M	M	M	M	M	M	F	F	F
ER80-06	C	C	C	C	C	M	M	M	M	M	M
ER80-08	VC	C	C	M	M	F	F	F	F	F	F
ER80-10	XC	XC	XC	C	C	C	M	M	M	F	F
ER80-125		XC	XC	VC	C	C	C	C	C	M	M
ER80-15		XC	XC	XC	C	C	C	M	M	M	M
ER80-20		UC	XC	XC	XC	VC	C	C	C	C	M
ER80-25		UC	XC	XC	XC	VC	C	C	C	C	M
ER80-30		UC	UC	XC	XC	XC	XC	XC	VC	VC	C
ER80-40				XC	XC	XC	XC	XC	XC	VC	VC
ER80-50				XC	XC	XC	XC	XC	XC	VC	VC
ER80-60				XC	XC	XC	XC	XC	XC	VC	VC

COMBO-JET® ER110° ASABE S572.1 Spray Quality Chart

Pressure (bar)	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6
ER110-01	F	F	F	F	F	F	F	F	F	F
ER110-015	F	F	F	F	F	F	F	F	F	F
ER110-02	F	F	F	F	F	F	F	F	F	F
ER110-025	F	F	F	F	F	F	F	F	F	F
ER110-03	F	F	F	F	F	F	F	F	F	F
ER110-04	M	M	M	F	F	F	F	F	F	F
ER110-05	M	M	M	F	F	F	F	F	F	F
ER110-06	C	M	M	M	M	M	F	F	F	F
ER110-08	C	C	M	M	M	M	F	F	F	F
ER110-10	C	C	C	C	M	M	M	M	F	F
ER110-125	XC	XC	XC	VC	C	C	C	C	C	C
ER110-15	XC	XC	XC	VC	C	C	C	C	C	C
ER110-20	UC	XC	XC	XC	XC	XC	VC	VC	C	C
ER110-25	UC	XC	XC	XC	XC	XC	VC	VC	C	C
ER110-30	UC	XC	XC	XC	XC	XC	XC	XC	VC	VC

COMBO-JET® ER Series Specifications

Approved for PWM Spray Systems
Compatible with all PWM Spray systems/Hz.

Operating Pressure
1.5-7 bar

Flat Fan Nozzle Type
Conventional Flat Fan

Nozzle Materials
Spray Tip: Stainless Steel
O-ring: FKM, 13mm x 3mm #40260-00 (viton avail.)
Cap: Glass-reinforced Polypropylene

ASABE Spray Classification

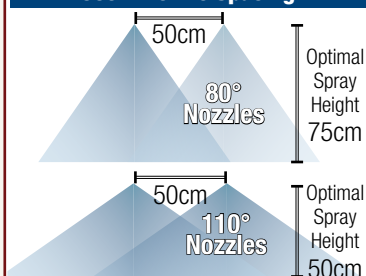
(ASABE S572.1 Standard)
Spray quality is categorized based on DV0.1 and VMD droplet sizes. Objective testing data (by 3rd party), from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Chart shown includes spray quality at tested data points as well as extrapolated data points.

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

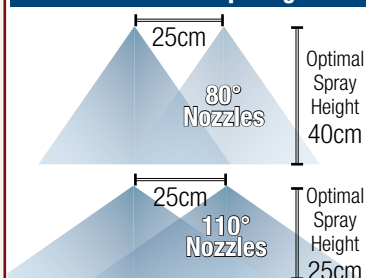
Tips sized up to 110-06 verified on Phase Doppler Particle Analyzer (PDPA); tips sized over 110-06 verified on Malvern.

Optimal Spray Tip Height

50cm Nozzle Spacing



25cm Nozzle Spacing



COMBO-JET SR80° & SR110° Series Spray Tips

The SR series spray tip is a closed-chamber, pre-orifice drift reduction nozzle, emphasizing a first stage of drift reduction. The SR series balances excellent coverage spray with significant drift reduction upwards of 50%+.



Longer Lasting Stainless Tips



Less Plugged Nozzles



Perfect for PWM Sprayers



Consistent Pattern at Lower pres.



Solid Mass Spray Droplets



Acid Resistant Nozzles

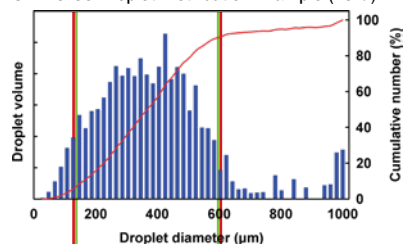
A DETAILED LOOK AT: SR110-06



Balance of Drift Control & Coverage



SR110-06 Droplet Distribution Example (40psi)



SR series droplet distribution balances excellent fine spray coverage while reducing driftable fines.

COMBO-JET® SR80° ASABE S572.1 Spray Quality Chart

Pressure (bar)	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6
SR80-01	M	M	F	F	F	F	F	F	F	F
SR80-015	C	M	M	M	F	F	F	F	F	F
SR80-02	C	M	M	M	F	F	F	F	F	F
SR80-025	C	C	C	M	M	M	M	M	F	F
SR80-03	C	C	C	C	C	M	M	M	M	M
SR80-04	C	C	C	C	C	C	M	M	M	M
SR80-05	VC	C	C	C	C	C	C	C	M	M
SR80-06	VC	VC	VC	C	C	C	C	C	C	C
SR80-08	UC	UC	XC	XC	XC	XC	VC	VC	C	C
SR80-10	UC	UC	UC	XC	XC	XC	XC	XC	VC	VC
SR80-125	UC	UC	UC	XC	XC	XC	XC	XC	VC	VC
SR80-15	UC	UC	UC	UC	UC	XC	XC	XC	XC	XC
SR80-20	UC	UC	UC	UC	UC	XC	XC	XC	XC	XC
SR80-25	UC	UC	UC	XC	XC	XC	XC	XC	XC	XC
SR80-30	-	UC	UC	UC	XC	XC	XC	XC	XC	XC

COMBO-JET® SR Series Specifications

Approved for PWM Spray Systems
Compatible with all PWM Spray systems/Hz.

Operating Pressure
1.75-7 bar

Flat Fan Nozzle Type
Closed-Chamber, Pre-Orifice Drift Reduction

Nozzle Materials
Spray Tip: Stainless Steel
O-ring: FKM, 13mm x 3mm #40260-00 (viton avail.)
Cap: Glass-reinforced Polypropylene

ASABE Spray Classification

(ASABE S572.1 Standard)
Spray quality is categorized based on Dv0.1 and VMD droplet sizes. Objective 3rd party testing data, from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Chart shown includes spray quality at tested data points as well as extrapolated data points.

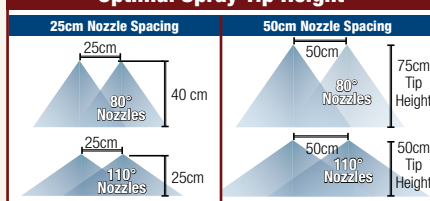
■ Fine (F) ■ Very Coarse (VC)
■ Medium (M) ■ Extremely Coarse (XC)
■ Coarse (C) ■ Ultra Coarse (UC)

Tips sized up to 110-06 verified on Phase Doppler Particle Analyzer (PDPA); tips sized over 110-06 verified on Malvern.

COMBO-JET® SR110° ASABE S572.1 Spray Quality Chart

Pressure (bar)	1.75	2	2.5	3	3.5	4	4.5	5	5.5	6
SR110-015	M	M	F	F	F	F	F	F	F	F
SR110-02	M	M	F	F	F	F	F	F	F	F
SR110-025	M	M	M	M	F	F	F	F	F	F
SR110-03	C	C	C	C	M	M	M	M	F	F
SR110-04	C	C	C	C	M	M	M	M	M	M
SR110-05	VC	C	C	C	C	C	M	M	M	M
SR110-06	XC	VC	C	C	C	C	C	C	M	M
SR110-08	UC	XC	XC	XC	VC	C	C	C	C	C
SR110-10	UC	XC	XC	XC	XC	VC	C	C	C	C
SR110-125	UC	UC	XC	XC	XC	XC	VC	C	C	C
SR110-15	UC	UC	UC	UC	XC	XC	XC	XC	XC	XC
SR110-20	UC	UC	UC	XC	XC	XC	XC	XC	XC	VC
SR110-25	UC	UC	UC	XC	XC	XC	XC	XC	XC	VC

Optimal Spray Tip Height



LERAP Ratings for SR Series

As of January 2021

SR110-05 ★★★★★ 75% ★☆☆ 50%

1.0-1.5BAR 1.6-3.0BAR

For the updated list of nozzles, visit www.wilger.net/LERAP
More information on LERAP certification, process, and the most up to date listing of approved nozzles and their ratings, is available from the Health and Safety Executive (HSE), also available online @ <https://secure.pesticides.gov.uk/SprayEquipment>

COMBO-JET® SR Pre-orifices - by nozzle size [Replacement Only for SR series]

SR Size	-01	-015	-02	-025	-03	-04	-05	-06	-08	-10	-125	-15	-20	-25	-30
SR80°	40285-015	40285-02	40285-025	40285-03	40285-03	40285-06	40285-06	40285-08	40285-10	40285-125	40285-20	40285-20	40285-25	40285-40	40285-40
SR110°	-	40285-02	40285-025	40285-04	40285-04	40285-06	40285-06	40285-08S	40285-08S	40285-10S	40285-13S	40285-20	40285-25	40285-40	-

COMBO-JET MR80° & MR110° Series Spray Tips

The MR series spray tip is a closed-chamber, pre-orifice drift reduction nozzle, emphasizing a second stage of drift reduction. The MR series balances great coverage spray with significant drift reduction upwards of 75%+.



Longer Lasting Stainless Tips



Superior Drift Reduction



Perfect for PWM Sprayers



Consistent Pattern at Lower pres.



Solid Mass Spray Droplets



Acid Resistant Nozzles

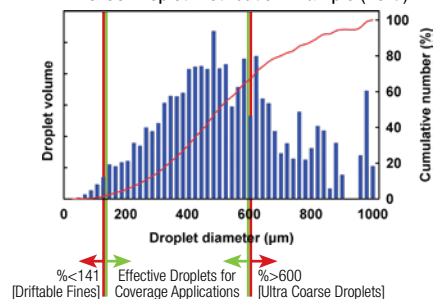
A DETAILED LOOK AT: MR110-06



Balance of Drift Control & Coverage



MR110-06 Droplet Distribution Example (40psi)



MR series is designed to produce relatively coarse spray with minimal drift.

COMBO-JET® MR80° ASABE S572.1 Spray Quality Chart

Pressure (bar)	2	2.5	3	3.5	4	4.5	5	5.5	6
MR80-005	M	M	F	F	F	F	F	F	F
MR80-0067	M	F	F	F	F	F	F	F	F
MR80-01	M	F	F	F	F	F	F	F	F
MR80-015	C	C	C	M	M	M	M	F	F
MR80-02	C	C	C	C	M	M	M	M	M
MR80-025	VC	VC	C	C	C	C	C	C	C
MR80-03	VC	VC	C	C	C	C	C	C	C
MR80-04	VC	C	C	C	C	C	C	C	C
MR80-05	XC	XC	VC	VC	VC	C	C	C	C
MR80-06	XC	XC	XC	VC	VC	VC	VC	C	C
MR80-08	UC	UC	UC	XC	XC	XC	VC	VC	C
MR80-10	UC	UC	UC	UC	XC	XC	XC	XC	XC
MR80-125	UC	UC	UC	UC	UC	UC	XC	XC	XC
MR80-15	UC	UC	XC	XC	XC	XC	VC	VC	C
MR80-20	UC	UC	UC	UC	XC	XC	XC	XC	XC
MR80-25	UC	UC	UC	UC	UC	UC	UC	UC	XC
MR80-30	UC	UC	UC	UC	UC	UC	UC	UC	XC
MR80-40	-	UC	UC	UC	UC	XC	XC	XC	XC

COMBO-JET® MR110° ASABE S572.1 Spray Quality Chart

Pressure (bar)	2	2.5	3	3.5	4	4.5	5	5.5	6
MR110-015	C	C	M	M	M	F	F	F	F
MR110-02	C	C	M	M	M	M	F	F	F
MR110-025	C	C	C	C	C	M	M	M	M
MR110-03	VC	C	C	C	C	C	C	C	M
MR110-04	VC	C	C	C	C	C	C	C	M
MR110-05	XC	VC	VC	VC	C	C	C	C	C
MR110-06	XC	XC	XC	VC	VC	VC	VC	C	C
MR110-08	UC	UC	XC	XC	XC	XC	XC	VC	C
MR110-10	UC	UC	XC	XC	XC	XC	XC	VC	C
MR110-125	UC	UC	UC	UC	UC	UC	UC	XC	XC
MR110-15	UC	UC	UC	UC	UC	UC	UC	UC	UC
MR110-20	UC	UC	UC	UC	UC	UC	UC	XC	XC

COMBO-JET® MR Pre-orifices - by size [Replacement Only]

-005	-0067	-01	-015	-02	-025	-03	-04	-05	-06	-08	-10	-125	-15	-20	-25	-30	-40
40285-005	40285-007	40285-01	40285-015	40285-02	40285-025	40285-03	40285-04	40285-05	40285-06	40285-08	40285-10	40285-125	40285-15	40285-20	40285-25	40285-30	40285-40

COMBO-JET® MR Series Specifications

Approved for PWM Spray Systems
Compatible with all PWM Spray systems/Hz.

Operating Pressure

2-7 bar

Flat Fan Nozzle Type
Closed-Chamber, Pre-Orifice Drift Reduction

Nozzle Materials
Spray Tip: Stainless Steel
Repl. O-ring: FKM, 13mm x 3mm #40260-00 (viton avail)
Cap: Glass-reinforced Polypropylene

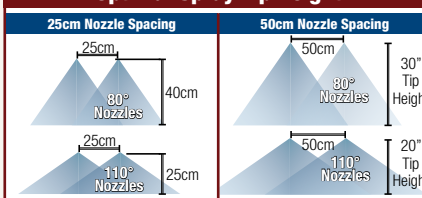
ASABE Spray Classification

(ASABE S572.1 Standard)
Spray quality is categorized based on Dv0.1 and VMD droplet sizes. Objective 3rd party testing data, from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Chart shown includes spray quality at tested data points as well as extrapolated data points.

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

Tips sized up to 110-06 verified on Phase Doppler Particle Analyzer (PDPA); tips sized over 110-06 verified on Malvern.

Optimal Spray Tip Height



LERAP Ratings for MR Series As of January 2021

MR110-04	★★★★75%	☆☆50%	1.0-2.5BAR	2.6-3.5BAR
MR110-05	★★★★90%	★★★★75%	1.0-1.5BAR	1.6-5.0BAR
MR110-06	★★★★90%	★★★★75%	1.0-1.5BAR	1.6-5.0BAR

For the updated list of nozzles, visit www.wilger.net/LERAP
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JKI Nozzle Ratings for MRs
Visit www.wilger.net for updated charts

COMBO-JET DR80° & DR110° Series Spray Tips

The DR series spray tip is a closed-chamber, pre-orifice drift reduction nozzle, emphasizing a third stage of drift reduction. The DR series balances good coverage spray with extremely low driftable fines, upwards of a 90% reduction in driftable fines.



Longer Lasting Stainless Tips



Superior Drift Reduction



Perfect for PWM Sprayers



Consistent Pattern at Lower pres.



Solid Mass Spray Droplets



Acid Resistant Nozzles

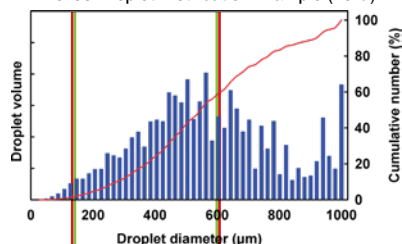
A DETAILED LOOK AT: DR110-06



Balance of Drift Control & Coverage



DR110-06 Droplet Distribution Example (40psi)



%<141 (Driftable Fines) Effective Droplets for Coverage Applications %>600 (Ultra Coarse Droplets)

DR series is designed to produce extremely coarse spray with very minimal drift.

COMBO-JET® DR80° ASABE S572.1 Spray Quality Chart

Pressure (bar)	2	2.5	3	3.5	4	4.5	5	5.5	6
DR80-005	C	M	M	F	F	F	F	F	F
DR80-0067	C	C	M	M	M	F	F	F	F
DR80-01	C	C	M	M	M	M	F	F	F
DR80-015	VC	VC	C	C	C	C	C	C	C
DR80-02	XC	VC	VC	VC	C	C	C	C	C
DR80-025	XC	VC	VC	VC	C	C	C	C	C
DR80-03	XC	XC	VC	VC	VC	C	C	C	C
DR80-04	XC	XC	XC	XC	XC	VC	VC	C	C
DR80-05	XC	XC	XC	XC	XC	XC	VC	VC	VC
DR80-06	XC	XC	XC	XC	XC	XC	XC	XC	VC
DR80-08	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-10	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-125	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-15	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-20	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-25	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR80-30	UC	UC	UC	UC	UC	UC	UC	UC	XC

COMBO-JET® DR110° ASABE S572.1 Spray Quality Chart

Pressure (bar)	2	2.5	3	3.5	4	4.5	5	5.5	6
DR110-015	C	C	C	C	C	C	M	M	M
DR110-02	VC	VC	C	C	C	C	C	C	C
DR110-025	VC	VC	C	C	C	C	C	C	C
DR110-03	XC	XC	VC	VC	C	C	C	C	C
DR110-04	XC	XC	VC	VC	VC	C	C	C	C
DR110-05	XC	XC	XC	XC	XC	XC	VC	VC	VC
DR110-06	XC	XC	XC	XC	XC	XC	XC	VC	VC
DR110-08	UC	UC	UC	UC	UC	UC	XC	XC	XC
DR110-10	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR110-125	UC	UC	UC	UC	UC	UC	UC	UC	UC
DR110-15	UC	UC	UC	UC	UC	UC	UC	UC	UC



COMBO-JET® DR Pre-orifices - by tip size [Replacement Only]

-005	-0067	-01	-015	-02	-025	-03	-04	-05	-06	-08	-10	-125	-15	-20	-25	-30
40285-005	40285-007	40285-01	40285-015	40285-02	40285-025	40285-03	40285-04	40285-05	40285-06	40285-08	40285-10	40285-125	40285-15	40285-20	40285-25	40285-30

COMBO-JET® DR Series Specifications

Approved for PWM Spray Systems
Compatible with all PWM Spray systems/Hz.

Operating Pressure
2-7 bar

Flat Fan Nozzle Type
Closed-Chamber, Pre-Orifice Drift Reduction

Nozzle Materials
Spray Tip: Stainless Steel
Repl. O-ring: FKM, 13mm x 3mm #40260-00 (viton avail)
Cap: Glass-reinforced Polypropylene

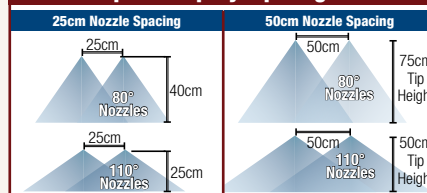
ASABE Spray Classification

(ASABE S572.1 Standard)
Spray quality is categorized based on Dv0.1 and VMD droplet sizes. Objective 3rd party testing data, from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Chart shown includes spray quality at tested data points as well as extrapolated data points.

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

Tips sized up to 110-06 verified on Phase Doppler Particle Analyzer (PDPA); tips sized over 110-06 verified on Malvern.

Optimal Spray Tip Height



LERAP Ratings for DR Series As of January 2021

DR110-025	★★★★ 75%	★★★ 50%
DR110-03	★★★★ 90%	★★★ 75%
DR110-04	★★★★ 75%	★★★ 50%
DR110-05	★★★★ 90%	★★★ 75%
DR110-06	★★★★ 90%	★★★ 75%

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JKI Nozzle Ratings for DR Series Visit www.wilger.net for updated charts

COMBO-JET UR110° Series* Spray Tips

*U.S. Patent No. 10,603,681

The UR series spray tip is a dual-chamber, pre-orifice drift reduction nozzle, emphasizing the coarsest stage of drift reduction. The UR series is heavily suited to ultra-low driftable fines, emphasizing drift reduction over coverage.



Approved for Dicamba Mixes



Ultra Low Spray Drift



Perfect for PWM Sprayers



Longer Lasting Stainless Tips



Solid Mass Spray Droplets



Acid Resistant Nozzles

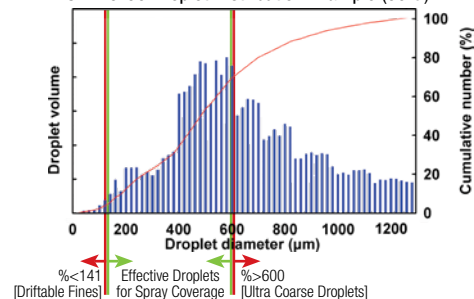
A DETAILED LOOK AT: UR110-06



Balance of Drift Control & Coverage



UR110-06 Droplet Distribution Example (60psi)



UR series is designed to produce ultra coarse spray with extremely little drift.

COMBO-JET® UR110° ASABE S572.1 Spray Quality Chart

Pressure (bar)	2.5	3	3.5	4	4.5	5	5.5	6
UR110-025	UC	UC	UC	XC	XC	XC	XC	XC
UR110-03	UC	UC	UC	XC	XC	XC	XC	XC
UR110-04	UC	UC	UC	UC	UC	UC	UC	UC
UR110-05	UC	UC	UC	UC	UC	UC	UC	UC
UR110-06	UC	UC	UC	UC	UC	UC	UC	UC
UR110-08	UC	UC	UC	UC	UC	UC	UC	UC
UR110-10	UC	UC	UC	UC	UC	UC	UC	UC

COMBO-JET® UR Series* Pre-orifice Sets [Replacement only]

UR two-piece pre-orifices must be replaced with a new pair only. Correct orifices must be used for proper performance.

