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Get Better Spray Application with Better Nozzle Bodies



COMBO-RATE® Stacking Nozzle Bodies
Maximize spray coverage by using multiple spray tips
at the same time

COMBO-RATE® Nozzle Bodies for Field Sprayers



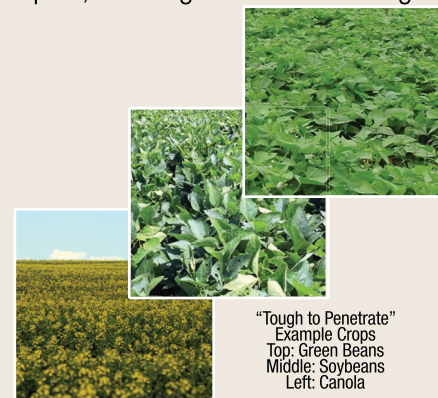
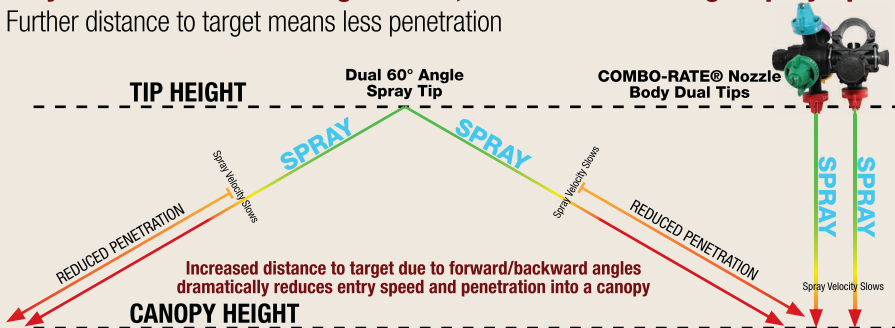
Stacking Nozzle Bodies That Can Do More

Increasing Canopy Penetration & Coverage

Using two spray tips **straight down** can provide better penetration through thick canopies, allowing for better coverage.

Why use two nozzles straight down, and not a multi-angle spray tip?

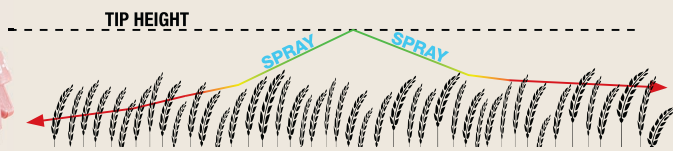
Further distance to target means less penetration



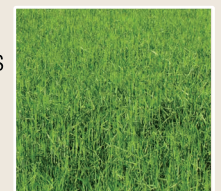
COMBO-RATE® gives you better penetration and coverage for a more consistent application.

What about spraying vertical target that don't have a dense canopy?

Spraying a vertical target is different than spraying into a canopy. Spraying forward/backward with a nozzles produces spray that can travel horizontal, making it more effective to cover vertical targets (at suitable boom heights).



COMBO-RATE® Nozzle Body with #40440-00 Wye Splitter



Vertical Target Spraying e.g. Applying Fungicide on Wheat

No need to sacrifice coverage to travel faster

Using a single, larger spray tip to allow faster travel (at the same rate) creates larger droplets, reducing spray coverage.

How to split nozzle flow for multi-tip application

Targeted Application:

Target Rate: 15 US Gallon/Acre
Average Speed: 15 MPH
Targeted VMD: 400 μ (COARSE)
Drift Sensitivity: Medium
(Contact Herbicide Chemical)

Single Tip Application:

15 US Gal/Acre @ 15MPH
20" spacing/110° Tips
Tip Selected: **SR110-08** @ ~36PSI
VMD: 425 μ (VERY COARSE Spray Quality)
7% volume < 141 μ (Low Driftable Fines)
71% volume < 600 μ (Coarse Coverage)



Dual Tip Application:

15 US Gal/Acre @ 15MPH
20" spacing/110° Tips
Tips Selected: 2x **MR110-04** @ ~36PSI
VMD: 392 μ (COARSE Spray Quality)
6% volume < 141 μ (Low Driftable Fines)
88% volume < 600 μ (Great Coverage)