-025	-03	-04	-05	-06	-08	-10
40292-22	40292-23	40292-24	40292-25	40292-26	40292-28	40292-30

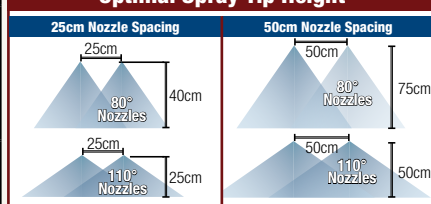
*U.S. Patent No. 10,603,681

JKI Ratings for UR Series

As of January 2021

	75%	50%
UR110-04	2.0-3.0BAR REF. G-2184	4.0-6.0BAR REF. G-2184
UR110-05	2.0BAR REF. G-2185	3.0-6.0BAR REF. G-2185
UR110-06	2.0-3.0BAR REF. G-2189	4.0-6.0BAR REF. G-2189

Optimal Spray Tip Height



COMBO-JET® UR Series Specifications

Approved for PWM Spray Systems
Compatible with all PWM Spray systems/Hz.

Operating Pressure
2.5-7 bar

Flat Fan Nozzle Type
Dual Closed-Chamber, Pre-Orifice Drift Reduction

Nozzle Materials
Spray Tip: Stainless Steel
Repl. O-ring: FKM, 13mm x 3mm #40260-00 (viton avail)
Cap: Glass-reinforced Polypropylene

ASABE Spray Classification

(ASABE S572.1 Standard)

Spray quality is categorized based on Dv0.1 and VMD droplet sizes. Objective 3rd party testing data, from spray spectrum recording equipment (without wind tunnel use), has been used to classify spray quality for this chart. Chart shown includes spray quality at tested data points as well as extrapolated data points.

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

UR Nozzles verified on Malvern.

COMBO-JET® Snap-in Strainers - What size(s) and when?

Wilger manufactures snap-in strainers that can be used to protect a spray nozzle and keep it spraying instead of getting plugged by residues or debris. They snap in to any COMBO-JET cap^{UR} or metering orifice so the cap handles as one piece.

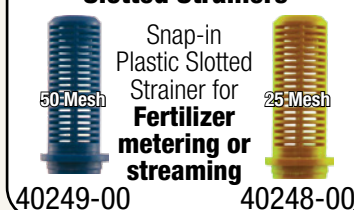
Nozzle Size	100 Mesh	50 Mesh	16/25 Mesh
-01 or smaller	X		
-015	X		
-02	X	X	
-025		X	
-03		X	
-04		X	
-05		X	X
-06		X	X
-08 or larger	Nozzle strainer is generally not required		X

^{UR}Strainers not compatible with UR series due to stacked pre-orifice

Stainless Steel Strainers



Slotted Strainers



Mesh Size	Slotted Strainer	Stainless Mesh	Color
100 mesh	-	#40251-00	Green
50 mesh	40249-00	#40250-00	Blue
25 mesh	40248-00	-	Yellow
16 mesh	40247-00	-	Gray

COMBO-JET 80° Spray Tips - Standard Sprayer Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

⚠ 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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

Nozzle Size & Angle	Flow Rate L/min	Boom BAR	Application Rate in Litres/Hectare on 50cm Nozzle Spacing				Spray Classification: VMD (Droplet Size in µ): %<141µ (Drift %): %<600µ (Small Droplets)															
			@ Sprayer Speed in km/h				ER80° Series				SR80° Series				MR80° Series				DR80° Series			
							Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
80 -005 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-005	#40270-005	SR80-005	#40288-005	MR80-005	#40290-005	DR80-005	#40280-005								
	0.140	1.50	20.9 kph	16.8 kph	13.4 kph	11.2 kph	F	163	36%	100%												
	0.151	1.75	22.6 kph	18.1 kph	14.5 kph	12.1 kph	F	156	41%	100%				M	258	16%	100%	C	308	17%	100%	
	0.161	2.00	24.2 kph	19.3 kph	15.5 kph	12.9 kph	F	150	45%	100%				M	240	16%	100%	C	282	12%	100%	
	0.180	2.50	27.0 kph	21.6 kph	17.3 kph	14.4 kph	F	141	52%	100%				F	212	23%	100%	M	245	17%	100%	
	0.197	3.00	29.6 kph	23.7 kph	19.0 kph	15.8 kph	F	133	58%	100%				F	192	28%	100%	M	218	22%	100%	
	0.213	3.50	32.0 kph	25.6 kph	20.5 kph	17.1 kph	F	127	63%	100%				F	177	33%	100%	F	198	26%	100%	
	0.228	4.00	34.2 kph	27.4 kph	21.9 kph	18.2 kph	F	122	67%	100%				F	164	38%	100%	F	181	30%	100%	
	0.242	4.50	36.3 kph	29.0 kph	23.2 kph	19.3 kph	F	118	71%	100%				F	154	41%	100%	F	168	33%	100%	
	0.255	5.00	38.2 kph	30.6 kph	24.5 kph	20.4 kph	F	115	74%	100%				F	145	45%	100%	F	157	36%	100%	
	0.267	5.50	40.1 kph	32.1 kph	25.7 kph	21.4 kph	VF	112	77%	100%				F	138	48%	100%	F	148	38%	100%	
	0.279	6.00	41.9 kph	33.5 kph	26.8 kph	22.3 kph	VF	109	80%	100%				F	131	51%	100%	F	140	41%	100%	
80 -0067 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-0067	#40270-0067	SR80-0067	#40288-0067	MR80-0067	#40290-0067	DR80-0067	#40280-0067								
	0.187	1.50	22.4 kph	18.0 kph	15.0 kph	11.2 kph	F	193	24%	100%												
	0.202	1.75	24.2 kph	19.4 kph	16.2 kph	12.1 kph	F	182	29%	100%				M	230	18%	100%	C	334	13%	100%	
	0.216	2.00	25.9 kph	20.7 kph	17.3 kph	13.0 kph	F	173	34%	100%				F	214	23%	100%	C	313	11%	100%	
	0.241	2.50	29.0 kph	23.2 kph	19.3 kph	14.5 kph	F	159	41%	100%				F	191	30%	100%	C	280	12%	100%	
	0.265	3.00	31.7 kph	25.4 kph	21.2 kph	15.9 kph	F	148	47%	100%				F	174	36%	100%	M	256	15%	100%	
	0.286	3.50	34.3 kph	27.4 kph	22.9 kph	17.1 kph	F	140	53%	100%				F	161	41%	100%	M	237	17%	100%	
	0.305	4.00	36.7 kph	29.3 kph	24.4 kph	18.3 kph	F	133	57%	100%				F	150	45%	100%	M	222	19%	100%	
	0.324	4.50	38.9 kph	31.1 kph	25.9 kph	19.4 kph	F	127	61%	100%				F	141	49%	100%	F	209	21%	100%	
	0.341	5.00	41.0 kph	32.8 kph	27.3 kph	20.5 kph	F	122	64%	100%				F	134	52%	100%	F	199	23%	100%	
	0.358	5.50	43.0 kph	34.4 kph	28.7 kph	21.5 kph	F	118	68%	100%				F	127	55%	100%	F	190	24%	100%	
	0.374	6.00	44.9 kph	35.9 kph	29.9 kph	22.4 kph	F	114	71%	100%				F	122	58%	100%	F	182	26%	100%	
80 -01 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-01	#40270-01	SR80-01	#40288-01	MR80-01	#40290-01	DR80-01	#40280-01								
	0.279	1.50	22.3 kph	16.8 kph	13.4 kph	11.2 kph	F	171	31%	100%	C	279	11%	97%								
	0.302	1.75	24.1 kph	18.1 kph	14.5 kph	12.1 kph	F	164	36%	100%	M	256	15%	97%								
	0.322	2.00	25.8 kph	19.3 kph	15.5 kph	12.9 kph	F	158	40%	100%	M	238	19%	97%	M	222	22%	97%	C	316	9%	94%
	0.360	2.50	28.8 kph	21.6 kph	17.3 kph	14.4 kph	F	148	46%	100%	F	210	26%	97%	F	200	28%	97%	C	286	12%	95%
	0.395	3.00	31.6 kph	23.7 kph	19.0 kph	15.8 kph	F	140	52%	100%	F	190	32%	97%	F	184	32%	97%	M	264	15%	97%
	0.426	3.50	34.1 kph	25.6 kph	20.5 kph	17.1 kph	F	134	57%	100%	F	174	36%	98%	F	172	36%	97%	M	247	17%	98%
	0.456	4.00	36.5 kph	27.4 kph	21.9 kph	18.2 kph	F	129	61%	100%	F	162	40%	98%	F	161	40%	97%	M	233	19%	99%
	0.484	4.50	38.7 kph	29.0 kph	23.2 kph	19.3 kph	F	124	64%	100%	F	151	44%	98%	F	153	43%	97%	M	221	20%	100%
	0.510	5.00	40.8 kph	30.6 kph	24.5 kph	20.4 kph	F	121	67%	100%	F	143	47%	98%	F	146	45%	97%	F	211	22%	100%
	0.535	5.50	42.8 kph	32.1 kph	25.7 kph	21.4 kph	F	117	70%	100%	F	135	50%	98%	F	139	48%	97%	F	202	23%	100%
	0.558	6.00	44.7 kph	33.5 kph	26.8 kph	22.3 kph	F	115	73%	100%	F	129	53%	98%	F	134	50%	96%	F	194	24%	100%
80 -015 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-015	#40270-015	SR80-015	#40288-015	MR80-015	#40290-015	DR80-015	#40280-015								
	0.419	1.50	25.1 kph	16.8 kph	14.4 kph	12.6 kph	F	195	22%	100%												
	0.452	1.75	27.1 kph	18.1 kph	15.5 kph	13.6 kph	F	187	25%	100%	C	284	13%	94%								
	0.484	2.00	29.0 kph	19.3 kph	16.6 kph	14.5 kph	F	181	28%	100%	M	267	16%	95%	C	328	10%	94%	VC	422	4%	86%
	0.541	2.50	32.4 kph	21.6 kph	18.5 kph	16.2 kph	F	171	32%	100%	M	240	20%	96%	C	296	13%	96%	VC	392	5%	89%
	0.592	3.00	35.5 kph	23.7 kph	20.3 kph	17.8 kph	F	163	36%	100%	M	221	24%	96%	C	273	15%	97%	C	369	6%	91%
	0.640	3.50	38.4 kph	25.6 kph	21.9 kph	19.2 kph	F	157	39%	100%	F	206	27%	97%	M	254	17%	98%	C	351	7%	92%
	0.684	4.00	41.0 kph	27.4 kph	23.4 kph	20.5 kph	F	152	42%	100%	F	194	29%	97%	M	239	19%	98%	C	336	8%	93%
	0.725	4.50	43.5 kph	29.0 kph	24.9 kph	21.8 kph	F	147	44%	100%	F	183	32%	98%	M	227	21%	98%	C	323	8%	94%
	0.765	5.00	45.9 kph	30.6 kph	26.2 kph	22.9 kph	F	144	46%	100%	F	175	34%	98%	M	216	22%	99%	C	312	9%	95%
	0.802	5.50	48.1 kph	32.1 kph	27.5 kph	24.1 kph	F	140	48%	100%	F	167	36%	98%	F	207	23%	99%	C	303	10%	95%
	0.838	6.00	50.3 kph	33.5 kph	28.7 kph	25.1 kph	F	137	50%	100%	F	160	37%	98%	F	199	25%	99%	C	294	10%	96%
80 -02 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-02	#40270-02	SR80-02	#40288-02	MR80-02	#40290-02	DR80-02	#40280-02								
	0.558	1.50	22.3 kph	16.8 kph	13.4 kph	11.2 kph	F	181	29%	100%												
	0.603	1.75	24.1 kph	18.1 kph	14.5 kph	12.1 kph	F	176	32%	100%	C	272	13%	94%								
	0.645	2.00	25.8 kph	19.3 kph	15.5 kph	12.9 kph	F	172	34%	100%	M	260	15%	95%	C	329	8%	94%	XC	459	3%	80%
	0.721	2.50	28.8 kph	21.6 kph	17.3 kph	14.4 kph	F	164	37%	100%	M	241	19%	96%	C	307	10%	94%	VC	431	4%	83%
	0.790	3.00	31.6 kph	23.7 kph	19.0 kph	15.8 kph	F	159	40%	100%	M	227	22%	97%	C	290	12%	94%	VC	410	5%	85%
	0.853	3.50	34.1 kph	25.6 kph	20.5 kph	17.1 kph	F	154	42%	100%	F	215	24%	97%	C	276	14%	95%	VC	392	5%	87%
	0.912	4.00	36.5 kph	27.4 kph	21.9 kph	18.2 kph	F	150	44%	100%	F	206	27%	97%	M	265	15%	95%	C	378	6%	88%
	0.967	4.50	38.7 kph	29.0 kph	23.2 kph	19.3 kph	F	147	46%	100%	F	198	29%	98%	M	255	17%	95%	C	366	6%	89%
	1.019	5.00	40.8 kph	30.6 kph	24.5 kph	20.4 kph	F	144	47%	100%	F	191	30%	98%	M	247	18%	95%	C	355	7%	90%
	1.069	5.50	42.8 kph	32.1 kph	25.7 kph	21.4 kph	F	142	49%	100%	F	185	32%	98%	M	239	19%	95%	C	346	7%	91%
	1.117	6.00	44.7 kph	33.5 kph	26.8 kph	22.3 kph	F	139	50%	100%	F	179	33%	98%	M	233	20%	96%	C	338	8%	91%
80 -025 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-025	#40270-025	SR80-025	#40288-025	MR80-025	#40290-025	DR80-025	#40280-025								
	0.698	1.50	20.9 kph	16.8 kph	14.0 kph	12.0 kph	M	227	18%	100%												
	0.754	1.75	22.6 kph	18.1 kph	15.1 kph	12.9 kph	M	218	21%	100%	C	314	9%	91%								
	0.806	2.00	24.2 kph	19.3 kph	16.1 kph	13.8 kph	F	211	23%	100%	C	299	11%	92%	VC	430	4%	80%	XC	463	3%	77%
	0.901	2.50	27.0 kph	21.6 kph	18.0 kph	15.4 kph	F	199	26%	100%	C	277	14%	94%	VC	396	6%	83%	VC	440	4%	80%
	0.987	3.00	29.6 kph	23.7 kph	19.7 kph	16.9 kph	F	189	29%	100%	M	260	16%	95%	C	371	7%	86%	VC	421	5%	82%
	1.066	3.50	32.0 kph	25.6 kph																		

COMBO-JET 80° Spray Tips - Standard Sprayer Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

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.

% <141 μ (% Driftable Fines)

Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600 μ (% of Small Droplets)

% of volume which is made up of 'small' droplets, useful for coverage. As % of useful droplets lowers, overall coverage is reduced.

	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-03		#40270-03		SR80-03		#40288-03		MR80-03		#40290-03		DR80-03		#40280-03	
			45L/Ha	55L/Ha	65L/Ha	75L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
80-03 Nozzles	0.838	1.50	22.3 kph	18.3 kph	15.5 kph	13.4 kph	M	229	18%	99%	C	366	7%	88%								
	0.905	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	M	221	20%	99%	C	366	7%	88%								
	0.967	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	F	215	22%	99%	C	349	9%	89%	VC	437	4%	80%	XC	485	3%	71%
	1.081	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	F	205	25%	99%	C	321	11%	90%	VC	404	6%	84%	XC	458	4%	75%
	1.184	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	F	197	27%	99%	C	300	13%	91%	C	378	7%	86%	VC	437	5%	78%
	1.279	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	F	191	29%	99%	C	283	15%	92%	C	358	8%	88%	VC	420	5%	80%
	1.368	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	F	186	31%	99%	M	269	16%	93%	C	341	9%	89%	VC	406	6%	82%
	1.451	4.50	38.7 kph	31.6 kph	26.8 kph	23.2 kph	F	181	33%	99%	M	258	18%	93%	C	327	10%	90%	C	394	6%	84%
	1.529	5.00	40.8 kph	33.4 kph	28.2 kph	24.5 kph	F	177	34%	99%	M	248	19%	93%	C	315	10%	91%	C	384	7%	85%
	1.604	5.50	42.8 kph	35.0 kph	29.6 kph	25.7 kph	F	174	35%	99%	M	239	20%	94%	C	304	11%	92%	C	374	7%	86%
80-04 Nozzles	1.675	6.00	44.7 kph	36.5 kph	30.9 kph	26.8 kph	F	170	36%	99%	M	232	21%	94%	C	295	12%	92%	C	366	8%	87%
	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER80-04	#40270-04	SR80-04	#40288-04	MR80-04	#40290-04	DR80-04	#40280-04							
	1.12	1.50	22.3 kph	19.1 kph	16.8 kph	14.9 kph	M	246	17%	99%												
	1.21	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	M	238	19%	99%	C	368	5%	86%								
	1.29	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	M	232	20%	99%	C	352	7%	87%	VC	424	5%	80%	XC	547	2%	61%
	1.44	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	M	221	23%	99%	C	327	9%	88%	C	397	7%	83%	XC	519	3%	66%
	1.58	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	F	212	25%	99%	C	306	11%	90%	C	376	8%	85%	XC	497	3%	70%
	1.71	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	F	205	26%	99%	C	289	12%	91%	C	359	9%	86%	XC	479	4%	72%
	1.82	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	F	200	28%	99%	C	274	13%	91%	C	345	10%	87%	XC	463	4%	75%
	1.93	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	F	195	29%	99%	M	260	14%	92%	C	333	11%	88%	VC	451	5%	76%
80-05 Nozzles	2.04	5.00	40.8 kph	35.0 kph	30.6 kph	27.2 kph	F	190	30%	99%	M	248	15%	93%	C	322	11%	89%	VC	439	5%	78%
	2.14	5.50	42.8 kph	36.7 kph	32.1 kph	28.5 kph	F	187	31%	99%	M	238	16%	93%	C	313	12%	90%	C	429	5%	79%
	2.23	6.00	44.7 kph	38.3 kph	33.5 kph	29.8 kph	F	183	32%	99%	M	228	17%	93%	C	305	13%	91%	C	421	5%	80%
	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER80-05	#40270-05	SR80-05	#40288-05	MR80-05	#40290-05	DR80-05	#40280-05							
	1.40	1.50	22.3 kph	18.6 kph	16.0 kph	14.0 kph	C	290	12%	95%												
	1.51	1.75	24.1 kph	20.1 kph	17.2 kph	15.1 kph	C	279	14%	95%	VC	409	5%	81%								
	1.61	2.00	25.8 kph	21.5 kph	18.4 kph	16.1 kph	M	269	16%	95%	C	391	7%	82%	XC	508	3%	67%	XC	579	2%	55%
	1.80	2.50	28.8 kph	24.0 kph	20.6 kph	18.0 kph	M	254	19%	95%	C	362	9%	85%	XC	478	4%	71%	XC	550	2%	60%
	1.97	3.00	31.6 kph	26.3 kph	22.6 kph	19.7 kph	M	243	21%	95%	C	338	11%	86%	VC	455	5%	75%	XC	528	3%	64%
	2.13	3.50	34.1 kph	28.4 kph	24.4 kph	21.3 kph	M	234	23%	95%	C	318	12%	88%	VC	436	5%	77%	XC	510	3%	67%
80-06 Nozzles	2.28	4.00	36.5 kph	30.4 kph	26.1 kph	22.8 kph	M	226	24%	95%	C	300	13%	89%	VC	421	6%	79%	XC	495	3%	69%
	2.42	4.50	38.7 kph	32.2 kph	27.6 kph	24.2 kph	M	219	26%	95%	C	285	14%	89%	C	407	6%	81%	XC	482	4%	71%
	2.55	5.00	40.8 kph	34.0 kph	29.1 kph	25.5 kph	F	214	27%	95%	C	271	15%	90%	C	396	7%	82%	VC	471	4%	73%
	2.67	5.50	42.8 kph	35.6 kph	30.5 kph	26.7 kph	F	208	28%	95%	M	259	16%	91%	C	386	7%	83%	VC	461	4%	74%
	2.79	6.00	44.7 kph	37.2 kph	31.9 kph	27.9 kph	F	204	29%	95%	M	247	17%	91%	C	376	7%	84%	VC	452	4%	75%
	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER80-06	#40270-06	SR80-06	#40288-06	MR80-06	#40290-06	DR80-06	#40280-06							
	1.68	1.50	22.3 kph	18.3 kph	15.5 kph	13.4 kph	C	316	13%	92%												
	1.81	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	C	307	15%	91%	VC	438	4%	78%								
	1.93	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	C	298	16%	91%	VC	423	5%	80%	XC	530	2%	63%	XC	600	1%	51%
	2.16	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	C	285	19%	91%	VC	400	6%	83%	XC	504	3%	68%	XC	575	2%	55%
80-08 Nozzles	2.37	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	C	275	21%	91%	C	381	7%	85%	XC	483	4%	71%	XC	555	2%	58%
	2.56	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	M	266	22%	90%	C	367	8%	86%	VC	466	4%	74%	XC	538	2%	61%
	2.74	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	M	259	24%	90%	C	354	9%	88%	VC	452	5%	76%	XC	524	3%	63%
	2.90	4.50	38.7 kph	31.6 kph	26.8 kph	23.2 kph	M	253	25%	90%	C	344	9%	89%	VC	440	5%	77%	XC	512	3%	65%
	3.06	5.00	40.8 kph	33.4 kph	28.2 kph	24.5 kph	M	247	26%	90%	C	334	10%	89%	VC	429	5%	79%	XC	502	3%	66%
	3.21	5.50	42.8 kph	35.0 kph	29.6 kph	25.7 kph	M	243	27%	90%	C	326	10%	90%	C	420	6%	80%	XC	492	3%	68%
	3.35	6.00	44.7 kph	36.5 kph	30.9 kph	26.8 kph	M	238	28%	89%	C	319	11%	91%	C	411	6%	81%	VC	484	4%	69%
	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER80-08	#40270-08	SR80-08	#40288-08	MR80-08	#40290-08	DR80-08	#40280-08							
	2.23	1.50	21.4 kph	17.9 kph	15.3 kph	13.4 kph	VC	356	13%	87%												
	2.41	1.75	23.2 kph	19.3 kph	16.5 kph	14.5 kph	C	336	15%	89%	UC	514	7%	54%								
2.58	2.00	24.8 kph	20.6 kph	17.7 kph	15.5 kph	C	321	17%	90%	UC	495	7%	58%	UC	545	6%	63%	UC	623	3%	51%	
2.88	2.50	27.7 kph	23.1 kph	19.8 kph	17.3 kph	M	296	19%	92%	XC	463	9%	64%	UC	513	7%	67%	UC	596	4%	56%	
3.16	3.00	30.3 kph	25.3 kph	21.7 kph	19.0 kph	M	277	22%	93%	XC	437	10%	68%	UC	488	8%	71%	UC	575	4%	59%	
3.41	3.50	32.8 kph	27.3 kph	23.4 kph	20.5 kph	F	262	24%	94%	XC	414	10%	71%	XC	468	9%	73%	UC	557	5%	62%	
80-10 Nozzles	3.65	4.00	35.0 kph	29.2 kph	25.0 kph	21.9 kph	F	250	25%	95%	XC	395	11%	73%	XC	452	10%	75%	UC	543	5%	64%
	3.87	4.50	37.1 kph	30.9 kph	26.5 kph	23.2 kph	F	239	27%	95%	VC	378	12%	75%	XC	438	11%	77%	UC	530	5%	66%
	4.08	5.00	39.1 kph	32.6 kph	28.0 kph	24.5 kph	F	231	28%	96%	VC	363	12%	77%	VC	426	11%	79%	UC	519	6%	68%
	4.28	5.50	41.1 kph	34.2 kph	29.3 kph	25.7 kph	F	223	29%	96%	C	350	13%	78%	VC	415	12%	80%	UC	509	6%	69%
	4.47	6.00	42.9 kph	35.7 kph	30.6 kph	26.8 kph	F	216	30%	96%	C	337	13%	80%	C	405	12%	81%	UC	500	6%	70%
	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER80-10	#40270-10	SR80-10	#40288-10	MR80-10	#40290-10	DR80-10	#40280-10							
	2.79	1.50	22.3 kph	19.1 kph	16.8 kph	14.9 kph	XC	446	9%	79%												
	3.02	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	XC	426	11%	80%	UC	535	6%	50%								
	3.22	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	XC	409	12%	81%	UC	516	6%	54%	UC	550	5%	62%	UC	615	4%	52%
	3.60	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	C	382	13%	83%	UC	485	7%	60%	UC	524	6%	66%	UC	592	5%	56%
3.95	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	C	361	15%	85%	XC	460	8%	65%	UC	504	6%	68%	UC	574	5%	58%	
4.26	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	C	345	16%	86%	XC	439	9%	68%	UC	487	7%	70%	UC	560	6%	61%	
4.56	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	M	331	17%	87%	XC	420	9%	70%	XC	473	7%	72%	UC	547	6%	63%	
4.84	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	M	319															

COMBO-JET 80° Spray Tips - Standard Sprayer Systems

	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-125		#40270-125		SR80-125		#40288-125		MR80-125		#40290-125		DR80-125		#40280-125	
	L/min	BAR	200L/Ha	225L/Ha	250L/Ha	275L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
80 -125 Nozzles	3.77	1.75	22.6 kph	20.1 kph	18.1 kph	16.4 kph	XC	431	10%	79%	UC	529	6%	51%					UC	628	4%	49%
	4.03	2.00	24.2 kph	21.5 kph	19.3 kph	17.6 kph	XC	416	11%	80%	UC	513	7%	54%	UC	588	5%	55%	UC	605	4%	53%
	4.51	2.50	27.0 kph	24.0 kph	21.6 kph	19.7 kph	VC	393	12%	82%	UC	486	8%	59%	UC	566	6%	59%	UC	587	5%	55%
	4.94	3.00	29.6 kph	26.3 kph	23.7 kph	21.5 kph	C	375	13%	84%	XC	464	8%	62%	UC	548	7%	61%	UC	587	5%	55%
	5.33	3.50	32.0 kph	28.4 kph	25.6 kph	23.3 kph	C	360	14%	85%	XC	446	9%	65%	UC	534	7%	63%	UC	572	5%	57%
	5.70	4.00	34.2 kph	30.4 kph	27.4 kph	24.9 kph	C	348	15%	86%	XC	429	10%	67%	UC	522	8%	65%	UC	560	6%	59%
	6.04	4.50	36.3 kph	32.2 kph	29.0 kph	26.4 kph	C	337	16%	87%	XC	415	10%	69%	UC	511	8%	67%	UC	549	6%	61%
	6.37	5.00	38.2 kph	34.0 kph	30.6 kph	27.8 kph	C	328	16%	88%	XC	403	11%	71%	XC	502	8%	68%	UC	539	6%	62%
	6.68	5.50	40.1 kph	35.6 kph	32.1 kph	29.2 kph	M	320	17%	88%	VC	391	11%	72%	XC	493	9%	69%	UC	531	6%	63%
	6.98	6.00	41.9 kph	37.2 kph	33.5 kph	30.5 kph	M	313	17%	89%	VC	381	12%	73%	XC	486	9%	70%	UC	523	7%	64%
80 -15 Nozzles	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-15		#40270-15		SR80-15		#40288-15		MR80-15		#40290-15		DR80-15		#40280-15	
	L/min	BAR	225L/Ha	275L/Ha	325L/Ha	375L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
	4.52	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	XC	432	9%	78%	UC	574	5%	44%								
	4.84	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	XC	416	10%	79%	UC	558	6%	47%	UC	517	7%	66%	UC	641	3%	47%
	5.41	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	XC	390	12%	80%	UC	531	6%	51%	UC	491	8%	69%	UC	616	3%	51%
	5.92	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	C	370	13%	81%	UC	509	6%	55%	XC	471	9%	71%	UC	596	3%	54%
	6.40	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	C	354	14%	82%	UC	491	7%	58%	XC	455	10%	73%	UC	580	4%	57%
	6.84	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	C	340	15%	83%	XC	475	7%	60%	XC	441	10%	75%	UC	566	4%	59%
	7.25	4.50	38.7 kph	31.6 kph	26.8 kph	23.2 kph	M	329	16%	84%	XC	460	7%	62%	XC	429	11%	76%	UC	554	4%	61%
	7.65	5.00	40.8 kph	33.4 kph	28.2 kph	24.5 kph	M	319	17%	84%	XC	448	8%	64%	VC	419	11%	77%	UC	544	5%	62%
80 -20 Nozzles	8.02	5.50	42.8 kph	35.0 kph	29.6 kph	25.7 kph	M	310	18%	85%	XC	436	8%	65%	VC	410	12%	78%	UC	534	5%	63%
	8.38	6.00	44.7 kph	36.5 kph	30.9 kph	26.8 kph	M	302	18%	85%	XC	426	8%	67%	C	402	12%	79%	UC	526	5%	64%
	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-20		#40270-20		SR80-20		#40288-20		MR80-20		#40290-20		DR80-20		#40280-20	
	L/min	BAR	300L/Ha	350L/Ha	400L/Ha	450L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
	6.03	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	UC	481	8%	71%												
	6.45	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	XC	464	9%	73%	UC	555	5%	47%								
	7.21	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	XC	438	10%	75%	UC	527	6%	52%	UC	537	6%	62%	UC	601	3%	54%
	7.90	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	XC	418	11%	77%	UC	504	6%	56%	UC	512	6%	65%	UC	575	4%	58%
	8.53	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	VC	402	12%	79%	UC	485	7%	59%	UC	492	7%	68%	UC	554	4%	61%
	9.12	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	C	388	13%	80%	XC	468	7%	61%	XC	476	8%	70%	UC	537	5%	63%
80 -25 Nozzles	9.67	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	C	376	13%	81%	XC	453	7%	63%	XC	461	8%	72%	UC	522	5%	65%
	10.19	5.00	40.8 kph	35.0 kph	30.6 kph	27.2 kph	C	366	14%	82%	XC	440	7%	65%	XC	449	8%	73%	UC	509	5%	67%
	10.69	5.50	42.8 kph	36.7 kph	32.1 kph	28.5 kph	C	357	15%	83%	XC	428	8%	66%	XC	438	9%	74%	UC	498	5%	68%
	11.17	6.00	44.7 kph	38.3 kph	33.5 kph	29.8 kph	M	349	15%	84%	XC	417	8%	67%	XC	428	9%	75%	UC	488	6%	69%
	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-25		#40270-25		SR80-25		#40288-25		MR80-25		#40290-25		DR80-25		#40280-25	
	L/min	BAR	350L/Ha	450L/Ha	550L/Ha	650L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
	7.54	1.75	25.8 kph	20.1 kph	16.4 kph	13.9 kph	UC	483	9%	71%												
	8.06	2.00	27.6 kph	21.5 kph	17.6 kph	14.9 kph	XC	466	9%	72%	UC	515	5%	53%								
	9.01	2.50	30.9 kph	24.0 kph	19.7 kph	16.6 kph	XC	439	11%	74%	UC	490	6%	57%	UC	579	4%	58%	UC	630	3%	50%
	9.87	3.00	33.8 kph	26.3 kph	21.5 kph	18.2 kph	XC	418	12%	76%	XC	470	7%	60%	UC	556	5%	61%	UC	605	3%	54%
10.66	3.50	36.6 kph	28.4 kph	23.3 kph	19.7 kph	VC	401	13%	77%	XC	453	7%	62%	UC	537	5%	63%	UC	585	3%	57%	
80 -30 Nozzles	11.40	4.00	39.1 kph	30.4 kph	24.9 kph	21.0 kph	C	387	13%	78%	XC	438	7%	64%	UC	521	5%	65%	UC	567	4%	59%
	12.09	4.50	41.4 kph	32.2 kph	26.4 kph	22.3 kph	C	374	14%	79%	XC	425	8%	66%	UC	508	6%	67%	UC	553	4%	61%
	12.74	5.00	43.7 kph	34.0 kph	27.8 kph	23.5 kph	C	364	15%	80%	XC	413	8%	67%	UC	496	6%	68%	UC	540	4%	63%
	13.36	5.50	45.8 kph	35.6 kph	29.2 kph	24.7 kph	C	355	15%	81%	XC	402	8%	68%	UC	486	6%	69%	UC	528	4%	64%
	13.96	6.00	47.9 kph	37.2 kph	30.5 kph	25.8 kph	M	347	16%	81%	XC	393	8%	69%	XC	477	6%	70%	UC	518	4%	66%
	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-30		#40270-30		SR80-30		#40288-30		MR80-30		#40290-30		DR80-30		#40280-30	
	L/min	BAR	450L/Ha	600L/Ha	700L/Ha	800L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
	9.05	1.75	24.1 kph	18.1 kph	15.5 kph	13.6 kph	UC	504	5%	67%												
	9.67	2.00	25.8 kph	19.3 kph	16.6 kph	14.5 kph	UC	485	6%	69%	UC	513	5%	53%								
	10.81	2.50	28.8 kph	21.6 kph	18.5 kph	16.2 kph	XC	456	7%	71%	UC	485	5%	57%	UC	567	4%	59%	UC	616	2%	52%
11.84	3.00	31.6 kph	23.7 kph	20.3 kph	17.8 kph	XC	434	8%	73%	XC	464	6%	60%	UC	546	5%	62%	UC	581	3%	56%	
12.79	3.50	34.1 kph	25.6 kph	21.9 kph	19.2 kph	XC	416	8%	75%	XC	447	6%	62%	UC	528	5%	64%	UC	553	3%	60%	
13.68	4.00	36.5 kph	27.4 kph	23.4 kph	20.5 kph	XC	401	9%	76%	XC	433	6%	64%	UC	514	5%	66%	UC	530	3%	62%	
80 -40 Nozzles	14.51	4.50	38.7 kph	29.0 kph	24.9 kph	21.8 kph	XC	388	10%	77%	XC	421	7%	66%	UC	501	5%	68%	UC	511	3%	65%
	15.29	5.00	40.8 kph	30.6 kph	26.2 kph	22.9 kph	VC	377	10%	78%	XC	410	7%	67%	UC	490	6%	69%	UC	494	4%	67%
	16.04	5.50	42.8 kph	32.1 kph	27.5 kph	24.1 kph	VC	367	11%	79%	XC	401	7%	69%	UC	480	6%	71%	UC	479	4%	68%
	16.75	6.00	44.7 kph	33.5 kph	28.7 kph	25.1 kph	C	358	11%	80%	XC	392	7%	70%	XC	471	6%	72%	XC	466	4%	70%
	Flow	Boom	Sprayer	Speed (L/Ha on 50cm spacing) @			ER80-40		#40270-40		SR80-40		#40288-40		MR80-40		#40290-40					
	L/min	BAR	650L/Ha	850L/Ha	1000L/Ha	1200L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	14.42	2.50	26.6 kph	20.4 kph	17.3 kph	14.4 kph	XC	456	8%	71%	XC	477	5									

COMBO-JET 110° Spray Tips - Standard Sprayer Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

⚠ 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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

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.
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Nozzle Size & Angle	Flow Rate L/min	Boom psi	Application Rate in Litres/Hectare on 50cm Nozzle Spacing @ Sprayer Speed in km/h				Spray Classification: VMD (Droplet Size in µ; %<141µ (Drift %); %<600µ (Small Droplets)												UR Series						
							ER110° Series				SR110° Series				MR110° Series						DR110° Series				
			Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD					
110-01 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-01	#40281-01																	
			15L/Ha	20L/Ha	25L/Ha	30L/Ha	Class	VMD	<141	<600															
	0.279	1.50	22.3 kph	16.8 kph	13.4 kph	11.2 kph	F	147	46%	100%															
	0.302	1.75	24.1 kph	18.1 kph	14.5 kph	12.1 kph	F	143	48%	100%															
	0.322	2.00	25.8 kph	19.3 kph	15.5 kph	12.9 kph	F	140	51%	100%															
	0.360	2.50	28.8 kph	21.6 kph	17.3 kph	14.4 kph	F	135	54%	100%															
	0.395	3.00	31.6 kph	23.7 kph	19.0 kph	15.8 kph	F	131	57%	100%															
	0.426	3.50	34.1 kph	25.6 kph	20.5 kph	17.1 kph	F	128	60%	100%															
	0.456	4.00	36.5 kph	27.4 kph	21.9 kph	18.2 kph	F	125	62%	100%															
	0.484	4.50	38.7 kph	29.0 kph	23.2 kph	19.3 kph	F	122	64%	100%															
	0.510	5.00	40.8 kph	30.6 kph	24.5 kph	20.4 kph	F	120	65%	100%															
	0.535	5.50	42.8 kph	32.1 kph	25.7 kph	21.4 kph	F	118	67%	100%															
	0.558	6.00	44.7 kph	33.5 kph	26.8 kph	22.3 kph	F	116	68%	100%															
110-015 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-015	#40281-015			SR110-015	#40287-015			MR110-015	#40291-015			DR110-015	#40286-015					
			20L/Ha	30L/Ha	35L/Ha	40L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	
	0.419	1.50	25.1 kph	16.8 kph	14.4 kph	12.6 kph	F	151	42%	100%															
	0.452	1.75	27.1 kph	18.1 kph	15.5 kph	13.6 kph	F	148	44%	100%															
	0.484	2.00	29.0 kph	19.3 kph	16.6 kph	14.5 kph	F	145	46%	100%	F	217	23%	98%	M	327	11%	94%	C	371	7%	91%			
	0.541	2.50	32.4 kph	21.6 kph	18.5 kph	16.2 kph	F	141	50%	100%	F	205	27%	98%	M	291	14%	97%	C	340	9%	93%			
	0.592	3.00	35.5 kph	23.7 kph	20.3 kph	17.8 kph	F	137	53%	100%	F	195	30%	98%	M	266	17%	98%	M	318	11%	94%			
	0.640	3.50	38.4 kph	25.6 kph	21.9 kph	19.2 kph	F	134	55%	100%	F	186	32%	98%	M	245	20%	99%	M	299	12%	95%			
	0.684	4.00	41.0 kph	27.4 kph	23.4 kph	20.5 kph	F	132	58%	100%	F	179	34%	98%	F	229	22%	99%	M	284	13%	96%			
	0.725	4.50	43.5 kph	29.0 kph	24.9 kph	21.8 kph	F	129	60%	100%	F	173	36%	98%	F	215	24%	99%	M	272	15%	96%			
	0.765	5.00	45.9 kph	30.6 kph	26.2 kph	22.9 kph	F	127	61%	100%	F	167	37%	98%	F	204	26%	99%	M	261	16%	97%			
	0.802	5.50	48.1 kph	32.1 kph	27.5 kph	24.1 kph	F	125	63%	100%	F	162	39%	98%	F	194	28%	100%	M	252	17%	97%			
	0.838	6.00	50.3 kph	33.5 kph	28.7 kph	25.1 kph	F	124	64%	100%	F	157	40%	98%	F	186	29%	100%	M	243	17%	97%			
110-02 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-02	#40281-02			SR110-02	#40287-02			MR110-02	#40291-02			DR110-02	#40286-02					
			30L/Ha	40L/Ha	50L/Ha	60L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	
	0.558	1.50	22.3 kph	16.8 kph	13.4 kph	11.2 kph	F	170	33%	100%															
	0.603	1.75	24.1 kph	18.1 kph	14.5 kph	12.1 kph	F	165	36%	100%															
	0.645	2.00	25.8 kph	19.3 kph	15.5 kph	12.9 kph	F	161	39%	100%	F	220	22%	99%	M	320	11%	95%	VC	436	4%	82%			
	0.721	2.50	28.8 kph	21.6 kph	17.3 kph	14.4 kph	F	154	43%	100%	F	210	25%	99%	M	291	14%	96%	VC	405	6%	86%			
	0.790	3.00	31.6 kph	23.7 kph	19.0 kph	15.8 kph	F	148	46%	100%	F	202	27%	99%	M	269	17%	97%	C	380	7%	88%			
	0.853	3.50	34.1 kph	25.6 kph	20.5 kph	17.1 kph	F	143	49%	100%	F	195	29%	99%	M	252	19%	98%	C	359	8%	90%			
	0.912	4.00	36.5 kph	27.4 kph	21.9 kph	18.2 kph	F	139	52%	100%	F	189	30%	99%	M	238	21%	98%	C	341	9%	91%			
	0.967	4.50	38.7 kph	29.0 kph	23.2 kph	19.3 kph	F	135	54%	100%	F	184	32%	99%	F	227	22%	98%	M	325	10%	92%			
	1.019	5.00	40.8 kph	30.6 kph	24.5 kph	20.4 kph	F	132	56%	100%	F	179	33%	99%	F	217	24%	98%	M	310	10%	93%			
	1.069	5.50	42.8 kph	32.1 kph	25.7 kph	21.4 kph	F	129	58%	100%	F	175	34%	99%	F	208	25%	99%	M	297	11%	94%			
	1.117	6.00	44.7 kph	33.5 kph	26.8 kph	22.3 kph	F	126	59%	100%	F	171	35%	99%	F	201	26%	99%	M	286	12%	94%			
110-025 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-025	#40281-025			SR110-025	#40287-025			MR110-025	#40291-025			DR110-025	#40286-025			UR110-025		
			40L/Ha	50L/Ha	60L/Ha	70L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	
	0.698	1.50	20.9 kph	16.8 kph	14.0 kph	12.0 kph	F	192	29%	100%															
	0.754	1.75	22.6 kph	18.1 kph	15.1 kph	12.9 kph	F	189	29%	100%	M	244	18%	98%											
	0.806	2.00	24.2 kph	19.3 kph	16.1 kph	13.8 kph	F	187	29%	100%	M	237	19%	98%	C	354	8%	90%	VC	438	5%	79%			
	0.901	2.50	27.0 kph	21.6 kph	18.0 kph	15.4 kph	F	182	30%	100%	F	227	22%	98%	M	330	10%	92%	VC	410	6%	84%	UC		
	0.987	3.00	29.6 kph	23.7 kph	19.7 kph	16.9 kph	F	179	30%	100%	F	218	24%	98%	M	311	12%	94%	C	387	7%	87%	UC		
	1.066	3.50	32.0 kph	25.6 kph	21.3 kph	18.3 kph	F	176	30%	100%	F	211	25%	98%	M	295	14%	95%	C	368	8%	90%	UC		
	1.140	4.00	34.2 kph	27.4 kph	22.8 kph	19.5 kph	F	174	31%	100%	F	204	27%	98%	M	281	15%	96%	C	351	9%	91%	UC		
	1.209	4.50	36.3 kph	29.0 kph	24.2 kph	20.7 kph	F	171	31%	100%	F	199	28%	98%	M	268	16%	96%	M	337	9%	92%	XC		
	1.274	5.00	38.2 kph	30.6 kph	25.5 kph	21.8 kph	F	169	31%	100%	F	194	29%	98%	M	257	17%	97%	M	323	10%	93%	XC		
	1.336	5.50	40.1 kph	32.1 kph	26.7 kph	22.9 kph	F	167	31%	100%	F	189	30%	98%	M	247	18%	97%	M	311	11%	94%	XC		
	1.396	6.00	41.9 kph	33.5 kph	27.9 kph	23.9 kph	F	166	31%	100%	F	185	31%	98%	M	238	19%	97%	M	301	11%	95%	VC		
110-03 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-03	#40281-03			SR110-03	#40287-03			MR110-03	#40291-03			DR110-03	#40286-03			UR110-03		
			45L/Ha	55L/Ha	65L/Ha	75L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	
	0.838	1.50	22.3 kph	18.3 kph	15.5 kph	13.4 kph	F	195	28%	100%															
	0.905	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	F	189	29%	100%	M	318	10%	94%											
	0.967	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	F	185	31%	100%	M	306	11%	95%	C	399	6%	86%	VC	484	3%	73%			
	1.081	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	F	177	34%	100%	M	287	14%	96%	C	371	8%	89%	VC	455	4%	78%	UC		
	1.184	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	F	170	36%	100%	M	272	16%	96%	C	350	9%	91%	VC	432	5%	82%	UC		
	1.279	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	F	165	37%	100%	M	258	17%	97%	M	331	10%	93%	VC	412	6%	84%	UC		
	1.368	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	F	160	39%	100%	M	247	19%	97%	M	315	11%	94%	C	395	6%	86%	UC		