Overview and Benefits of Single/Dual Tip Spraying

SR110-08	Application Criteria	2x MR110-04	BENEFIT of 2x MR110-04
15 US Gal/Acre	Application Rate	15 US Gal/Acre	SAME RATE
15 MPH	Speed (MPH)	15 MPH	SAME SPEED
36 PSI	Pressure (PSI)	36PSI	SAME PRESSURE
425 μ (VERY COARSE)	Droplet Size (VMD)	392 μ (COARSE)	Nominally closer VMD to target ¹
7% Driftable Fines	Driftable Fines (<141 μ)	6% Driftable Fines	~14% Less Drift with MR110-04s ¹
71% of Volume < 600 μ	Coverage (% <600 μ)	88% of Volume <600 μ	~24% more effective droplets for better coverage ¹

¹Comparisons are based on difference from the SR110-08 and dual MR110-04s for the same conditions only. Information provided is based on spraying with water (80°F) in lab conditions. Field conditions, with active spray chemical can change spray quality from the information above. The information is for educational use only, and should not be considered to be accurate for field spraying conditions.



Not sure which spray tips to use in a multi-tip spray application? Tip Wizard can help.

Tip Wizard is available for FREE on the wilger.net website and smartphone app stores. Simply split up the flow as you need (e.g. 50/50 - like the above example), and you can use Tip Wizard to find the best tip(s).

Styles of COMBO-RATE® Nozzle Bodies

COMBO-RATE® Side-Fed Saddles & Nozzle Bodies The Original Stacking Nozzle Body
The Original Combo-Rate® nozzle body was a side-fed nozzle saddle, with stackable thru and end bodies, allowing for multiple spray tips to be sprayed at once, in conjunction with each other or separate.

GOOD



Nozzle Body Highlights

- **Cost effective stacking nozzle body.**
- **Thru & End nozzle bodies can be used to make powerful plumbing manifolds.**
- **Used for making wet boom liquid fertilizer liquid kits for air seeders/ drills, planters and other planting equipment.**
- **Saddles are available in 3/4", 1" and 2" boom pipe sizes.**
Options for 3/8" inlet & 9/16" inlet feeds.

COMBO-RATE® II (CRII) Universal Saddles & Nozzle Bodies

The second generation of Combo-Rate® nozzle bodies came with the universal nozzle body saddle, that allowed for dual direction stacking, as well as the ability to mount the nozzle body to passively remove air from within a boom.

BETTER



Combo-Rate® II (CRII) Universal Saddle Highlights

- **Completely universal saddle body.**
Can be mounted forward/backward, upside down or right side up.
- **Available in 1/2" & 1" One-Way or Two-Way stacking saddles.**
Options for 3/8" inlet & 9/16" inlet feeds.
- **Use with Combo-Rate® Turrets for added convenience.**
Compatible with all Combo-Rate stacking components
- **Use as a universal stacking nozzle bodies on any sprayer.**

COMBO-RATE® II (CRII) Integrated Stacking Nozzle Bodies

The second generation of Combo-Rate® nozzle body that includes an integral nozzle body below the boom, with dual direction stacking options, providing even more choice for nozzle body configuration.

BEST



Combo-Rate® II (CRII) Integrated Nozzle Body Highlights

- **Two-Way Universal Left/Right Nozzle Body.**
Two-Way nozzle body can be switched to be either left/right stacking.
- **Available in 1/2" & 1" One-Way or Two-Way stacking saddles.**
Options for 3/8" inlet, 9/16" inlet, and High Flow 21/32" inlet feeds.
- **Use with Combo-Rate® Turrets for added convenience.**
Compatible with all Combo-Rate stacking components
- **KWIKSTOP™ raised inlet option for reducing spray tip run-on.**
- **Use as a universal stacking nozzle bodies on any sprayer.**



#41256-00

Did you know Combo-Rate® components can be used on dry-boom sprayers?

Combo-Rate nozzle bodies and components can be adapted to 3/4" square mount clamps and threaded inlet feeds with the #41256-00 (3/8" NPT-F) and 41255-00 (1/4" NPT-F) square mount adapters.



COMBO-RATE® Nozzle Bodies & Components

Combo-Rate® Side-Inlet Saddles

Buna-N O-ring seals are standard. For VITON® O-ring options, contact Wilger.

Boom Size	Inlet Size	Part #
3/4" Boom	3/8" Inlet	41203-00
1" Boom	3/8" Inlet	41200-00
	9/16" Inlet	41201-00
2" Boom	9/16" Inlet	41206-00



Combo-Rate® II Universal Saddles & Integrated Nozzle Bodies

Buna-N O-ring seals are standard. For VITON® O-ring options, contact Wilger.