COMBO-JET 110° Spray Tips - Standard Sprayer Systems

NOZZLES

110° Nozzle Charts - Broadcast Spraying

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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

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 Finest) 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.
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	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @					ER110-04		#40281-04		SR110-04		#40287-04		MR110-04		#40291-04		DR110-04		#40286-04		UR110-04	
			60L/Ha	70L/Ha	80L/Ha	90L/Ha		Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
110 -04 Nozzles	1.117	1.50	22.3 kph	19.1 kph	16.8 kph	14.9 kph	M	237	19%	100%	M	328	10%	93%											#40292-04
	1.206	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	M	231	20%	100%	M	317	11%	94%	VC	421	5%	84%	XC	514	3%	68%			
	1.289	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	M	227	22%	100%	M	317	11%	94%	VC	421	5%	84%	XC	514	3%	68%			
	1.442	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	M	218	23%	100%	M	297	13%	95%	C	390	6%	88%	VC	483	4%	73%	UC	616	
	1.579	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	F	211	25%	100%	M	281	14%	95%	C	365	7%	90%	VC	458	4%	77%	UC	588	
	1.706	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	F	206	26%	100%	M	267	16%	96%	C	344	8%	92%	VC	436	5%	80%	UC	565	
	1.824	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	F	201	28%	100%	M	256	17%	96%	M	326	9%	94%	VC	417	6%	82%	UC	545	
	1.934	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	F	196	29%	100%	M	245	18%	97%	M	310	10%	94%	C	400	6%	84%	UC	526	
	2.039	5.00	40.8 kph	35.0 kph	30.6 kph	27.2 kph	F	192	29%	100%	M	236	19%	97%	M	296	11%	95%	C	386	6%	85%	UC	511	
	2.138	5.50	42.8 kph	36.7 kph	32.1 kph	28.5 kph	F	189	30%	100%	F	228	20%	97%	M	282	11%	96%	C	372	7%	87%	UC	496	
2.233	6.00	44.7 kph	38.3 kph	33.5 kph	29.8 kph	F	186	31%	100%	F	220	21%	97%	M	271	12%	96%	C	360	7%	87%	UC	483		
110 -05 Nozzles	Flow L/min	Boom BAR	Sprayer 75L/Ha	Speed (L/Ha 90L/Ha	on 50cm spacing) @ 105L/Ha	120L/Ha		ER110-05	#40281-05	SR110-05	#40287-05	MR110-05	#40291-05	DR110-05	#40286-05	UR110-05									
	1.40	1.50	22.3 kph	18.6 kph	16.0 kph	14.0 kph	M	244	19%	95%														#40292-05	
	1.51	1.75	24.1 kph	20.1 kph	17.2 kph	15.1 kph	M	236	21%	95%	C	375	7%	89%											
	1.61	2.00	25.8 kph	21.5 kph	18.4 kph	16.1 kph	M	230	22%	95%	C	359	8%	91%	VC	491	3%	71%	XC	533	2%	62%			
	1.80	2.50	28.8 kph	24.0 kph	20.6 kph	18.0 kph	M	219	25%	95%	M	333	10%	93%	VC	459	4%	76%	XC	512	3%	66%	UC	633	
	1.97	3.00	31.6 kph	26.3 kph	22.6 kph	19.7 kph	F	210	27%	95%	M	312	12%	94%	VC	432	5%	80%	VC	495	3%	69%	UC	610	
	2.13	3.50	34.1 kph	28.4 kph	24.4 kph	21.3 kph	F	202	28%	95%	M	294	13%	95%	VC	410	6%	82%	VC	481	3%	72%	UC	590	
	2.28	4.00	36.5 kph	30.4 kph	26.1 kph	22.8 kph	F	196	30%	95%	M	279	14%	96%	C	391	6%	84%	VC	469	3%	74%	UC	574	
	2.42	4.50	38.7 kph	32.2 kph	27.6 kph	24.2 kph	F	190	31%	95%	M	265	16%	96%	C	374	7%	86%	VC	457	4%	75%	UC	560	
	2.55	5.00	40.8 kph	34.0 kph	29.1 kph	25.5 kph	F	185	32%	95%	M	253	17%	97%	C	359	7%	87%	VC	448	4%	77%	UC	547	
2.67	5.50	42.8 kph	35.6 kph	30.5 kph	26.7 kph	F	180	33%	95%	M	242	17%	97%	C	345	8%	88%	VC	439	4%	78%	UC	536		
2.79	6.00	44.7 kph	37.2 kph	31.9 kph	27.9 kph	F	176	34%	95%	F	232	18%	97%	M	332	8%	89%	VC	431	4%	79%	UC	527		
110 -06 Nozzles	Flow L/min	Boom BAR	Sprayer 90L/Ha	Speed (L/Ha 110L/Ha	on 50cm spacing) @ 130L/Ha	150L/Ha		ER110-06	#40281-06	SR110-06	#40287-06	MR110-06	#40291-06	DR110-06	#40286-06	UR110-06									
	1.68	1.50	22.3 kph	18.3 kph	15.5 kph	13.4 kph	C	278	15%	94%														#40292-06	
	1.81	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	M	270	16%	94%	VC	442	5%	80%											
	1.93	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	M	263	17%	94%	VC	421	6%	83%	XC	511	3%	67%	XC	569	2%	56%			
	2.16	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	M	251	19%	94%	C	386	8%	87%	VC	485	4%	72%	XC	541	2%	62%	UC	647	
	2.37	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	M	242	21%	95%	C	358	9%	90%	VC	464	4%	76%	XC	518	3%	65%	UC	622	
	2.56	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	M	234	22%	95%	M	334	10%	92%	VC	447	4%	78%	VC	499	3%	68%	UC	601	
	2.74	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	M	227	24%	95%	M	314	12%	93%	VC	431	5%	80%	VC	482	3%	71%	UC	584	
	2.90	4.50	38.7 kph	31.6 kph	26.8 kph	23.2 kph	F	221	25%	95%	M	295	13%	94%	VC	418	5%	82%	VC	468	3%	72%	UC	569	
	3.06	5.00	40.8 kph	33.4 kph	28.2 kph	24.5 kph	F	216	26%	95%	M	279	14%	95%	VC	405	5%	84%	VC	454	4%	74%	UC	556	
3.21	5.50	42.8 kph	35.0 kph	29.6 kph	25.7 kph	F	211	27%	95%	M	264	14%	95%	C	394	6%	85%	VC	442	4%	75%	UC	545		
3.35	6.00	44.7 kph	36.5 kph	30.9 kph	26.8 kph	F	206	27%	95%	M	251	15%	96%	C	384	6%	86%	VC	432	4%	77%	UC	534		
110 -08 Nozzles	Flow L/min	Boom BAR	Sprayer 125L/Ha	Speed (L/Ha 150L/Ha	on 50cm spacing) @ 175L/Ha	200L/Ha		ER110-08	#40281-08	SR110-08	#40287-08	MR110-08	#40291-08	DR110-08	#40286-08	UR110-08									
	2.23	1.50	21.4 kph	17.9 kph	15.3 kph	13.4 kph	C	319	15%	91%														#40292-08	
	2.41	1.75	23.2 kph	19.3 kph	16.5 kph	14.5 kph	C	305	16%	92%	VC	478	5%	61%											
	2.58	2.00	24.8 kph	20.6 kph	17.7 kph	15.5 kph	C	293	17%	93%	VC	458	6%	66%	XC	537	4%	52%	XC	620	3%	40%			
	2.88	2.50	27.7 kph	23.1 kph	19.8 kph	17.3 kph	M	273	19%	94%	VC	423	7%	72%	VC	499	5%	58%	XC	585	3%	45%	UC	668	
	3.16	3.00	30.3 kph	25.3 kph	21.7 kph	19.0 kph	M	257	21%	95%	C	396	8%	76%	VC	470	5%	63%	XC	556	4%	49%	UC	637	
	3.41	3.50	32.8 kph	27.3 kph	23.4 kph	20.5 kph	M	243	22%	95%	C	372	9%	79%	VC	444	6%	67%	XC	532	4%	52%	UC	612	
	3.65	4.00	35.0 kph	29.2 kph	25.0 kph	21.9 kph	M	231	23%	96%	C	351	10%	81%	VC	422	6%	70%	XC	511	4%	54%	UC	591	
	3.87	4.50	37.1 kph	30.9 kph	26.5 kph	23.2 kph	F	220	24%	96%	M	333	10%	83%	C	402	7%	72%	VC	493	5%	56%	UC	573	
	4.08	5.00	39.1 kph	32.6 kph	28.0 kph	24.5 kph	F	211	25%	97%	M	317	11%	85%	C	385	7%	74%	VC	476	5%	58%	UC	557	
4.28	5.50	41.1 kph	34.2 kph	29.3 kph	25.7 kph	F	202	26%	97%	M	302	11%	86%	C	369	8%	76%	VC	461	5%	60%	UC	543		
4.47	6.00	42.9 kph	35.7 kph	30.6 kph	26.8 kph	F	194	27%	97%	M	289	12%	87%	C	355	8%	77%	VC	448	5%	61%	UC	531		
110 -10 Nozzles	Flow L/min	Boom BAR	Sprayer 150L/Ha	Speed (L/Ha 175L/Ha	on 50cm spacing) @ 200L/Ha	225L/Ha		ER110-10	#40281-10	SR110-10	#40287-10	MR110-10	#40291-10	DR110-10	#40286-10	UR110-10									
	2.79	1.50	22.3 kph	19.1 kph	16.8 kph	14.9 kph	C	354	11%	89%														#40292-10	
	3.02	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	C	340	12%	89%	VC	497	5%	57%											
	3.22	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	C	328	14%	90%	VC	476	6%	61%	XC	529	4%	52%	XC	612	5%	59%			
	3.60	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	C	307	16%	91%	VC	439	7%	68%	VC	493	5%	57%	XC	593	5%	56%	UC	675	
	3.95	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	C	290	17%	92%	VC	410	8%	72%	VC	464	5%	61%	XC	577	5%	53%	UC	643	
	4.26	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	M	276	19%	93%	C	385	9%	76%	VC	439	6%	64%	XC	564	6%	51%	UC	617	
	4.56	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	M	264	20%	93%	C	363	9%	78%	VC	418	6%	67%	XC	553	6%	49%	UC	595	
	4.84	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	M	253	21%	94%	C	344	10%	80%	C	400	6%	69%	XC	543	6%	47%	UC	577	
	5.10	5.00	40.8 kph	35.0 kph	30.6 kph	27.2 kph	M	243	22%	94%	M	327	10%	82%	C	383	7%	71%	XC	534	6%	45%	UC	561	
5.35	5.50	42.8 kph	36.7 kph	32.1 kph	28.5 kph	F	234	23%	94%	M	312	11%	83%	C	368	7%	72%	XC	526	6%	43%	UC	546		
5.58	6.00	44.7 kph	38.3 kph	33.5 kph	29.8 kph	F	226	24%	95%	M	298	11%	84%	C	354	7%	73%	XC	518	6%	42%	UC	534		
110 -125 Nozzles	Flow L/min	Boom BAR	Sprayer 200L/Ha	Speed (L/Ha 225L/Ha	on 50cm spacing) @ 250L/Ha	275L/Ha		ER110-125																	

COMBO-JET 110° Spray Tips - Standard Sprayer Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

⚠ 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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

110 -15 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-15		#40281-15		SR110-15		#40287-15		MR110-15		#40291-15		DR110-15		#40286-15	
			225L/Ha	275L/Ha	325L/Ha	375L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600
	4.52	1.75	24.1 kph	19.7 kph	16.7 kph	14.5 kph	XC	414	10%	69%												
	4.84	2.00	25.8 kph	21.1 kph	17.9 kph	15.5 kph	XC	401	10%	71%	XC	543	5%	50%								
	5.41	2.50	28.8 kph	23.6 kph	20.0 kph	17.3 kph	XC	379	11%	74%	XC	510	5%	56%	XC	586	4%	44%	XC	636	4%	44%
	5.92	3.00	31.6 kph	25.8 kph	21.9 kph	19.0 kph	VC	361	12%	77%	VC	483	6%	60%	XC	564	5%	47%	XC	614	4%	47%
	6.40	3.50	34.1 kph	27.9 kph	23.6 kph	20.5 kph	C	346	13%	79%	VC	460	6%	64%	XC	546	5%	49%	XC	595	4%	50%
	6.84	4.00	36.5 kph	29.8 kph	25.2 kph	21.9 kph	C	333	14%	80%	VC	441	7%	67%	XC	530	5%	51%	XC	579	4%	52%
	7.25	4.50	38.7 kph	31.6 kph	26.8 kph	23.2 kph	C	322	14%	82%	VC	423	7%	69%	XC	517	5%	53%	XC	565	4%	54%
	7.65	5.00	40.8 kph	33.4 kph	28.2 kph	24.5 kph	C	311	15%	83%	VC	407	7%	71%	XC	504	5%	54%	XC	552	4%	56%
8.02	5.50	42.8 kph	35.0 kph	29.6 kph	25.7 kph	C	302	15%	84%	C	393	8%	72%	VC	493	5%	56%	XC	540	5%	57%	
8.38	6.00	44.7 kph	36.5 kph	30.9 kph	26.8 kph	C	294	16%	84%	C	380	8%	74%	VC	483	5%	57%	XC	530	5%	59%	
110 -20 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-20		#40281-20		SR110-20		#40287-20		MR110-20		#40291-20					
			300L/Ha	350L/Ha	400L/Ha	450L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	6.03	1.75	24.1 kph	20.7 kph	18.1 kph	16.1 kph	XC	471	7%	61%												
	6.45	2.00	25.8 kph	22.1 kph	19.3 kph	17.2 kph	XC	457	8%	63%	XC	522	6%	54%								
	7.21	2.50	28.8 kph	24.7 kph	21.6 kph	19.2 kph	XC	433	8%	67%	VC	492	6%	60%	XC	569	5%	46%				
	7.90	3.00	31.6 kph	27.1 kph	23.7 kph	21.1 kph	XC	413	9%	70%	VC	467	7%	64%	XC	547	5%	49%				
	8.53	3.50	34.1 kph	29.2 kph	25.6 kph	22.7 kph	XC	397	9%	72%	VC	446	7%	67%	XC	527	6%	52%				
	9.12	4.00	36.5 kph	31.3 kph	27.4 kph	24.3 kph	XC	383	10%	74%	VC	428	8%	70%	XC	511	6%	54%				
	9.67	4.50	38.7 kph	33.2 kph	29.0 kph	25.8 kph	VC	370	10%	75%	VC	412	8%	72%	VC	496	6%	56%				
	10.19	5.00	40.8 kph	35.0 kph	30.6 kph	27.2 kph	VC	359	10%	76%	C	398	8%	74%	VC	483	6%	57%				
10.69	5.50	42.8 kph	36.7 kph	32.1 kph	28.5 kph	C	348	11%	78%	C	385	8%	75%	VC	471	7%	59%					
11.17	6.00	44.7 kph	38.3 kph	33.5 kph	29.8 kph	C	339	11%	79%	C	373	9%	77%	VC	460	7%	60%					
110 -25 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-25		#40281-25		SR110-25		#40287-25									
			350L/Ha	450L/Ha	550L/Ha	650L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600								
	7.54	1.75	25.8 kph	20.1 kph	16.4 kph	13.9 kph	XC	470	7%	61%												
	8.06	2.00	27.6 kph	21.5 kph	17.6 kph	14.9 kph	XC	456	7%	64%												
	9.01	2.50	30.9 kph	24.0 kph	19.7 kph	16.6 kph	XC	433	7%	69%	VC	480	6%	60%								
	9.87	3.00	33.8 kph	26.3 kph	21.5 kph	18.2 kph	XC	414	8%	72%	VC	458	7%	64%								
	10.66	3.50	36.6 kph	28.4 kph	23.3 kph	19.7 kph	XC	397	8%	75%	VC	439	7%	66%								
	11.40	4.00	39.1 kph	30.4 kph	24.9 kph	21.0 kph	XC	383	8%	77%	VC	423	8%	68%								
	12.09	4.50	41.4 kph	32.2 kph	26.4 kph	22.3 kph	VC	371	8%	78%	VC	408	8%	70%								
	12.74	5.00	43.7 kph	34.0 kph	27.8 kph	23.5 kph	VC	360	8%	80%	C	396	8%	72%								
13.36	5.50	45.8 kph	35.6 kph	29.2 kph	24.7 kph	C	350	8%	81%	C	384	8%	73%									
13.96	6.00	47.9 kph	37.2 kph	30.5 kph	25.8 kph	C	341	9%	82%	C	373	9%	74%									
110 -30 Nozzles	Flow L/min	Boom BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-30		#40281-30													
			450L/Ha	600L/Ha	700L/Ha	800L/Ha	Class	VMD	<141	<600												
	9.05	1.75	24.1 kph	18.1 kph	15.5 kph	13.6 kph	UC	483	6%	59%												
	9.67	2.00	25.8 kph	19.3 kph	16.6 kph	14.5 kph	XC	469	6%	61%												
	10.81	2.50	28.8 kph	21.6 kph	18.5 kph	16.2 kph	XC	447	7%	64%												
	11.84	3.00	31.6 kph	23.7 kph	20.3 kph	17.8 kph	XC	429	7%	66%												
	12.79	3.50	34.1 kph	25.6 kph	21.9 kph	19.2 kph	XC	413	8%	68%												
	13.68	4.00	36.5 kph	27.4 kph	23.4 kph	20.5 kph	XC	400	8%	70%												
	14.51	4.50	38.7 kph	29.0 kph	24.9 kph	21.8 kph	XC	388	9%	71%												
	15.29	5.00	40.8 kph	30.6 kph	26.2 kph	22.9 kph	XC	377	9%	72%												
16.04	5.50	42.8 kph	32.1 kph	27.5 kph	24.1 kph	VC	368	9%	73%													
16.75	6.00	44.7 kph	33.5 kph	28.7 kph	25.1 kph	VC	359	10%	74%													

NOTE: 'SR, MR, DR, UR spray tips include pre-orifice(s). Pre-orifices are not interchangeable between different spray tips of different series. ²Shown application information is based on water @ 26.5°C in a controlled environment and should not be considered actual. Information is provided for comparison to other Combo-Jet® spray tips, for educational purposes only. Repeat testing results can vary.

LERAP Drift Reduction Star Rating for COMBO-JET 110° Spray Nozzles [For UK applicators]

Local Environmental Risk Assessments for Pesticides (LERAP) certification is completed in the UK to provide applications a means to qualify a local drift reduction assessment based on the nozzles used for an application. Stay tuned for further LERAP nozzle testing for more nozzles.

LERAP RATING	Nozzle	Pressure Range
★★★★ 90% Drift Reduction	DR110-03	1.0 - 1.5 BAR
	DR110-05	1.0 - 1.5 BAR
	DR110-06	1.0 - 3.0 BAR
	MR110-05	1.0 - 1.5 BAR
	MR110-06	1.0 - 1.5 BAR

The 4-star LERAP rating is a new rating that illustrates the highest classification for drift reduction within the standard certification. (List updated January 2021)

LERAP RATING	Nozzle	Pressure Range
★★★ 75% Drift Reduction	DR110-025	1.0 - 2.5 BAR
	DR110-03	1.6 - 3.0 BAR
	DR110-04	1.0 - 5.0 BAR
	DR110-05	1.6 - 5.0 BAR
	DR110-06	3.1 - 5.0 BAR
	MR110-04	1.0 - 2.5 BAR
	MR110-05	1.6 - 5.0 BAR
	MR110-06	1.6 - 5.0 BAR
	SR110-05	1.0 - 1.5 BAR

LERAP RATING	Nozzle	Pressure Range
★★ 50% Drift Reduction	DR110-025	2.6 - 3.5 BAR
	DR110-03	3.1 - 5.0 BAR
	MR110-04	2.6 - 3.5 BAR
	SR110-05	1.6 - 3.0 BAR

For the updated list on COMBO-JET nozzles, visit www.wilger.net/LERAP

More information on LERAP certification, process, and the most up to date listing of approved nozzles and their ratings, is available from the Health and Safety Executive (HSE), also available online @ <https://secure.pesticides.gov.uk/SprayEquipment>

COMBO-JET 80° Spray Tips - PWM Spray Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

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.

% <141 μ (% Driftable Fines)

Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600 μ (% 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 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 not advised to spray below 40% duty cycle.

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)

Nozzle Size & Angle	Flow Rate L/min	Boom BAR	Tip BAR	Application Rate in Litres/Hectare on 50cm Nozzle Spacing @ Sprayer Speed in km/h				Spray Classification: VMD (Droplet Size in µ; %<141µ (Drift %); %<600µ (Small Droplets)															
								ER80° Series				SR80° Series				MR80° Series				DR80° Series			
				Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
80-005 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-005	#40270-005	SR80-005	#40288-005	MR80-005	#40290-005	DR80-005	#40280-005								
	0.140	1.50	1.50	8L/Ha	10L/Ha	12.5L/Ha	15L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	0.151	1.75	1.75	5.7-23	4.5-18	3.6-15	3-12	F	156	41%	100%												
	0.161	2.00	2.00	6.1-24	4.8-19	3.9-16	3.2-13	F	150	45%	100%												
	0.180	2.50	2.50	6.8-27	5.4-22	4.3-17	3.6-14	F	141	52%	100%												
	0.197	3.00	3.00	7.4-30	5.9-24	4.8-19	4-16	F	133	58%	100%												
	0.213	3.50	3.50	8-32	6.4-26	5.1-21	4.3-17	F	127	63%	100%												
	0.228	4.00	4.00	8.6-34	6.9-27	5.5-22	4.6-18	F	122	67%	100%												
	0.242	4.50	4.50	9.1-36	7.3-29	5.8-23	4.8-19	F	118	71%	100%												
	0.255	5.00	5.00	9.6-38	7.7-31	6.1-25	5.1-20	F	115	74%	100%												
	0.267	5.50	5.50	10-40	8-32	6.4-26	5.4-21	F	112	77%	100%												
	0.279	6.00	6.00	10-42	8.4-34	6.7-27	5.6-22	F	109	80%	100%												
80-0067 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-0067	#40270-0067	SR80-0067	#40288-0067	MR80-0067	#40290-0067	DR80-0067	#40280-0067								
	0.187	1.50	1.50	10L/Ha	12.5L/Ha	15L/Ha	20L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	0.202	1.75	1.75	6.1-24	4.9-19	4.1-16	3-12	F	182	29%	100%												
	0.216	2.00	2.00	6.5-26	5.2-21	4.3-17	3.3-13	F	173	34%	100%												
	0.241	2.50	2.50	7.3-29	5.8-23	4.8-19	3.6-15	F	159	41%	100%												
	0.265	3.00	3.00	7.9-32	6.4-25	5.3-21	4-16	F	148	47%	100%												
	0.286	3.50	3.50	8.6-34	6.9-27	5.7-23	4.3-17	F	140	53%	100%												
	0.305	4.00	4.00	9.2-37	7.3-29	6.1-24	4.6-18	F	133	57%	100%												
	0.324	4.50	4.50	9.7-39	7.8-31	6.5-26	4.9-19	F	127	61%	100%												
	0.341	5.00	5.00	10-41	8.2-33	6.8-27	5.1-21	F	122	64%	100%												
	0.358	5.50	5.50	11-43	8.6-34	7.2-29	5.4-22	F	118	68%	100%												
	0.374	6.00	6.00	11-45	9-36	7.5-30	5.6-22	F	114	71%	100%												
80-01 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-01	#40270-01	SR80-01	#40288-01	MR80-01	#40290-01	DR80-01	#40280-01								
	0.279	1.50	1.49	15L/Ha	20L/Ha	25L/Ha	30L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	0.301	1.75	1.74	6-24	4.5-18	3.6-14	3-12	F	164	36%	100%												
	0.322	2.00	1.99	6.4-26	4.8-19	3.9-15	3.2-13	F	158	40%	100%	M	238	19%	97%								
	0.360	2.50	2.49	7.2-29	5.4-22	4.3-17	3.6-14	F	148	46%	100%	F	210	26%	97%	F	201	27%	97%				
	0.394	3.00	2.99	7.9-32	5.9-24	4.7-19	4-16	F	140	52%	100%	F	190	32%	97%	F	184	32%	97%				
	0.426	3.50	3.49	8.5-34	6.4-26	5.1-20	4.3-17	F	134	56%	100%	F	174	36%	98%	F	172	36%	97%				
	0.455	4.00	3.98	9.1-36	6.8-27	5.5-22	4.6-18	F	129	60%	100%	F	162	40%	98%	F	162	39%	97%				
	0.483	4.50	4.48	9.7-39	7.3-29	5.8-23	4.8-19	F	125	64%	100%	F	152	44%	98%	F	153	42%	97%				
	0.509	5.00	4.98	10-41	7.6-31	6.1-24	5.1-20	F	121	67%	100%	F	143	47%	98%	F	146	45%	97%				
	0.534	5.50	5.48	11-43	8-32	6.4-26	5.3-21	F	118	70%	100%	F	136	50%	98%	F	140	48%	97%				
	0.557	6.00	5.98	11-45	8.4-33	6.7-27	5.6-22	F	115	73%	100%	F	129	52%	98%	F	134	50%	96%				
80-015 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-015	#40270-015	SR80-015	#40288-015	MR80-015	#40290-015	DR80-015	#40280-015								
	0.417	1.50	1.49	20L/Ha	30L/Ha	35L/Ha	40L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	0.450	1.75	1.73	6.8-27	4.5-18	3.9-15	3.4-14	F	188	25%	100%												
	0.481	2.00	1.98	7.2-29	4.8-19	4.1-17	3.6-14	F	182	28%	100%	M	268	15%	95%	C	329	10%	94%				
	0.538	2.50	2.48	8.1-32	5.4-22	4.6-19	4-16	F	172	32%	100%	M	241	20%	96%	C	298	13%	96%				
	0.590	3.00	2.97	8.9-35	5.9-24	5.1-20	4.4-18	F	164	36%	100%	M	222	23%	96%	C	274	15%	97%				
	0.637	3.50	3.47	9.6-38	6.4-26	5.5-22	4.8-19	F	158	39%	100%	F	207	26%	97%	M	255	17%	97%				
	0.681	4.00	3.96	10-41	6.8-27	5.8-23	5.1-20	F	152	42%	100%	F	194	29%	97%	M	240	19%	98%				
	0.722	4.50	4.46	11-43	7.2-29	6.2-25	5.4-22	F	148	44%	100%	F	184	31%	97%	M	228	21%	98%				
	0.761	5.00	4.96	11-46	7.6-30	6.5-26	5.7-23	F	144	46%	100%	F	175	34%	98%	M	217	22%	99%				
	0.798	5.50	5.45	12-48	8-32	6.9-27	6-24	F	140	48%	100%	F	168	35%	98%	F	208	23%	99%				
	0.834	6.00	5.95	13-50	8.4-33	7.2-29	6.3-25	F	137	50%	100%	F	161	37%	98%	F	200	24%	99%				
80-02 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-02	#40270-02	SR80-02	#40288-02	MR80-02	#40290-02	DR80-02	#40280-02								
	0.554	1.50	1.47	30L/Ha	40L/Ha	50L/Ha	60L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
	0.598	1.75	1.72	6-24	4.5-18	3.6-14	3-12	F	177	31%	100%	C	274	13%	94%								
	0.639	2.00	1.97	6.4-26	4.8-19	3.8-15	3.2-13	F	172	33%	100%	M	261	15%	95%	C	331	8%	93%				
	0.715	2.50	2.46	7.2-29	5.4-21	4.3-17	3.6-14	F	165	37%	100%	M	242	19%	96%	C	309	10%	94%				
	0.783	3.00	2.95	7.8-31	5.9-24	4.7-19	3.9-16	F	159	39%	100%	M	228	22%	97%	C	291	12%	94%				
	0.846	3.50	3.44	8.5-34	6.4-25	5.1-20	4.2-17	F	155	42%	100%	M	216	24%	97%	C	277	14%	95%				
	0.904	4.00	3.93	9.1-36	6.8-27	5.4-22	4.5-18	F	151	44%	100%	F	207	26%	97%	M	266	15%	95%				
	0.959	4.50	4.42	9.6-38	7.2-29	5.8-23	4.8-19	F	148	46%	100%	F	199	28%	98%	M	256	16%	95%				
	1.011	5.00	4.92	10-40	7.6-30	6.1-24	5.1-20	F	145	47%	100%	F	192	30%	98%	M	248	18%	95%				
	1.060	5.50	5.41	11-42	8-32	6.4-25	5.3-21	F	142	49%	100%	F	186	32%	98%	M	241	19%	95%				
	1.107	6.00	5.90	11-44	8.3-33	6.7-27	5.5-22	F	140	50%	100%	F	180	33%	98%	M	234	19%	95%				

COMBO-JET 80° Spray Tips - PWM Spray Systems

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.

% <141 μ (% Driftable Fines)

Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600 μ (% 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 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 not advised to spray below 40% duty cycle.

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)

	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-025 Class	VMD	#40270-025		SR80-025 Class	VMD	#40288-025		MR80-025 Class	VMD	#40290-025		DR80-025 Class	VMD	#40280-025	
				40L/Ha	50L/Ha	60L/Ha	70L/Ha			<141	<600			<141	<600			<141	<600			<141	<600
80 -025 Nozzles	0.689	1.50	1.46	5.2-21	4.1-17	3.5-14	3-12	M	229	18%	100%												
	0.744	1.75	1.71	5.6-22	4.5-18	3.7-15	3.2-13	M	220	20%	100%												
	0.796	2.00	1.95	6-24	4.8-19	4-16	3.4-14	F	212	23%	100%	C	302	11%	92%								
	0.890	2.50	2.44	6.7-27	5.3-21	4.5-18	3.8-15	F	200	26%	100%	C	280	14%	94%	VC	400	6%	83%	VC	442	4%	79%
	0.974	3.00	2.92	7.3-29	5.9-23	4.9-20	4.2-17	F	191	29%	100%	M	263	16%	95%	C	374	7%	85%	VC	424	5%	81%
	1.053	3.50	3.41	7.9-32	6.3-25	5.3-21	4.5-18	F	183	31%	100%	M	249	18%	95%	C	354	8%	87%	VC	409	5%	83%
	1.125	4.00	3.90	8.5-34	6.8-27	5.6-23	4.8-19	F	177	33%	100%	M	238	20%	96%	C	337	9%	88%	VC	396	6%	84%
	1.193	4.50	4.39	9-36	7.2-29	6-24	5.1-21	F	171	35%	100%	M	228	21%	96%	C	323	10%	89%	C	385	6%	85%
	1.258	5.00	4.87	9.4-38	7.6-30	6.3-25	5.4-22	F	167	37%	100%	M	220	22%	97%	C	311	10%	90%	C	376	7%	86%
	1.319	5.50	5.36	9.9-40	7.9-32	6.6-26	5.7-23	F	162	38%	99%	F	213	24%	97%	C	301	11%	91%	C	367	7%	87%
	1.378	6.00	5.85	10-41	8.3-33	6.9-28	5.9-24	F	159	40%	99%	F	207	25%	97%	C	291	11%	91%	C	360	8%	87%
	80 -03 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-03 Class	VMD	#40270-03		SR80-03 Class	VMD	#40288-03		MR80-03 Class	VMD	#40290-03		DR80-03 Class	VMD	#40280-03
0.822		1.50	1.45	5.5-22	4.5-18	3.8-15	3.3-13	M	231	18%	99%												
0.888		1.75	1.69	5.9-24	4.9-19	4.1-16	3.6-14	M	223	20%	99%												
0.950		2.00	1.93	6.3-25	5.2-21	4.4-18	3.8-15	M	217	22%	99%												
1.062		2.50	2.41	7.1-28	5.8-23	4.9-20	4.3-17	F	207	25%	99%	C	325	11%	90%	VC	409	6%	83%	XC	462	4%	75%
1.163		3.00	2.89	7.8-31	6.4-25	5.4-22	4.7-19	F	199	27%	99%	C	304	13%	91%	C	383	7%	86%	VC	441	4%	78%
1.256		3.50	3.38	8.4-34	6.9-27	5.8-23	5-20	F	193	29%	99%	C	287	15%	92%	C	362	8%	87%	VC	424	5%	80%
1.343		4.00	3.86	9-36	7.3-29	6.2-25	5.4-22	F	187	31%	99%	C	273	16%	92%	C	346	9%	89%	VC	410	6%	82%
1.424		4.50	4.34	9.5-38	7.8-31	6.6-26	5.7-23	F	183	32%	99%	M	261	17%	93%	C	331	10%	90%	C	398	6%	83%
1.502		5.00	4.82	10-40	8.2-33	6.9-28	6-24	F	179	34%	99%	M	251	18%	93%	C	319	10%	91%	C	387	7%	84%
1.575		5.50	5.30	11-42	8.6-34	7.3-29	6.3-25	F	175	35%	99%	M	243	19%	94%	C	308	11%	91%	C	378	7%	85%
1.645		6.00	5.79	11-44	9-36	7.6-30	6.6-26	F	172	36%	99%	M	235	20%	94%	C	299	11%	92%	C	370	8%	86%
80 -04 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-04 Class	VMD	#40270-04		SR80-04 Class	VMD	#40288-04		MR80-04 Class	VMD	#40290-04		DR80-04 Class	VMD	#40280-04	
	1.08	1.50	1.41	5.4-22	4.6-19	4.1-16	3.6-14	M	250	17%	99%												
	1.17	1.75	1.64	5.9-23	5-20	4.4-18	3.9-16	M	242	18%	99%												
	1.25	2.00	1.87	6.3-25	5.4-21	4.7-19	4.2-17	M	235	20%	99%												
	1.40	2.50	2.34	7-28	6-24	5.2-21	4.7-19	M	224	22%	99%	C	334	8%	88%	VC	405	6%	82%	XC	527	2%	65%
	1.53	3.00	2.81	7.7-31	6.6-26	5.7-23	5.1-20	F	215	24%	99%	C	314	10%	89%	C	383	7%	84%	XC	504	3%	68%
	1.65	3.50	3.28	8.3-33	7.1-28	6.2-25	5.5-22	F	208	25%	99%	C	296	11%	90%	C	366	8%	86%	XC	486	4%	71%
	1.77	4.00	3.75	8.8-35	7.6-30	6.6-27	5.9-24	F	202	27%	99%	C	281	13%	91%	C	351	9%	87%	XC	471	4%	74%
	1.87	4.50	4.22	9.4-37	8-32	7-28	6.3-25	F	197	28%	99%	M	268	14%	92%	C	339	10%	88%	XC	458	4%	75%
	1.97	5.00	4.69	9.9-40	8.5-34	7.4-30	6.6-26	F	193	29%	99%	M	256	15%	92%	C	329	11%	89%	VC	446	5%	77%
	2.07	5.50	5.15	10-41	8.9-36	7.8-31	6.9-28	F	189	30%	99%	M	245	16%	93%	C	319	12%	90%	VC	436	5%	78%
	2.16	6.00	5.62	11-43	9.3-37	8.1-32	7.2-29	F	186	31%	99%	M	235	17%	93%	C	311	12%	90%	C	427	5%	79%
80 -05 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-05 Class	VMD	#40270-05		SR80-05 Class	VMD	#40288-05		MR80-05 Class	VMD	#40290-05		DR80-05 Class	VMD	#40280-05	
	1.33	1.50	1.36	5.3-21	4.4-18	3.8-15	3.3-13	C	297	11%	95%												
	1.43	1.75	1.59	5.8-23	4.8-19	4.1-16	3.6-14	C	286	13%	95%												
	1.53	2.00	1.81	6.1-25	5.1-21	4.4-18	3.8-15	C	276	15%	95%	VC	404	6%	81%								
	1.72	2.50	2.26	6.9-27	5.7-23	4.9-20	4.3-17	M	261	17%	95%	C	375	8%	84%	XC	491	3%	70%	XC	563	2%	58%
	1.88	3.00	2.72	7.5-30	6.3-25	5.4-22	4.7-19	M	249	20%	95%	C	351	10%	85%	VC	467	4%	73%	XC	540	2%	62%
	2.03	3.50	3.17	8.1-33	6.8-27	5.8-23	5.1-20	M	240	21%	95%	C	331	11%	87%	VC	448	5%	76%	XC	522	3%	65%
	2.17	4.00	3.62	8.7-35	7.2-29	6.2-25	5.4-22	M	232	23%	95%	C	313	12%	88%	VC	432	5%	78%	XC	506	3%	67%
	2.30	4.50	4.08	9.2-37	7.7-31	6.6-26	5.8-23	M	225	24%	95%	C	298	14%	89%	VC	418	6%	79%	XC	493	3%	70%
	2.43	5.00	4.53	9.7-39	8.1-32	6.9-28	6.1-24	M	219	26%	95%	C	284	15%	89%	C	407	6%	81%	XC	482	4%	71%
	2.54	5.50	4.98	10-41	8.5-34	7.3-29	6.4-25	F	214	27%	95%	C	272	15%	90%	C	396	7%	82%	VC	471	4%	73%
	2.66	6.00	5.43	11-43	8.9-35	7.6-30	6.7-27	F	209	28%	95%	M	260	16%	91%	C	387	7%	83%	VC	462	4%	74%
80 -06 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-06 Class	VMD	#40270-06		SR80-06 Class	VMD	#40288-06		MR80-06 Class	VMD	#40290-06		DR80-06 Class	VMD	#40280-06	
	1.69	1.75	1.52	5.6-23	4.6-18	3.9-16	3.4-14	C	316	13%	92%												
	1.80	2.00	1.74	6-24	4.9-20	4.2-17	3.6-14	C	307	15%	91%	VC	439	4%	78%								
	2.02	2.50	2.17	6.7-27	5.5-22	4.7-19	4-16	C	293	17%	91%	VC	414	5%	81%	XC	520	3%	65%	XC	591	2%	52%
	2.21	3.00	2.61	7.4-30	6-24	5.1-20	4.4-18	C	283	19%	91%	C	395	6%	83%	XC	499	3%	69%	XC	570	2%	56%
	2.39	3.50	3.04	8-32	6.5-26	5.5-22	4.8-19	C	274	21%	91%	C	380	7%	85%	XC	481	4%	71%	XC	553	2%	59%
	2.55	4.00	3.48	8.5-34	7-28	5.9-24	5.1-20	M	266	22%	90%	C	367	8%	86%	VC	467	4%	74%	XC	539	2%	61%
	2.71	4.50	3.91	9-36	7.4-30	6.3-25	5.4-22	M	260	23%	90%	C	356	9%	87%	VC	454	5%	75%	XC	526	3%	63%
	2.85	5.00	4.35	9.5-38	7.8-31	6.6-26	5.7-23	M	254	25%	90%	C	347	9%	88%	VC	443	5%	77%	XC	516	3%	64%
	2.99	5.50	4.78	10-40	8.2-33	6.9-28	6-24	M	250	26%	90%	C	338	10%	89%	VC	433	5%	78%	XC	506	3%	66%
	3.12	6.00	5.22	10-42	8.5-34	7.2-29	6.3-25	M	245	27%	90%	C	331	10%	90%	VC	425	6%	79%	XC	498	3%	67%
	80 -08 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-08 Class	VMD	#40270-08		SR80-08 Class	VMD	#40288-08		MR80-08 Class	VMD	#40290-08		DR80-08 Class	VMD	#40280-08
2.14		1.75	1.38	6.4-26	5.2-21	4.3-17	3.7-15	VC	366	12%	86%												
2.29		2.00	1.58	6.9-28	5.5-22	4.6-18	3.9-16	C	349	14%	88%	UC	529	6%	51%								
2.56		2.50	1.97	7.7-31	6.2-25	5.1-21	4.4-18	C	322	16%	90%	UC	497	7%	58%								
2.81		3.00	2.37	8.4-34	6.7-27	5.6-23	4.8-19	M	302	19%	91%	XC	470	8%	62%	UC	520	7%	66%	UC	603	3%	55%
3.03		3.50	2.76	9.1-36	7.3-29	6.1-24	5.2-21	M	285	21%	93%	XC	448	9%	66%	UC	499	8%	69%	UC	584	4%	58%
3.24		4.00	3.16	9.7-39	7.8-31	6.5-26	5.6-22	M	272	22%	93%	XC	429	10%	69%	UC	482	9%	72%	UC	569	4%	60%
3.44		4.50	3.55	10-41	8.3-33	6.9-28	5.9-24	F	261	24%	94%	XC	412	10%	71%	XC	467	9%	74%	UC	556	5%	62%
3.62		5.00	3.95	11-444																			

COMBO-JET 80° Spray Tips - PWM Spray Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

⚠ 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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

ASABE Spray Classification (ASABE S572.1 Standard)

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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.

% <141 μ (% Driftable Fines)

Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600 μ (% of Small Droplets)

% of volume which is made up of 'small' droplets, useful for coverage. As % of useful droplets lowers, overall coverage is reduced.

	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-10		#40270-10		SR80-10		#40288-10		MR80-10		#40290-10		DR80-10		#40280-10			
				125L/Ha	150L/Ha	175L/Ha	200L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
80 -10 Nozzles	2.71	2.00	1.41	6.5-26	5.4-22	4.7-19	4.1-16	XC	455	9%	78%														
	3.03	2.50	1.77	7.3-29	6.1-24	5.2-21	4.6-18	XC	425	11%	80%	UC	534	6%	51%										
	3.32	3.00	2.12	8-32	6.6-27	5.7-23	5-20	XC	402	12%	82%	UC	508	7%	56%										
	3.58	3.50	2.47	8.6-34	7.2-29	6.2-25	5.4-22	VC	383	13%	83%	UC	487	7%	60%	UC	525	6%	65%	UC	593	5%	55%		
	3.83	4.00	2.82	9.2-37	7.7-31	6.6-26	5.8-23	C	368	14%	84%	XC	468	8%	63%	UC	510	6%	67%	UC	580	5%	57%		
	4.06	4.50	3.18	9.8-39	8.1-33	7-28	6.1-24	C	355	15%	85%	XC	452	8%	66%	UC	497	7%	69%	UC	569	6%	59%		
	4.28	5.00	3.53	10-41	8.6-34	7.4-29	6.4-26	C	344	16%	86%	XC	437	9%	68%	UC	486	7%	70%	UC	559	6%	61%		
	4.49	5.50	3.88	11-43	9-36	7.7-31	6.8-27	M	334	17%	87%	XC	424	9%	70%	XC	476	7%	72%	UC	550	6%	62%		
	4.69	6.00	4.24	11-45	9.4-38	8.1-32	7.1-28	M	325	18%	87%	XC	412	10%	71%	XC	467	8%	73%	UC	542	6%	63%		
80 -125 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-125		#40270-125		SR80-125		#40288-125		MR80-125		#40290-125		DR80-125		#40280-125			
				150L/Ha	200L/Ha	225L/Ha	250L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600		
	3.14	2.00	1.21	6.3-25	4.7-19	4.2-17	3.8-15	XC	474	8%	74%														
	3.51	2.50	1.52	7-28	5.3-21	4.7-19	4.2-17	XC	447	10%	77%														
	3.84	3.00	1.82	7.7-31	5.8-23	5.1-21	4.6-18	XC	427	11%	79%	UC	525	6%	52%										
	4.15	3.50	2.12	8.3-33	6.2-25	5.5-22	5-20	XC	410	11%	81%	UC	506	7%	56%										
	4.44	4.00	2.42	8.9-36	6.7-27	5.9-24	5.3-21	VC	396	12%	82%	UC	490	8%	58%	UC	569	6%	58%	UC	608	4%	52%		
	4.71	4.50	2.73	9.4-38	7.1-28	6.3-25	5.7-23	VC	384	13%	83%	XC	476	8%	61%	UC	557	6%	60%	UC	596	5%	54%		
	4.96	5.00	3.03	9.9-40	7.5-30	6.6-27	6-24	C	374	13%	84%	XC	463	9%	63%	UC	547	7%	62%	UC	586	5%	55%		
5.20	5.50	3.33	10-42	7.8-31	6.9-28	6.3-25	C	365	14%	85%	XC	451	9%	64%	UC	538	7%	63%	UC	577	5%	57%			
5.43	6.00	3.64	11-44	8.2-33	7.3-29	6.5-26	C	357	14%	86%	XC	441	9%	66%	UC	530	7%	64%	UC	569	5%	58%			
80 -15 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-15		#40270-15		SR80-15		#40288-15		MR80-15		#40290-15		DR80-15		#40280-15			
				200L/Ha	225L/Ha	250L/Ha	300L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600		
	3.88	2.50	1.29	5.8-23	5.2-21	4.7-19	3.9-16	XC	473	7%	76%														
	4.26	3.00	1.55	6.4-26	5.7-23	5.1-20	4.3-17	XC	448	8%	77%														
	4.60	3.50	1.81	6.9-28	6.1-25	5.5-22	4.6-18	XC	428	9%	78%	UC	570	5%	44%										
	4.91	4.00	2.07	7.4-30	6.6-26	5.9-24	4.9-20	XC	412	10%	79%	UC	554	6%	47%										
	5.21	4.50	2.32	7.8-31	7-28	6.3-25	5.2-21	XC	398	11%	80%	UC	540	6%	50%	UC	499	8%	68%	UC	624	3%	50%		
	5.49	5.00	2.58	8.3-33	7.3-29	6.6-26	5.5-22	VC	386	12%	81%	UC	527	6%	52%	UC	487	8%	69%	UC	612	3%	52%		
	5.76	5.50	2.84	8.7-35	7.7-31	6.9-28	5.8-23	VC	376	13%	81%	UC	516	6%	54%	XC	477	9%	71%	UC	602	3%	54%		
6.02	6.00	3.10	9-36	8-32	7.2-29	6-24	C	366	13%	82%	UC	505	7%	56%	XC	467	9%	72%	UC	593	4%	55%			
80 -20 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER80-20		#40270-20		SR80-20		#40288-20		MR80-20		#40290-20		DR80-20		#40280-20			
				250L/Ha	300L/Ha	400L/Ha	450L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600		
	5.22	3.50	1.31	6.3-25	5.2-21	3.9-16	3.5-14	UC	518	6%	66%														
	5.59	4.00	1.50	6.7-27	5.6-22	4.2-17	3.7-15	UC	500	7%	68%														
	5.92	4.50	1.69	7.1-28	5.9-24	4.5-18	4-16	UC	485	8%	70%	UC	577	5%	43%										
	6.24	5.00	1.88	7.5-30	6.3-25	4.7-19	4.2-17	XC	472	8%	72%	UC	563	5%	46%										
	6.55	5.50	2.06	7.9-31	6.6-26	4.9-20	4.4-18	XC	461	9%	73%	UC	551	5%	48%										
	6.84	6.00	2.25	8.2-33	6.9-27	5.1-21	4.6-18	XC	450	9%	74%	UC	540	6%	50%	UC	552	5%	60%	UC	616	3%	52%		

NOTE: 'SR, MR, DR, UR spray tips include pre-orifice(s). Pre-orifices are not interchangeable between different spray tips of different series. *Shown application information is based on water @ 26.5°C in a controlled environment and should not be considered actual. Information is provided for comparison to other Combo-Jet® spray tips, for educational purposes only. Repeat testing results can vary.