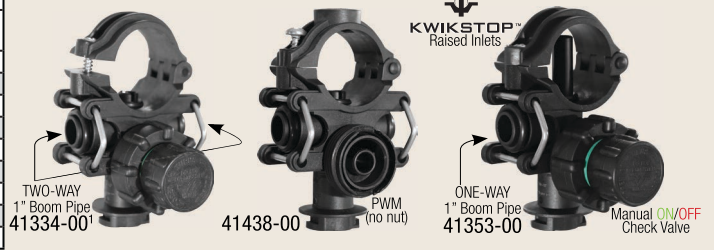
Boom Size	Inlet Size	Stacks	Bolt Mount ¹
1/2" Boom	3/8" Inlet	One-Way	41471-00
		Two-Way	41472-00
1" Boom	3/8" Inlet	One-Way	41475-00
		Two-Way	41476-00
	9/16" Inlet	One-Way	41477-00
		Two-Way	41478-00



¹Ordering Saddles with Smooth Clamps

Replace the 3rd digit in the part number with a '3'.
 #41472-00: 1/2" Two-Way Saddle w/ 1/4" Bolt-Mount Clamp
 #41372-00: 1/2" Two-Way Saddle w/ smooth clamp

Boom Size	Inlet Size	Stacks	Upper Clamp with 1/4" Bolt Mount ¹			
			Dia. Check Valve	Manual ON/OFF	Air-Off Operated	PWM (w/o Nut)**
1/2" Boom	3/8" Inlet	One-Way	41411-00	41413-00	41415-00	41417-00
		Two-Way	41412-00	41414-00	41416-00	41418-00
1" Boom	3/8" Inlet	One-Way	41431-00	41433-00	41435-00	41437-00
		Two-Way	41432-00	41434-00	41436-00	41438-00
	9/16" Inlet	One-Way	41441-00	41443-00	41445-00	41447-00
		Two-Way	41442-00	41444-00	41446-00	41448-00
1" KWIKSTOP	3/8" Inlet	One-Way	41462-00	41464-00	41466-00	41468-00
		Two-Way	41451-00	41453-00	41455-00	41457-00
			41452-00	41454-00	41456-00	41458-00



Combo-Rate® Universal Side Take-Off Turret

Buna-N O-ring seals are standard. For VITON® O-ring options, contact Wilger.

Model	Dia. Check Valve	Manual ON/OFF	Air-Off Operated	PWM (w/o nut)**
3 Outlet Side Turret	41603-00	41613-00	41643-00	41633-00
4 Outlet Side Turret	41604-00	41614-00	41644-00	41634-00
5 Outlet Side Turret	41605-00	41615-00	41645-00	41635-00
"3+2" Outlet Turret Body	41605-32	41615-32	41645-32	41635-32



Combo-Rate® Stacking Nozzle Bodies

Buna-N O-ring seals are standard. For VITON® O-ring options, contact Wilger.

Model	Dia. Check Valve	Manual ON/OFF	Air-Off Operated	PWM (w/o nut)**
Thru Body	41100-00	41110-00	41125-00	41135-00
End Body	41101-00	41111-00	41126-00	41136-00



PWM Solenoids?

Combo-Rate® Nozzle Bodies allow for Pulse Width Modulation (PWM) solenoids to be installed.
 All Combo-Rate® & Combo-Jet® Nozzle body module threads are compatible with major PWM manufacturer solenoids.

Combo-Rate® Front Take-Off Turrets

Buna-N O-ring seals are standard. For VITON® O-ring options, contact Wilger.

Model	Dia. Check Valve	Manual ON/OFF	Air-Off Operated	PWM (w/o nut)**
3 Outlet Turret Body	41503-00	41513-00	41543-00	41533-00
4 Outlet Turret Body	41504-00	41514-00	41544-00	41534-00
5 Outlet Turret Body	41505-00	41515-00	41545-00	41535-00
"3+2" Outlet Turret Body	41505-32*	41515-32*	41545-32*	41535-32*



! For a listing of all COMBO-RATE® nozzle bodies, adapters and components, refer to the Wilger Manufacturer's Suggested Retail Price List. Available in print, or online @ www.wilger.net

COMBO-JET® Fertilizer Streamer Tips



COMBO-JET® Nozzle Bodies



COMBO-RATE® Stacking Nozzle Bodies



COMBO-RATE® Side Take-Off Turrets



Wilger Boom End Flush Valves



Wilger Visual Ball Flow Indicators



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