COMBO-JET 110° Spray Tips - PWM Spray Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

⚠ 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). Always verify these charts with the most recent charts found on the www.wilger.net, and ALWAYS follow chemical label nozzle requirements.

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.

% <141 μ (% Driftable Fines)

Percentage of volume which is likely to drift. As wind & boom height increase, observed spray drift will increase substantially.

% <600 μ (% of Small Droplets)

% of volume which is made up of 'small' droplets, useful for coverage. As % of useful droplets lowers, overall coverage is reduced.

Nozzle Size & Angle	Max Flow Rate	Boom BAR	Tip psi	Application Rate in Litres/Hectare on 20" Nozzle Spacing				Spray Classification: VMD (Droplet Size in µ); %<141µ (Drift %); %<600µ (Small Droplets)																			
								ER110° Series				SR110° Series		MR110° Series			DR110° Series			UR Series							
				③ Sprayer Speed in km/h				Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600				
110-01 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) ③				ER110-01	#40281-01																		
	0.279	1.50	1.49	15L/Ha	20L/Ha	25L/Ha	30L/Ha	Class	VMD	<141	<600																
	0.301	1.75	1.74	6-24	4.5-18	3.6-14	3-12	F	143	48%	100%																
	0.322	2.00	1.99	6.4-26	4.8-19	3.9-15	3.2-13	F	140	50%	100%																
	0.360	2.50	2.49	7.2-29	5.4-22	4.3-17	3.6-14	F	135	54%	100%																
	0.394	3.00	2.99	7.9-32	5.9-24	4.7-19	4-16	F	131	57%	100%																
	0.426	3.50	3.49	8.5-34	6.4-26	5.1-20	4.3-17	F	128	59%	100%																
	0.455	4.00	3.98	9.1-36	6.8-27	5.5-22	4.6-18	F	125	62%	100%																
	0.483	4.50	4.48	9.7-39	7.3-29	5.8-23	4.8-19	F	122	63%	100%																
	0.509	5.00	4.98	10-41	7.6-31	6.1-24	5.1-20	F	120	65%	100%																
	0.534	5.50	5.48	11-43	8-32	6.4-26	5.3-21	F	118	67%	100%																
	0.557	6.00	5.98	11-45	8.4-33	6.7-27	5.6-22	F	116	68%	100%																
110-015 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) ③				ER110-015	#40281-015	SR110-015	#40287-015	MR110-015	#40291-015	DR110-015	#40286-015												
	0.417	1.50	1.49	6.3-25	6.3-25	3.6-14	3.1-13	F	151	42%	100%																
	0.450	1.75	1.73	6.8-27	4.5-18	3.9-15	3.4-14	F	148	44%	100%	M	225	21%	98%												
	0.481	2.00	1.98	7.2-29	4.8-19	4.1-17	3.6-14	F	145	46%	100%	M	218	23%	98%	C	323	11%	94%	C	368	7%	92%				
	0.538	2.50	2.48	8.1-32	5.4-22	4.6-19	4-16	F	141	50%	100%	F	205	27%	98%	C	298	14%	96%	C	346	8%	93%				
	0.590	3.00	2.97	8.9-35	5.9-24	5.1-20	4.4-18	F	137	53%	100%	F	195	29%	98%	C	279	16%	97%	C	329	10%	94%				
	0.637	3.50	3.47	9.6-38	6.4-26	5.5-22	4.8-19	F	134	55%	100%	F	187	32%	98%	M	262	18%	98%	C	315	11%	95%				
	0.681	4.00	3.96	10-41	6.8-27	5.8-23	5.1-20	F	132	57%	100%	F	180	34%	98%	M	248	20%	98%	C	302	12%	95%				
	0.722	4.50	4.46	11-43	7.2-29	6.2-25	5.4-22	F	129	59%	100%	F	173	36%	98%	M	226	23%	99%	C	282	14%	96%				
	0.761	5.00	4.96	11-46	7.6-30	6.5-26	5.7-23	F	127	61%	100%	F	167	37%	98%	F	217	24%	99%	C	273	15%	96%				
	0.798	5.50	5.45	12-48	8-32	6.9-27	6-24	F	125	63%	100%	F	162	39%	98%	F	209	25%	99%	M	265	15%	97%				
	0.834	6.00	5.95	13-50	8.4-33	7.2-29	6.3-25	F	124	64%	100%	F	157	40%	98%	F	195	27%	100%	M	252	17%	97%				
110-02 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) ③				ER110-02	#40281-02	SR110-02	#40287-02	MR110-02	#40291-02	DR110-02	#40286-02												
	0.554	1.50	1.47	5.5-22	4.2-17	3.3-13	2.8-11	F	171	33%	100%																
	0.598	1.75	1.72	6-24	4.5-18	3.6-14	3-12	F	166	36%	100%																
	0.639	2.00	1.97	6.4-26	4.8-19	3.8-15	3.2-13	F	161	39%	100%	M	221	22%	99%	C	317	11%	95%	VC	433	5%	82%				
	0.715	2.50	2.46	7.2-29	5.4-21	4.3-17	3.6-14	F	154	43%	100%	F	211	25%	99%	C	297	13%	96%	VC	412	6%	85%				
	0.783	3.00	2.95	7.8-31	5.9-24	4.7-19	3.9-16	F	148	46%	100%	F	203	27%	99%	C	281	15%	97%	VC	394	6%	87%				
	0.846	3.50	3.44	8.5-34	6.4-25	5.1-20	4.2-17	F	144	49%	100%	F	196	29%	99%	M	267	17%	97%	C	378	7%	88%				
	0.904	4.00	3.93	9.1-36	6.8-27	5.4-22	4.5-18	F	139	52%	100%	F	190	30%	99%	M	256	18%	97%	C	364	8%	90%				
	0.959	4.50	4.42	9.6-38	7.2-29	5.8-23	4.8-19	F	136	54%	100%	F	185	32%	99%	M	237	21%	98%	C	339	9%	91%				
	1.011	5.00	4.92	10-40	7.6-30	6.1-24	5.1-20	F	132	56%	100%	F	180	33%	99%	M	229	22%	98%	C	328	10%	92%				
	1.060	5.50	5.41	11-42	8-32	6.4-25	5.3-21	F	129	57%	100%	F	176	34%	99%	M	222	23%	98%	C	318	10%	93%				
	1.107	6.00	5.90	11-44	8.3-33	6.7-27	5.5-22	F	126	59%	100%	F	172	35%	99%	F	210	25%	99%	C	299	11%	94%				
110-025 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) ③				ER110-025	#40281-025	SR110-025	#40287-025	MR110-025	#40291-025	DR110-025	#40286-025												
	0.689	1.50	1.46	5.2-21	4.1-17	3.5-14	3-12	F	193	28%	100%																
	0.744	1.75	1.71	5.6-22	4.5-18	3.7-15	3.2-13	F	190	29%	100%																
	0.796	2.00	1.95	6-24	4.8-19	4-16	3.4-14	F	187	29%	100%	M	239	19%	98%	C	353	8%	90%	VC	437	5%	79%				
	0.890	2.50	2.44	6.7-27	5.3-21	4.5-18	3.8-15	F	183	30%	100%	M	228	21%	98%	C	337	10%	92%	VC	418	6%	83%				
	0.974	3.00	2.92	7.3-29	5.9-23	4.9-20	4.2-17	F	179	30%	100%	M	219	23%	98%	C	322	11%	93%	VC	401	6%	86%				
	1.053	3.50	3.41	7.9-32	6.3-25	5.3-21	4.5-18	F	177	30%	100%	F	212	25%	98%	C	310	12%	94%	C	386	7%	88%				
	1.125	4.00	3.90	8.5-34	6.8-27	5.6-23	4.8-19	F	174	31%	100%	F	205	26%	98%	C	299	13%	95%	C	373	8%	89%				
	1.193	4.50	4.39	9-36	7.2-29	6-24	5.1-21	F	172	31%	100%	F	200	28%	98%	C	280	15%	96%	C	350	9%	91%				
	1.258	5.00	4.87	9.4-38	7.6-30	6.3-25	5.4-22	F	170	31%	100%	F	195	29%	98%	C	271	16%	96%	C	340	9%	92%				
	1.319	5.50	5.36	9.9-40	7.9-32	6.6-26	5.7-23	F	168	31%	100%	F	190	30%	98%	M	263	16%	96%	C	331	10%	93%				
	1.378	6.00	5.85	10-41	8.3-33	6.9-28	5.9-24	F	166	31%	100%	F	186	31%	98%	M	249	18%	97%	C	314	10%	94%				
110-03 Nozzles	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) ③				ER110-03	#40281-03	SR110-03	#40287-03	MR110-03	#40291-03	DR110-03	#40286-03												
	0.822	1.50	1.45	5.5-22	4.5-18	3.8-15	3.3-13	F	196	27%	99%																
	0.888	1.75	1.69	5.9-24	4.9-19	4.1-16	3.6-14	F	191	29%	99%	C	321	9%	94%												
	0.950	2.00	1.93	6.3-25	5.2-21	4.4-18	3.8-15	F	186	30%	99%	C	309	11%	94%	VC	403	6%	85%	XC	488	3%	72%				
	1.062	2.50	2.41	7.1-28	5.8-23	4.9-20	4.3-17	F	178	33%	98%	C	290	13%	95%	C	376	8%	89%	XC	460	4%	77%				
	1.163	3.00	2.89	7.8-31	6.4-25	5.4-22	4.7-19	F	172	35%	98%	C	275	15%	96%	C	354	9%	91%	VC	437	5%	81%				
	1.256	3.50	3.38	8.4-34	6.9-27	5.8-23	5-20	F	166	37%	98%	M	262	17%	97%	C	335	10%	93%	VC	417	6%	84%				
	1.343	4.00	3.86	9-36	7.3-29	6.2-25	5.4-22	F	161	39%	97%	M	250	18%	97%	C	319	11%	94%	VC	400	6%	86%				
	1.424	4.50	4.34	9.5-38	7.8-31	6.6-26	5.7-23	F	157	40%	97%	M	240	20%	97%	C	305	12%	95%	C	385	7%	87%				
	1.502	5.00	4.82	10-40	8.2-33	6.9-28	6-24	F	153	41%	97%	M	231	21%	98%	C	292	13%	95%	C	372	7%	88%				
	1.575	5.50	5.30	11-42	8.6-34	7.3-29	6.3-25	F	150	42%	97%	M	223	22%	98%	C	281	14%	96%	C	359	8%	89%				
	1.645	6.00	5.79	11-44	9-36	7.6-30	6.6-26	F	147	43%	96%	F	215	23%	98%	M	270	14%	96%	C	348	8%	90%				

NOTE: 'SR, MR, DR, UR spray tips include pre-orifice(s). Pre-orifices are not interchangeable between different spray tips of different series. *Shown application information is based on water @ 26.5°C in a controlled environment and should not be considered actual. Information is provided for comparison to other Combo-Jet® spray tips, for educational purposes only. Repeat testing results can vary.

COMBO-JET 110° Spray Tips - PWM Spray Systems

Comprehensive rate & speed charts for any nozzle spacing/speed/rate is available on Tip Wizard. Try it today!

Duty Cycle (Effective 'on time' of 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 not advised to spray below 40% duty cycle.

Calculating Duty Cycle on Printed Charts (Useful for nozzle sizing & selection)

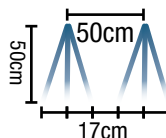
On Wilger printed charts, typically a SPEED RANGE is provided, but the duty cycle % is a dynamic factor based on the sprayers travel speed. To calculate a duty cycle at a given travel speed, divide CURRENT sprayer speed into max nozzle speed. (e.g. 15mph / 20mph max = 75% duty cycle)

	Flow L/min	Boom BAR	Tip BAR	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-04		#40281-04		SR110-04		#40287-04		MR110-04		#40291-04		DR110-04		#40286-04		UR110-04	
				60L/Ha	70L/Ha	80L/Ha	90L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
110 -04 Nozzles	1.168	1.75	1.64	5.9-23	5-20	4.4-18	3.9-16	M	234	20%	97%	C	322	10%	93%	VC	429	4%	82%	XC	524	3%	66%	UC	660
	1.248	2.00	1.87	6.3-25	5.4-21	4.7-19	4.2-17	M	229	21%	97%	C	303	12%	94%	VC	399	6%	87%	XC	492	4%	72%	UC	626
	1.396	2.50	2.34	7-28	6-24	5.2-21	4.7-19	M	221	23%	97%	C	287	14%	95%	C	374	7%	90%	VC	467	4%	76%	UC	598
	1.529	3.00	2.81	7.7-31	6.6-26	5.7-23	5.1-20	F	214	24%	96%	C	273	15%	96%	C	353	8%	92%	VC	445	5%	79%	UC	575
	1.651	3.50	3.28	8.3-33	7.1-28	6.2-25	5.5-22	F	208	26%	96%	C	262	17%	96%	C	335	9%	93%	VC	426	5%	81%	UC	554
	1.765	4.00	3.75	8.8-35	7.6-30	6.6-27	5.9-24	F	203	27%	96%	M	261	17%	96%	C	319	9%	93%	VC	410	6%	83%	UC	536
	1.872	4.50	4.22	9.4-37	8-32	7-28	6.3-25	F	199	28%	96%	M	251	18%	97%	C	319	10%	94%	VC	410	6%	83%	UC	536
	1.974	5.00	4.69	9.9-40	8.5-34	7.4-30	6.6-26	F	195	29%	96%	M	242	19%	97%	C	304	10%	95%	C	395	6%	85%	UC	520
	2.070	5.50	5.15	10-41	8.9-36	7.8-31	6.9-28	F	191	30%	95%	M	234	19%	97%	C	291	11%	95%	C	381	7%	86%	UC	506
	2.162	6.00	5.62	11-43	9.3-37	8.1-32	7.2-29	F	188	30%	95%	M	226	20%	97%	C	280	11%	96%	C	369	7%	87%	UC	493
110 -05 Nozzles	Flow	Boom	Tip	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-05		#40281-05		SR110-05		#40287-05		MR110-05		#40291-05		DR110-05		#40286-05		UR110-05	
	L/min	BAR	BAR	75L/Ha	90L/Ha	105L/Ha	120L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
	1.43	1.75	1.59	5.8-23	4.8-19	4.1-16	3.6-14	M	241	19%	95%													#40292-05	
	1.53	2.00	1.81	6.1-25	5.1-21	4.4-18	3.8-15	M	234	21%	95%	C	371	7%	90%										
	1.72	2.50	2.26	6.9-27	5.7-23	4.9-20	4.3-17	M	224	23%	95%	C	345	9%	92%	XC	473	4%	74%	XC	522	2%	65%		
	1.88	3.00	2.72	7.5-30	6.3-25	5.4-22	4.7-19	F	215	26%	95%	C	324	11%	93%	VC	447	5%	78%	XC	505	3%	68%	UC	622
	2.03	3.50	3.17	8.1-33	6.8-27	5.8-23	5.1-20	F	207	27%	95%	C	306	12%	94%	VC	424	5%	81%	XC	490	3%	70%	UC	603
	2.17	4.00	3.62	8.7-35	7.2-29	6.2-25	5.4-22	F	201	29%	95%	C	291	14%	95%	VC	405	6%	83%	XC	478	3%	72%	UC	586
	2.30	4.50	4.08	9.2-37	7.7-31	6.6-26	5.8-23	F	195	30%	95%	C	277	15%	96%	C	388	7%	84%	XC	467	3%	74%	UC	571
	2.43	5.00	4.53	9.7-39	8.1-32	6.9-28	6.1-24	F	190	31%	95%	M	265	16%	96%	C	373	7%	86%	VC	457	4%	75%	UC	559
110 -06 Nozzles	Flow	Boom	Tip	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-06		#40281-06		SR110-06		#40287-06		MR110-06		#40291-06		DR110-06		#40286-06		UR110-06	
	L/min	BAR	BAR	90L/Ha	110L/Ha	130L/Ha	150L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
	1.69	1.75	1.52	5.6-23	4.6-18	3.9-16	3.4-14	C	277	15%	94%													#40292-06	
	1.80	2.00	1.74	6-24	4.9-20	4.2-17	3.6-14	M	270	16%	94%	VC	443	4%	80%										
	2.02	2.50	2.17	6.7-27	5.5-22	4.7-19	4-16	M	258	18%	94%	VC	408	6%	85%	XC	502	3%	69%	XC	559	2%	58%		
	2.21	3.00	2.61	7.4-30	6-24	5.1-20	4.4-18	M	249	20%	94%	C	380	8%	88%	XC	481	4%	73%	XC	536	2%	63%	UC	641
	2.39	3.50	3.04	8-32	6.5-26	5.5-22	4.8-19	M	241	21%	95%	C	356	9%	90%	VC	463	4%	76%	XC	517	3%	66%	UC	620
	2.55	4.00	3.48	8.5-34	7-28	5.9-24	5.1-20	M	234	22%	95%	C	335	10%	92%	VC	447	4%	78%	XC	500	3%	68%	UC	602
	2.71	4.50	3.91	9-36	7.4-30	6.3-25	5.4-22	M	228	23%	95%	C	317	11%	93%	VC	434	5%	80%	XC	485	3%	70%	UC	587
	2.85	5.00	4.35	9.5-38	7.8-31	6.6-26	5.7-23	M	223	24%	95%	C	301	12%	94%	VC	422	5%	82%	XC	472	3%	72%	UC	573
110 -08 Nozzles	Flow	Boom	Tip	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-08		#40281-08		SR110-08		#40287-08		MR110-08		#40291-08		DR110-08		#40286-08		UR110-08	
	L/min	BAR	BAR	100L/Ha	125L/Ha	150L/Ha	175L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
	2.14	1.75	1.38	6.4-26	5.2-21	4.3-17	3.7-15	C	327	14%	91%													#40292-08	
	2.29	2.00	1.58	6.9-28	5.5-22	4.6-18	3.9-16	C	315	15%	92%	UC	494	4%	58%										
	2.56	2.50	1.97	7.7-31	6.2-25	5.1-21	4.4-18	C	295	17%	93%	XC	460	6%	65%	UC	539	4%	51%	UC	622	3%	39%		
	2.81	3.00	2.37	8.4-34	6.7-27	5.6-23	4.8-19	C	278	19%	94%	XC	432	7%	70%	UC	509	5%	57%	UC	593	3%	44%	UC	678
	3.03	3.50	2.76	9.1-36	7.3-29	6.1-24	5.2-21	M	264	20%	95%	XC	408	7%	74%	UC	483	5%	61%	UC	569	4%	47%	UC	651
	3.24	4.00	3.16	9.7-39	7.8-31	6.5-26	5.6-22	M	252	21%	95%	XC	388	8%	77%	XC	461	6%	65%	UC	548	4%	50%	UC	628
	3.44	4.50	3.55	10-41	8.3-33	6.9-28	5.9-24	M	241	22%	96%	VC	369	9%	79%	XC	441	6%	67%	UC	530	4%	52%	UC	609
	3.62	5.00	3.95	11-44	8.7-35	7.3-29	6.2-25	M	232	23%	96%	C	353	9%	81%	XC	424	6%	69%	UC	513	4%	54%	UC	593
110 -10 Nozzles	Flow	Boom	Tip	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-10		#40281-10		SR110-10		#40287-10		MR110-10		#40291-10		DR110-10		#40286-10		UR110-10	
	L/min	BAR	BAR	125L/Ha	150L/Ha	175L/Ha	200L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
	2.71	2.00	1.41	6.5-26	5.4-22	4.7-19	4.1-16	VC	360	10%	88%													#40292-10	
	3.03	2.50	1.77	7.3-29	6.1-24	5.2-21	4.6-18	C	339	12%	90%	UC	496	5%	57%										
	3.32	3.00	2.12	8-32	6.6-27	5.7-23	5-20	C	322	14%	91%	XC	467	6%	63%	UC	520	4%	53%	UC	607	5%	58%		
	3.58	3.50	2.47	8.6-34	7.2-29	6.2-25	5.4-22	C	308	16%	91%	XC	442	7%	67%	UC	495	5%	57%	UC	594	5%	56%	UC	678
	3.83	4.00	2.82	9.2-37	7.7-31	6.6-26	5.8-23	C	296	17%	92%	XC	420	8%	71%	XC	474	5%	60%	UC	582	5%	54%	UC	654
	4.06	4.50	3.18	9.8-39	8.1-33	7-28	6.1-24	C	285	18%	92%	XC	401	8%	74%	XC	455	5%	62%	UC	572	5%	52%	UC	633
	4.28	5.00	3.53	10-41	8.6-34	7.4-29	6.4-26	M	275	19%	93%	XC	384	9%	76%	XC	438	6%	65%	UC	563	6%	51%	UC	616
	4.49	5.50	3.88	11-43	9-36	7.7-31	6.8-27	M	266	20%	93%	VC	368	9%	78%	XC	423	6%	66%	UC	555	6%	49%	UC	600
110 -125 Nozzles	Flow	Boom	Tip	Sprayer Speed (L/Ha on 50cm spacing) @				ER110-125		#40281-125		SR110-125		#40287-125		MR110-125		#40291-125		DR110-125		#40286-125			
	L/min	BAR	BAR	150L/Ha	200L/Ha	225L/Ha	250L/Ha	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD	<141	<600	Class	VMD
	3.51	2.50	1.52	7-28	5.3-21	4.7-19	4.2-17	XC	433	8%	67%														
	3.84	3.00	1.82	7.7-31	5.8-23	5.1-21	4.6-18	XC	412	9%	71%	UC	523	4%	52%										
	4.15	3.50	2.12	8.3-33	6.2-25	5.5-22	5-20	XC	395	10%	74%	UC	492	4%	58%	UC	638	4%	36%	UC	661	3%	33%		
	4.44	4.00	2.42	8.9-36	6.7-27	5.9-24	5.3-21	XC	381	10%	77%	XC	467	5%	63%	UC	614	4%	40%	UC	645	3%	35%		
	4.71	4.50	2.73	9.4-38	7.1-28	6.3-25	5.7-23	VC	361	11%	79%	XC	444	5%	66%	UC	592	4%	44%	UC	630	4%	37%		
	4.96	5.00	3.03	9.9-40	7.5-30	6.6-27	6-24	VC	358	11%	80%	XC	425	6%	69%	UC	573	4%	46%	UC	617	4%	39%		
	5.20	5.50	3.33	10-42	7.8-31	6.9-28	6.3-25	C	348	12%	81%	XC	407	6%	72%	UC	556	5%	49%	UC	606	4%	40%		
	5.43	6.00	3.64	11-44	8.2-33	7.3-29	6.5-26	C	339	12%	83%	XC	391	7%	74%	UC	541	5%	51%	UC	595	4%	41		

COMBO-JET® Metering Orifices & Fertilizer Streamer Caps

COMBO-JET® Fertilizer Streamer Caps

Color-coded 3-hole streamer nozzles designed for streaming liquid fertilizer on consistent spacing to minimize leaf burn.



Operating Pressure	0.8bar - 4bar
O-rings	FKM (viton avail.)
Material	Glass-reinforced Polypropylene

Cap Includes:



COMBO-JET® Metering Orifices

Metering orifice snap into any Combo-Jet or Radialock caps to meter fertilizer or chemical flow rates.

40249-00
50 Mesh Strainer



LONG ORIFICE
Available in -08 size & up



Short style orifices are compatible with Combo-Jet snap-in strainers.

40285-04 40285-15

*Some metering orifices have long stems, as they do not require strainers

UR series Orifices

If you are looking for replacement two-piece pre-orifices for Combo-Jet UR series spray tips, visit the UR series spray tip page for part numbers.



40292-27

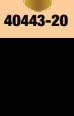
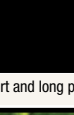
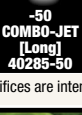
Combo-Jet Streamer Nozzle Size	Metering Orifice Size	Pres. (BAR)	Flow Rate L/min	20cm Outlet Spacing			25cm Outlet Spacing			30cm Outlet Spacing			38cm Outlet Spacing			50cm Outlet Spacing		
				Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @		
				8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph
Use Tip Wizard to select metering orifices & streamers!    	 -005 COMBO-JET Metering Orifice 40285-005	1.00	0.114	43L	34L	28L	34L	27L	23L	28L	23L	19L	22L	18L	15L	17L	14L	11L
		1.50	0.140	52L	42L	35L	42L	34L	28L	35L	28L	23L	28L	22L	18L	21L	17L	14L
		1.75	0.151	57L	45L	38L	45L	36L	30L	38L	30L	25L	30L	24L	20L	23L	18L	15L
		2.00	0.161	60L	48L	40L	48L	39L	32L	40L	32L	27L	32L	25L	21L	24L	19L	16L
		2.50	0.180	68L	54L	45L	54L	43L	36L	45L	36L	30L	36L	28L	24L	27L	22L	18L
	 -0067 COMBO-JET Metering Orifice 40285-007	3.00	0.197	74L	59L	49L	59L	47L	39L	49L	39L	33L	39L	31L	26L	30L	24L	20L
		1.00	0.153	57L	46L	38L	46L	37L	31L	38L	31L	25L	30L	24L	20L	23L	18L	15L
		1.50	0.187	70L	56L	47L	56L	45L	37L	47L	37L	31L	37L	30L	25L	28L	22L	19L
		1.75	0.202	76L	61L	51L	61L	48L	40L	51L	40L	34L	40L	32L	27L	30L	24L	20L
		2.00	0.216	81L	65L	54L	65L	52L	43L	54L	43L	36L	43L	34L	28L	32L	26L	22L
 -01 COMBO-JET Metering Orifice 40285-01	2.50	0.241	91L	72L	60L	72L	58L	48L	60L	48L	40L	48L	38L	32L	36L	29L	24L	
	3.00	0.265	99L	79L	66L	79L	63L	53L	66L	53L	44L	52L	42L	35L	40L	32L	26L	
	1.00	0.228	85L	68L	57L	68L	55L	46L	57L	46L	38L	45L	36L	30L	34L	27L	23L	
	1.50	0.279	105L	84L	70L	84L	67L	56L	70L	56L	47L	55L	44L	37L	42L	34L	28L	
	1.75	0.302	113L	90L	75L	90L	72L	60L	75L	60L	50L	60L	48L	40L	45L	36L	30L	
 -015 COMBO-JET Metering Orifice 40285-015	2.00	0.322	121L	97L	81L	97L	77L	64L	81L	64L	54L	64L	51L	42L	48L	39L	32L	
	2.50	0.360	135L	108L	90L	108L	86L	72L	90L	72L	60L	71L	57L	47L	54L	43L	36L	
	3.00	0.395	148L	118L	99L	118L	95L	79L	99L	79L	66L	78L	62L	52L	59L	47L	39L	
	1.00	0.342	128L	103L	85L	103L	82L	68L	85L	68L	57L	67L	54L	45L	51L	41L	34L	
	1.50	0.419	157L	126L	105L	126L	101L	84L	105L	84L	70L	83L	66L	55L	63L	50L	42L	
 -02 COMBO-JET Metering Orifice 40285-02	1.75	0.452	170L	136L	113L	136L	109L	90L	113L	90L	75L	89L	71L	60L	68L	54L	45L	
	2.00	0.484	181L	145L	121L	145L	116L	97L	121L	97L	81L	95L	76L	64L	73L	58L	48L	
	2.50	0.541	203L	162L	135L	162L	130L	108L	135L	108L	90L	107L	85L	71L	81L	65L	54L	
	3.00	0.592	222L	178L	148L	178L	142L	118L	148L	118L	99L	117L	94L	78L	89L	71L	59L	
	1.00	0.456	171L	137L	114L	137L	109L	91L	114L	91L	76L	90L	72L	60L	68L	55L	46L	
 -025 COMBO-JET Metering Orifice 40285-025	1.50	0.558	209L	168L	140L	168L	134L	112L	140L	112L	93L	110L	88L	73L	84L	67L	56L	
	1.75	0.603	226L	181L	151L	181L	145L	121L	151L	121L	101L	119L	95L	79L	90L	72L	60L	
	2.00	0.645	242L	193L	161L	193L	155L	129L	161L	129L	107L	127L	102L	85L	97L	77L	64L	
	2.50	0.721	270L	216L	180L	216L	173L	144L	180L	144L	120L	142L	114L	95L	108L	86L	72L	
	3.00	0.790	296L	237L	197L	237L	190L	158L	197L	158L	132L	156L	125L	104L	118L	95L	79L	
 -03 COMBO-JET Metering Orifice 40285-03	1.00	0.570	214L	171L	142L	171L	137L	114L	142L	114L	95L	112L	90L	75L	85L	68L	57L	
	1.50	0.698	262L	209L	174L	209L	168L	140L	174L	140L	116L	138L	110L	92L	105L	84L	70L	
	1.75	0.754	283L	226L	188L	226L	181L	151L	188L	151L	126L	149L	119L	99L	113L	90L	75L	
	2.00	0.806	302L	242L	201L	242L	193L	161L	201L	161L	134L	159L	127L	106L	121L	97L	81L	
	2.50	0.901	338L	270L	225L	270L	216L	180L	225L	180L	150L	178L	142L	119L	135L	108L	90L	
 -04 COMBO-JET Metering Orifice 40285-04	3.00	0.987	370L	296L	247L	296L	237L	197L	247L	197L	165L	195L	156L	130L	148L	118L	99L	
	1.00	0.684	256L	205L	171L	205L	164L	137L	171L	137L	114L	135L	108L	90L	103L	82L	68L	
	1.50	0.838	314L	251L	209L	251L	201L	168L	209L	168L	140L	165L	132L	110L	126L	101L	84L	
	1.75	0.905	339L	271L	226L	271L	217L	181L	226L	181L	151L	179L	143L	119L	136L	109L	90L	
	2.00	0.967	363L	290L	242L	290L	232L	193L	242L	193L	161L	191L	153L	127L	145L	116L	97L	
 -05 COMBO-JET Metering Orifice 40285-05	2.50	1.081	405L	324L	270L	324L	259L	216L	270L	216L	180L	213L	171L	142L	162L	130L	108L	
	3.00	1.184	444L	355L	296L	355L	284L	237L	296L	237L	197L	234L	187L	156L	178L	142L	118L	
	1.00	0.91	342L	274L	228L	274L	219L	182L	228L	182L	152L	180L	144L	120L	137L	109L	91L	
	1.50	1.12	419L	335L	279L	335L	268L	223L	279L	223L	186L	220L	176L	147L	168L	134L	112L	
	1.75	1.21	452L	362L	302L	362L	289L	241L	302L	241L	201L	238L	190L	159L	181L	145L	121L	
 -06 COMBO-JET Metering Orifice 40285-06	2.00	1.29	484L	387L	322L	387L	309L	258L	322L	258L	215L	254L	204L	170L	193L	155L	129L	
	2.50	1.44	541L	432L	360L	432L	346L	288L	360L	288L	240L	285L	228L	190L	216L	173L	144L	
	3.00	1.58	592L	474L	395L	474L	379L	316L	395L	316L	263L	312L	249L	208L	237L	190L	158L	
	1.00	1.14	427L	342L	285L	342L	274L	228L	285L	228L	190L	225L	180L	150L	171L	137L	114L	
	1.50	1.40	523L	419L	349L	419L	335L	279L	349L	279L	233L	275L	220L	184L	209L	168L	140L	
 -06 COMBO-JET Metering Orifice 40285-06	1.75	1.51	565L	452L	377L	452L	362L	302L	377L	302L	251L	298L	238L	198L	226L	181L	151L	
	2.00	1.61	604L	484L	403L	484L	387L	322L	403L	322L	269L	318L	254L	212L	242L	193L	161L	
	2.50	1.80	676L	541L	451L	541L	432L	360L	451L	360L	300L	356L	285L	237L	270L	216L	180L	
	3.00	1.97	740L	592L	494L	592L	474L	395L	494L	395L	329L	390L	312L	260L	296L	237L	197L	
	1.00	1.37	513L	410L	342L	410L	328L	274L	342L	274L	228L	270L	216L	180L	205L	164L	137L	
 -06 COMBO-JET Metering Orifice 40285-06	1.50	1.68	628L	503L	419L	503L	402L	335L	419L	335L	279L	331L	264L	220L	251L	201L	168L	
	1.75	1.81	678L	543L	452L	543L	434L	362L	452L	362L	302L	357L	286L	238L	271L	217L	181L	
	2.00	1.93	725L	580L	484L	580L	464L	387L	484L	387L	322L	382L	305L	254L	290L	232L	193L	
	2.50	2.16	811L	649L	541L	649L	519L	432L	541L	432L	360L	427L	341L	285L	324L	259L	216L	
	3.00	2.37	888L	711L	592L	711L	569L	474L	592L	474L	395L	468L	374L	312L	355L	284L	237L	

COMBO-JET® Metering Orifices & Fertilizer Streamer Caps

NOZZLES

Fertilizer Streaming & Metering Orifices

Common Liquid Weight, Specific Gravity, and Conversion Factor for Flow Rate: Required Flow Rate x Conversion Factor = Flow Rate adjusted for density	[WATER] 8.34 lbs/gal // 1.0 kg/L Specific Gravity 1.0 Conversion Factor: 1.00	[28-0-0] 10.67 lbs/gal // 1.28 kg/L Specific Gravity 1.28 Conversion Factor: 1.13	[10-34-0] 11.65 lbs/gal // 1.4 kg/L Specific Gravity 1.4 Conversion Factor: 1.18
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Combo-Jet Streamer Nozzle Size	Metering Orifice Size	Pres. (BAR)	Flow Rate L/min	20cm Outlet Spacing			25cm Outlet Spacing			30cm Outlet Spacing			38cm Outlet Spacing			50cm Outlet Spacing		
				Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @			Application Rates (L/ha) @		
				8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph	8 kph	10kph	12kph
 40443-08		1.00	1.82	684L	547L	456L	547L	438L	365L	456L	365L	304L	360L	288L	240L	274L	219L	182L
		1.50	2.23	838L	670L	558L	670L	536L	447L	558L	447L	372L	441L	353L	294L	335L	268L	223L
		1.75	2.41	905L	724L	603L	724L	579L	482L	603L	482L	402L	476L	381L	317L	362L	289L	241L
		2.00	2.58	967L	774L	645L	774L	619L	516L	645L	516L	430L	509L	407L	339L	387L	309L	258L
		2.50	2.88	1081L	865L	721L	865L	692L	577L	721L	577L	481L	569L	455L	379L	432L	346L	288L
 40443-10		3.00	3.16	1184L	948L	790L	948L	758L	632L	790L	632L	526L	623L	499L	416L	474L	379L	316L
		1.00	2.28	855L	684L	570L	684L	547L	456L	570L	456L	380L	450L	360L	300L	342L	274L	228L
		1.50	2.79	1047L	838L	698L	838L	670L	558L	698L	558L	465L	551L	441L	367L	419L	335L	279L
		1.75	3.02	1131L	905L	754L	905L	724L	603L	754L	603L	503L	595L	476L	397L	452L	362L	302L
		2.00	3.22	1209L	967L	806L	967L	774L	645L	806L	645L	537L	636L	509L	424L	484L	387L	322L
 40443-125		2.50	3.60	1352L	1081L	901L	1081L	865L	721L	901L	721L	601L	711L	569L	474L	541L	432L	360L
		3.00	3.95	1481L	1184L	987L	1184L	948L	790L	987L	790L	658L	779L	623L	519L	592L	474L	395L
		1.00	2.85	1068L	855L	712L	855L	684L	570L	712L	570L	475L	562L	450L	375L	427L	342L	285L
		1.50	3.49	1309L	1047L	872L	1047L	838L	698L	872L	698L	582L	689L	551L	459L	523L	419L	349L
		1.75	3.77	1413L	1131L	942L	1131L	905L	754L	942L	754L	628L	744L	595L	496L	565L	452L	377L
 40443-15		2.00	4.03	1511L	1209L	1007L	1209L	967L	806L	1007L	806L	672L	795L	636L	530L	604L	484L	403L
		2.50	4.51	1689L	1352L	1126L	1352L	1081L	901L	1126L	901L	751L	889L	711L	593L	676L	541L	451L
		3.00	4.94	1851L	1481L	1234L	1481L	1184L	987L	1234L	987L	823L	974L	779L	649L	740L	592L	494L
		1.00	3.42	1282L	1026L	855L	1026L	821L	684L	855L	684L	570L	675L	540L	450L	513L	410L	342L
		1.50	4.19	1570L	1256L	1047L	1256L	1005L	838L	1047L	838L	698L	826L	661L	551L	628L	503L	419L
 40443-20		1.75	4.52	1696L	1357L	1131L	1357L	1086L	905L	1131L	905L	754L	893L	714L	595L	678L	543L	452L
		2.00	4.84	1813L	1451L	1209L	1451L	1160L	967L	1209L	967L	806L	954L	763L	636L	725L	580L	484L
		2.50	5.41	2027L	1622L	1352L	1622L	1297L	1081L	1352L	1081L	901L	1067L	854L	711L	811L	649L	541L
		3.00	5.92	2221L	1777L	1481L	1777L	1421L	1184L	1481L	1184L	987L	1169L	935L	779L	888L	711L	592L
		1.00	4.56	1710L	1368L	1140L	1368L	1094L	912L	1140L	912L	760L	900L	720L	600L	684L	547L	456L
 40443-25		1.50	5.58	2094L	1675L	1396L	1675L	1340L	1117L	1396L	1117L	931L	1102L	882L	735L	838L	670L	558L
		1.75	6.03	2262L	1809L	1508L	1809L	1447L	1206L	1508L	1206L	1005L	1190L	952L	794L	905L	724L	603L
		2.00	6.45	2418L	1934L	1612L	1934L	1547L	1289L	1612L	1289L	1075L	1272L	1018L	848L	967L	774L	645L
		2.50	7.21	2703L	2162L	1802L	2162L	1730L	1442L	1802L	1442L	1201L	1423L	1138L	948L	1081L	865L	721L
		3.00	7.90	2961L	2369L	1974L	2369L	1895L	1579L	1974L	1579L	1316L	1558L	1247L	1039L	1184L	948L	790L
 40443-30		1.00	5.70	2137L	1710L	1425L	1710L	1368L	1140L	1425L	1140L	950L	1125L	900L	750L	855L	684L	570L
		1.50	6.98	2617L	2094L	1745L	2094L	1675L	1396L	1745L	1396L	1163L	1377L	1102L	918L	1047L	838L	698L
		1.75	7.54	2827L	2262L	1885L	2262L	1809L	1508L	1885L	1508L	1256L	1488L	1190L	992L	1131L	905L	754L
		2.00	8.06	3022L	2418L	2015L	2418L	1934L	1612L	2015L	1612L	1343L	1591L	1272L	1060L	1209L	967L	806L
		2.50	9.01	3379L	2703L	2253L	2703L	2162L	1802L	2253L	1802L	1502L	1778L	1423L	1186L	1352L	1081L	901L
 40443-40		3.00	9.87	3701L	2961L	2468L	2961L	2369L	1974L	2468L	1974L	1645L	1948L	1558L	1299L	1481L	1184L	987L
		1.00	6.84	2564L	2051L	1710L	2051L	1641L	1368L	1710L	1368L	1140L	1350L	1080L	900L	1026L	821L	684L
		1.50	8.38	3141L	2513L	2094L	2513L	2010L	1675L	2094L	1675L	1396L	1653L	1322L	1102L	1256L	1005L	838L
		1.75	9.05	3392L	2714L	2262L	2714L	2171L	1809L	2262L	1809L	1508L	1785L	1428L	1190L	1357L	1086L	905L
		2.00	9.67	3627L	2901L	2418L	2901L	2321L	1934L	2418L	1934L	1612L	1909L	1527L	1272L	1451L	1160L	967L
 40443-50		2.50	10.81	4055L	3244L	2703L	3244L	2595L	2162L	2703L	2162L	1802L	2134L	1707L	1423L	1622L	1297L	1081L
		3.00	11.84	4442L	3553L	2961L	3553L	2843L	2369L	2961L	2369L	1974L	2338L	1870L	1558L	1777L	1421L	1184L
		1.00	9.12	3419L	2735L	2279L	2735L	2188L	1824L	2279L	1824L	1520L	1800L	1440L	1200L	1368L	1094L	912L
		1.50	11.17	4188L	3350L	2792L	3350L	2680L	2233L	2792L	2233L	1861L	2204L	1763L	1469L	1675L	1340L	1117L
		1.75	12.06	4523L	3618L	3015L	3618L	2895L	2412L	3015L	2412L	2010L	2381L	1904L	1587L	1809L	1447L	1206L
 40443-50		2.00	12.89	4835L	3868L	3224L	3868L	3095L	2579L	3224L	2579L	2149L	2545L	2036L	1697L	1934L	1547L	1289L
		2.50	14.42	5406L	4325L	3604L	4325L	3460L	2883L	3604L	2883L	2403L	2845L	2276L	1897L	2162L	1730L	1442L
		3.00	15.79	5922L	4738L	3948L	4738L	3790L	3158L	3948L	3158L	2632L	3117L	2494L	2078L	2369L	1895L	1579L
		1.00	11.40	4274L	3419L	2849L	3419L	2735L	2279L	2849L	2279L	1900L	2249L	1800L	1500L	1710L	1368L	1140L
		1.50	13.96	5234L	4188L	3490L	4188L	3350L	2792L	3490L	2792L	2326L	2755L	2204L	1837L	2094L	1675L	1396L
 40443-50		1.75	15.08	5654L	4523L	3769L	4523L	3618L	3015L	3769L	3015L	2513L	2976L	2381L	1984L	2262L	1809L	1508L
		2.00	16.12	6044L	4835L	4029L	4835L	3868L	3224L	4029L	3224L	2686L	3181L	2545L	2121L	2418L	1934L	1612L
		2.50	18.02	6758L	5406L	4505L	5406L	4325L	3604L	4505L	3604L	3003L	3557L	2845L	2371L	2703L	2162L	1802L
		3.00	19.74	7403L	5922L	4935L	5922L	4738L	3948L	4935L	3948L	3290L	3896L	3117L	2597L	2961L	2369L	1974L

*Short and long pre-orifices are intended to be used as replacement. If a long pre-orifice is used in a spray nozzle, replace it with the same length pre-orifice.

NEW

COMBO-JET® Narrow-Angle Nozzles for Spot Spraying

A full selection of narrow angle spray nozzles for use in specialty applications that require a narrow, but thick pattern. These nozzles are fully compatible with PWM spray systems, and other optical spray systems. Contact factory for availability.

COMBO-JET® ER & DX Series of 20°, 40° & 60° Spray Nozzles for Optical & Spot Spraying

The DX (drift redux) & ER (fine spray) narrow angle spray nozzles.
For smaller nozzle sizes and angles, contact Wilger.

Nozzle Size	Flow Rate L/min	Boom BAR	Tip BAR*	Application Rate in Litres/Hectare on 10cm Nozzle Spacing with PWM @ Speed Range in kph (25-100% D/C)	20° Nozzles	40° Nozzles	60° Nozzles
-015	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	0.48	2.0	1.98	75L/Ha 100L/Ha 125L/Ha 150L/Ha	DX20-015	DX40-015	DX60-015
	0.54	2.5	2.48	4.3-17 3.3-13 2.5-10 2.2-8.6	#42220-015	#42240-015	#42260-015
	0.59	3.0	2.97	4.8-19 3.5-14 2.8-11 2.4-9.4	20° Fine Spray ER20-015	40° Fine Spray ER40-015	60° Fine Spray ER60-015
	0.68	4.0	3.96	5.5-22 4-16 3.3-13 2.8-11	#42120-015	#42140-015	#42160-015
	0.76	5.0	4.96	6-24 4.5-18 3.8-15 3-12			
-02	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	0.64	2.0	1.97	75L/Ha 100L/Ha 125L/Ha 150L/Ha 175L/Ha	DX20-02	DX40-02	DX60-02
	0.71	2.5	2.46	4.3-17 3.5-14 2.8-11 2.5-9.8	#42220-02	#42240-02	#42260-02
	0.78	3.0	2.95	4.8-19 3.8-15 3.3-13 2.8-11	20° Fine Spray ER20-02	40° Fine Spray ER40-02	60° Fine Spray ER60-02
	0.90	4.0	3.93	5.5-22 4.3-17 3.5-14 3-12	#42120-02	#42140-02	#42160-02
	1.01	5.0	4.92	6-24 4.8-19 4-16 3.5-14			
-025	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	0.80	2.0	1.95	75L/Ha 100L/Ha 125L/Ha 150L/Ha 200L/Ha	DX20-025	DX40-025	DX60-025
	0.89	2.5	2.44	4.3-17 3.5-14 3-12 2.8-11	#42220-025	#42240-025	#42260-025
	0.97	3.0	2.92	4.8-19 4-16 3.3-13 3-12	20° Fine Spray ER20-025	40° Fine Spray ER40-025	60° Fine Spray ER60-025
	1.13	4.0	3.90	5.5-22 4.5-18 3.8-15 3.5-14	#42120-025	#42140-025	#42160-025
	1.26	5.0	4.87	6-24 5-20 4.3-17 3.8-15			
-03	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	0.95	2.0	1.93	125L/Ha 150L/Ha 175L/Ha 200L/Ha	DX20-03	DX40-03	DX60-03
	1.06	2.5	2.41	4.5-18 3.8-15 3.3-13 2.8-11	#42220-03	#42240-03	#42260-03
	1.16	3.0	2.89	5.5-22 4.8-19 4-16 3.5-14	20° Fine Spray ER20-03	40° Fine Spray ER40-03	60° Fine Spray ER60-03
	1.34	4.0	3.86	6.5-26 5.3-21 4.5-18 4-16	#42120-03	#42140-03	#42160-03
	1.50	5.0	4.82	7.3-29 6-24 5.3-21 4.5-18			
-04	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	1.25	2.0	1.87	150L/Ha 200L/Ha 250L/Ha 275L/Ha	DX20-04	DX40-04	DX60-04
	1.40	2.5	2.34	5.5-22 4.3-17 3.3-13 3-12	#42220-04	#42240-04	#42260-04
	1.53	3.0	2.81	6-24 4.5-18 3.8-15 3.3-13	20° Fine Spray ER20-04	40° Fine Spray ER40-04	60° Fine Spray ER60-04
	1.77	4.0	3.75	7-28 5.3-21 4.3-17 3.8-15	#42120-04	#42140-04	#42160-04
	1.97	5.0	4.69	8-32 6-24 4.8-19 4.3-17			
-05	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	1.53	2.0	1.81	175L/Ha 200L/Ha 250L/Ha 300L/Ha	DX20-05	DX40-05	DX60-05
	1.72	2.5	2.26	6-24 5.3-21 4-16 3-12	#42220-05	#42240-05	#42260-05
	1.88	3.0	2.72	6.5-26 5.8-23 4.5-18 3.8-15	20° Fine Spray ER20-05	40° Fine Spray ER40-05	60° Fine Spray ER60-05
	2.17	4.0	3.62	7.5-30 6.5-26 5.3-21 4.3-17	#42120-05	#42140-05	#42160-05
	2.43	5.0	4.53	8.3-33 7.3-29 5.8-23 4.8-19			
-06	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	1.80	2.0	1.74	200L/Ha 250L/Ha 300L/Ha 350L/Ha	DX20-06	DX40-06	DX60-06
	2.02	2.5	2.17	6-24 4.8-19 4-16 3.5-14	#42220-06	#42240-06	#42260-06
	2.21	3.0	2.61	6.8-27 5.3-21 4.5-18 3.8-15	20° Fine Spray ER20-06	40° Fine Spray ER40-06	60° Fine Spray ER60-06
	2.55	4.0	3.48	7.8-31 6-24 5-20 4.3-17	#42120-06	#42140-06	#42160-06
	2.85	5.0	4.35	8.5-34 6.8-27 5.8-23 5-20			
-08	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	2.29	2.0	1.58	300L/Ha 350L/Ha 400L/Ha 450L/Ha	DX20-08	DX40-08	DX60-08
	2.56	2.5	1.97	4.5-18 4-16 3.5-14 3-12	#42220-08	#42240-08	#42260-08
	2.81	3.0	2.37	5.5-22 4.8-19 4.3-17 3.8-15	20° Fine Spray ER20-08	40° Fine Spray ER40-08	60° Fine Spray ER60-08
	3.24	4.0	3.16	6.5-26 5.5-22 4.8-19 4.3-17	#42120-08	#42140-08	#42160-08
	3.62	5.0	3.95	7.3-29 6.3-25 5.5-22 4.8-19			
-10	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	2.71	2.0	1.41	400L/Ha 450L/Ha 500L/Ha 600L/Ha	DX20-10	DX40-10	DX60-10
	3.03	2.5	1.77	4.5-18 4-16 3.8-15 3-12	#42220-10	#42240-10	#42260-10
	3.32	3.0	2.12	5-20 4.5-18 4-16 3.3-13	20° Fine Spray ER20-10	40° Fine Spray ER40-10	60° Fine Spray ER60-10
	3.83	4.0	2.82	5.8-23 5-20 4.5-18 3.8-15	#42120-10	#42140-10	#42160-10
	4.28	5.0	3.53	6.5-26 5.8-23 5.3-21 4.3-17			
-125	Flow L/min	Boom BAR	Tip BAR	Speed Range (25-100% Duty cycle) @	20° Drift Reduction	40° Drift Reduction	60° Drift Reduction
	3.14	2.0	1.21	500L/Ha 600L/Ha 700L/Ha 800L/Ha	DX20-125	DX40-125	DX60-125
	3.51	2.5	1.52	4.3-17 3.5-14 3-12 2.8-11	#42220-125	#42240-125	#42260-125
	3.84	3.0	1.82	4.5-18 3.8-15 3.3-13 3-12	20° Fine Spray ER20-125	40° Fine Spray ER40-125	60° Fine Spray ER60-125
	4.44	4.0	2.42	5.3-21 4.5-18 3.8-15 3.3-13	#42120-125	#42140-125	#42160-125
	4.96	5.0	3.03	6-24 5-20 4.3-17 3.8-15			

*NOTE: This chart takes into account a relative pressure drop through commonly used PWM solenoids to illustrate some potential flow restriction for larger spot spraying nozzles. If using PWM solenoid without PWM/Duty cycle, simply use maximum speed in range for speed/flow rate.

Spot & Broadcast spraying with the same nozzles? Consider **COMBO-JET® 80° Nozzles**. Using 80° drift reduction nozzles can be an effective way to use broadcast (with overlap) and spot spray mode with the same nozzles.

What is optical spot spraying?

Optical spraying systems, or spot spraying based on optical feedback is used for a variety of purposes and with different modes of action.

Spray on Green

Optics identify 'green' targets in field, and sprays them.

- Pre-plant spraying to clear out established weeds
- Spraying fungicide on plants in field, ignoring dirt.
- Using modes of actions to manage resistant weeds.
- Foliar fertilizer applications on plant only

Green on Green

Optics & computer differentiate plants in field and spray target plants only.

- Spraying weeds ONLY, avoiding planted crop.
- Spraying crop with fungicide, ignoring weeds.
- Spraying different weeds with different chemicals

While the potential benefits of **Green on Green** provide a great deal of flexibility & means to use cost-prohibitive herbicide regimens, the means to differentiate plants at application time and development of the computing power and learning mechanisms are continually under development.

What is the DX series spray nozzle?

Effectively through development of the narrow angle nozzles, there is a relative sweet spot for consistent coverage and maintaining a reasonable level of driftable fines.

Since optical/spot sprayers are typically subject to minimized speeds and narrow spacing, Wilger developed the DX series as a sweet-spot between drift reduction and coverage in those nozzle sizes and angles.

Are they still PWM-spray system compatible? Absolutely!



Speed up spray nozzle responsivity with INSTA-JET

Faster nozzle pattern generation, faster shut-off, and increased time with an optimal spray pattern are ways to tune in your spot spraying application.

The Insta-jet insert helps improve responsiveness of your nozzle by significantly reducing the amount of cavity space within a nozzle body outlet, such that there is less cavity space to charge between pulses. This means faster ON and OFF time of the nozzle's spray, leaving for more time being optimally spraying.



40262-00
INSTA-JET
snap-in insert

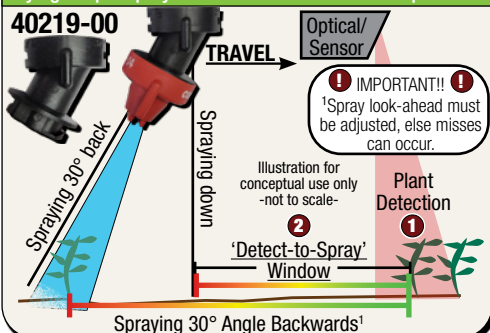


The INSTA-JET insert snaps into any COMBO-JET nozzle¹ to handle as one piece.



¹except UR series, or nozzles using adapters that do not allow for use of a snap-in strainer/insta-jet

Trying to spot spray faster? Consider the 30° Adapter.



COMBO-JET® Cap Adapters

Order #####-V0 for viton o-ring assemblies

Wilger manufactures a variety of adapters to adapt Wilger nozzles to other brands of nozzle bodies (e.g. Teejet, Hypro, Arag, etc), provide new functions, or a mix thereof. All adapters self-align cap to common nozzle offset angle.

COMBO-JET 50/30 Adapter

NEW



40442-00
COMBO-JET outlet to
30° & 50° front/back
COMBO-JET outlets
-Quarter Turn-

COMBO-JET 30/30 Y-Adapter



40440-00
COMBO-JET outlet to
dual 30° front/back
COMBO-JET outlets
-Quarter Turn-

30° COMBO-JET to COMBO-JET



40219-00
COMBO-JET to
COMBO-JET, 30° incline
(front or back)
-Quarter Turn-

COMBO-JET DOUBLE-DOWN



40441-00
COMBO-JET outlet to dual
COMBO-JET outlets straight
down
-Quarter Turn-

Square Lug to COMBO-JET®



40204-00
Converts Square Lug
(e.g. Teejet/Hypro) Outlet
to COMBO-JET
-TWIST-LOCK-

Square Lug to DOUBLE-DOWN



40206-00
Converts Square Lug Outlet
to COMBO-JET
Double-Down Outlets
-TWIST-LOCK-

COMBO-JET to Square Lug



40203-00
Converts COMBO-JET
Outlet to Square Lug
(e.g. Teejet/Hypro)
-Quarter Turn-

30° COMBO-JET to Square Lug



40220-00
COMBO-JET to
Square Lug, 30° incline
(front or back)
-Quarter Turn-

JACTO to COMBO-JET



40207-00
Converts Jacto Outlet
to COMBO-JET
-Quarter Turn-

AGRIFAC to COMBO-JET

NEW



40205-00
Converts Agrifac Outlet
to COMBO-JET
-Easy nozzle sleeve-
snaps into Combo-Jet caps

AGRIFAC to DOUBLE-DOWN



40203-00 + 40441-00
Converts
Agrifac Outlet to
Double COMBO-JET
-Quarter Turn-

AGRIFAC to 30/30 Y-Adapter



40213-00
Converts Agrifac Outlet
to COMBO-JET
Y-adapter Outlets
-TWIST-LOCK-

Y-Adapter or 'Double-Down' mode?

To split up a high volume, coarse spray nozzle into two more meaningful spray qualities. Y-adapter is excellent for vertical growing targets, double-down is better into thick canopies.

Read the 'Tip Guide for Double Nozzle Spraying'

PWM-Ready Double Nozzle Spraying

Just add the two nozzle sizes together for your PWM nozzle flow*

For example: **MR110-04**
+ **SR110-06**
110-10 size

*PWM solenoid pressure drop would be based on combined size (e.g. -10)



HARDI to COMBO-JET



40202-00
HARDI Outlet to COMBO-JET
-Semi-permanent snap on
adapter-

Radialock Slotted Caps & ER spray tip capsules (80° & 110°)

Wilger manufactures caps for using flanged spray tip capsules onto any Combo-Jet nozzle outlets. Gasket is required.

Gasket for Slotted Caps

40160-00
Rubber Gasket for
Radialock slotted
caps
40160-V0 for Viton

3/8" Slot¹



40269-05
For 3/8"
Teejet/Hypro
spray tips¹

1/2" Round Slot¹



40271-05
For
1/2" round
spray tips¹

7/16" Wide Slot²



40276-05
For larger
Teejet/Hypro
spray tips²

HARDI Tip Slot²



40275-05
For HARDI
spray tips²

¹May be available in colors: Grey (-09), Orange (-08), Brown (-07), Blue (-06), Black (-05), Yellow (-04), Green (-03), White (-02), Red (-01)

²May be available in colors: Black (-05), Yellow (-04), Green (-03), White (-02), Red (-01) *Check factory availability of non-black colors.

ER Stainless spray tips with 3/8" capsules



40170-04

80°

Optimal
Height
75cm



40169-04

110°

Optimal
Height
50cm



Use with #40269-05
+ #40160-00 gasket

Looking for narrower
20°, 40° or 60° ER
nozzle capsules?
Contact Wilger.



Tip Size	-005	-0067	-01	-015	-02	-025	-03	-04	-05	-06	-08
80° ER Tip	ER80-005	ER80-007	ER80-01	ER80-015	ER80-02	ER80-025	ER80-03	ER80-04	ER80-05	ER80-06	ER80-08
Part #	40170-005	40170-007	40170-01	40170-015	40170-02	40170-025	40170-03	40170-04	40170-05	40170-06	40170-08
110° ER Tip	-	-	ER110-01	ER110-015	ER110-02	ER110-025	ER110-03	ER110-04	ER110-05	ER110-06	ER110-08
Part #	-	-	40169-01	40169-015	40169-02	40169-025	40169-03	40169-04	40169-05	40169-06	40169-08

For flow rate & spray quality charts, and more information on ER spray tips, reference the 80° and 110° spray nozzle charts.

COMBO-JET® Caps, Adapters & Strainers

Wilger manufactures a variety of caps that are used for metering flow rates (through hose barb, push-in tube, or streamer caps) or used as accessories for other spraying or plumbing functions.

Plug Caps



Caps unused Combo-Jet nozzle body outlets

Plug Cap	
Assembled Plug	Cap Only
40272-B5	40272-05

40272-B5

Hose Barb Caps



Hose barb caps can be used as manifold plumbing parts or for metering flow.

Hose Barb Caps		
Barb Size	FKM O-ring Assy	Cap Only
1/8"	40420-B5	40420-05
1/4"	40422-B5	40422-05
3/8"	40424-B5	40424-05
1/2"	40426-B5	40426-05

To use cap for metering, order CAP ONLY, with o-ring and 40285-## metering orifice.

Push-in-Tube Caps



Quick connect tube caps seal on the outside diameter of a tube, and used as manifold plumbing parts or for metering flow.

Quick Connect/Push-in-tube Caps		
Tube Size (O.D.)	FKM O-ring Assy	Cap Only
1/4"	40435-B5	40435-05
5/16"	40437-B5	40437-05
3/8"	40436-B5	40436-05

To use cap for metering, order CAP ONLY, with o-ring and 40285-## metering orifice.

Threaded Outlet Adapters



Combo-Jet Cap with NPT-F threaded port

Threaded Outlet Caps		
Thread Size	FKM O-ring Assy	Cap Only
1/8" NPT-F	40277-B5	40277-05
1/4" NPT-F	40273-B5	40273-05
45° 1/4" NPT-F	40274-B5	40274-05

Fertilizer Streamer Caps



3-hole Fertilizer Streamer Caps [Molded]

3-hole fertilizer streamer (FS3) nozzle improves stream consistency across higher pressure ranges



Color-coded, Single part number ordering

VISIT PAGE 28-29 for both FS3 Fertilizer Streamer Caps & metering orifice charts

2-hole Streamer Caps [Drilled]

2-hole streamer caps are used to stream liquid fertilizer for ~25cm coverage



3-hole Streamer Caps [Drilled]

3-hole streamer caps are used to stream liquid fertilizer for ~17cm coverage



Drilled Fertilizer Streamer Caps [CAP ONLY]			
Cap Size	Flow Range	2-Hole Cap	3-Hole Cap
Small	0.19 - 1.51 L/min	40432-047	40433-047
Medium	0.76 - 3.78 L/min	40432-086	40433-067
Large	1.9 - 11.4 L/min	40432-104	40433-104

Ordering [Drilled] Streamer Caps

For drilled streamer cap assembly, order:

1. Metering Orifice (40285-## series)*
2. Streamer cap (2 or 3 hole, sized to flow range)
3. O-ring seal (40260-00 or 40260-V0)
4. [Optional] Slotted Strainer

*For selecting metering orifices to fit your application, use Tip Wizard, consult flow charts, or use other tools available at www.wilger.net.



COMBO-JET Cap O-rings



13mm x 3mm o-ring for COMBO-JET® Caps & Spray Tips

40260-00 FKM



40260-V0 viton



40261-00

Adapter for non-metering caps
Seal adapter is used to keep o-ring in place if metering orifice is NOT used

COMBO-JET Snap-in Strainers

Combo-jet strainers snap into a metering orifice or cap for an assembly that handles as 'one-piece'



40250-00



40251-00



40249-00



40248-00

Mesh Size	Slotted Strainer	Stainless Mesh	Color
100 mesh	-	#40251-00	Green
	use 100 mesh for -02 nozzles or smaller	40249-00	#40250-00
50 mesh	use 50 mesh for -025 or larger nozzles	40248-00	-
25 mesh	40248-00	-	Yellow
16 mesh	40247-00	-	Gray

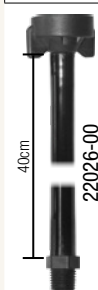
'-B5' Assembly Breakdown - For non-metering apps

For applications that do not require liquid metering orifices (e.g. plumbing manifolds), the -B5 is an assembly that includes an o-ring (#40260-00), seal adapter (#40261-00 in lieu of orifice), and cap.

New Hose Drop & Extension Caps

Hose Drop Caps are used to feed or spray down below a canopy to minimize crop contact.

Outlet	Length	Part #
Combo-Jet to Combo-Jet	5cm	40210-00
	12cm	40211-00
Combo-Jet to 1/4" NPT-M	40cm	22026-00
	60cm	22036-00
	91cm	22038-00
	122cm	22048-00



22021-00

Other styles of Hose Drop Assemblies using threaded inlets are also available. Find them in the DRY BOOMS section of the catalog.

Square Lug Nozzle Outlet Caps - Only for Square Lug Nozzle Body Outlets (Teejet, Hypro, etc)

Plug Cap



40197-05

Square Lug nozzle outlet plug cap

3/8" Slot Cap



40159-05

For 3/8" wide flanged spray tips

Threaded Cap



40164-00

45° 1/4" NPT-F thread

Flanged Strainers



40150-00



40158-00



40151-00

Stainless Steel Strainers for Square-Lug Caps & Nozzles

Cap Gaskets



40160-00 [FKM]
40160-V0 [viton]

Gaskets are required to seal all Square Lug Caps