



**See Any Application Accurately**

**WILGER BALL FLOW INDICATORS**  
Using Flow Indicators lets you identify and resolve leaks or plugs, resulting in more accurate application.

***Flow Indicator Brochure for Planters, Seeders, Sprayers***



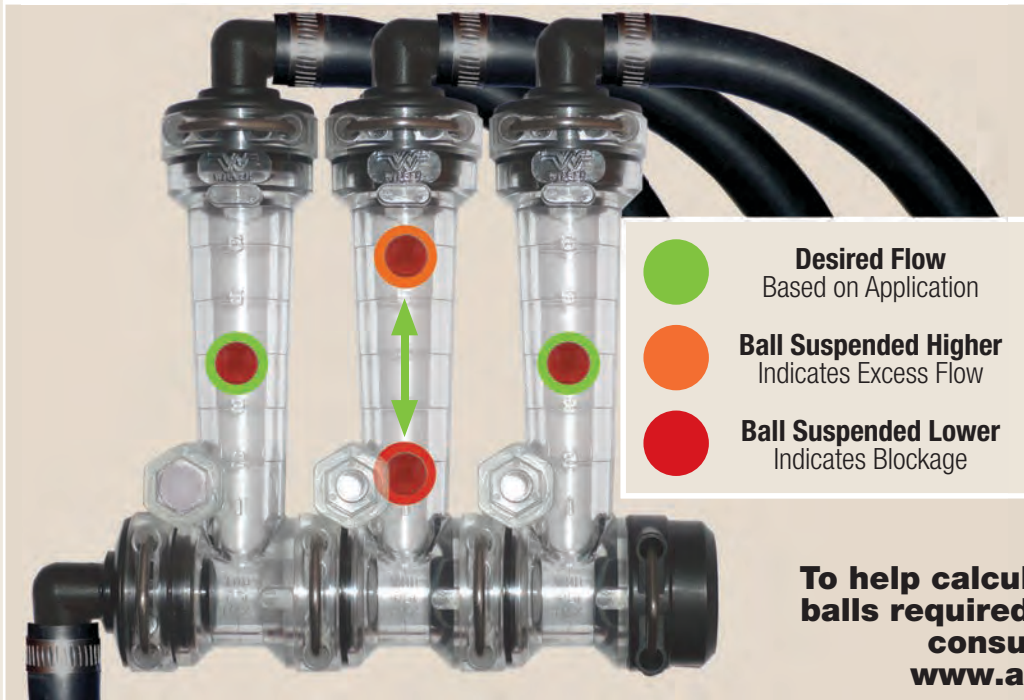





## Cost Effective, Modular & Flexible Ball Flow Indicator Configurations

### Spot any disruptions in flow immediately.

A glance is all it takes to know that liquid is properly flowing to the outlets of nozzles.

#### How to Read Ball Flow Indicators



-  **Desired Flow**  
Based on Application
-  **Ball Suspended Higher**  
Indicates Excess Flow
-  **Ball Suspended Lower**  
Indicates Blockage

With properly selected balls (based on flow rate), balls are suspended at a desired level.

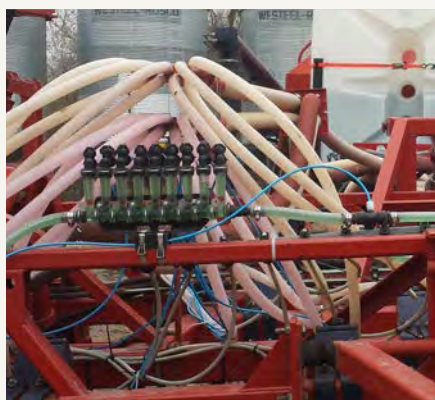
If a ball deviates from its desired level, it can indicate a difference in flow with the outlet tied to that flow indicator column.

**If a ball drops below the others,** it indicates a blockage or plug which is restricting flow.

**If a ball rises above the others,** it indicates excess flow that might be caused by leaking fittings or hoses.

**To help calculate the flow rate and balls required for your application, consult the tools at [www.agspray.com.au](http://www.agspray.com.au)**

#### Example Applications



##### AGRICULTURAL

Liquid Fertilizer Kits for Planters, Air Seeders, Sprayers



##### TURF & GOLF COURSE

Turf Sprayers & Liquid Application Equipment



##### INDUSTRIAL

Watering, Cooling & Air Distribution Systems



**Not sure which Flow Indicators to use? There are calculators to help.**

There are flow indicator calculators to help select your flow indicator metering orifice, flow rate, ball and other fittings that might be needed for your application.



# Better Engineered Components for Over 40 Years

## Build your Flow Indicator Kit in 10 Easy Steps

### STEP ① Manifold or Isolated Feed Options

Manifold and isolated options make it easy to match an application to the right flow indicator.

#### Manifold Feed

Available Options:  
Standard Flow  
Low Flow  
UltraLow Flow



Typical Uses:  
Multi-line monitoring  
Liquid Fertilizer Application on Seeders/Planters/Sprayers

#### Isolated Feed

Available Options:  
Standard Flow  
Low Flow



Typical Uses:  
Single Line Monitoring  
Squeeze Pump Systems

Uses radiallock cap for individual feed lines.

### STEP ② Column Flow Options

Depending on the flow rates required, different column sizes can provide more accuracy for your application.

#### Ultra Low Flow Column

For Flow Rates: 0.01 to 0.24 usgpm

#### Low Flow Column

For Flow Rates: 0.05 to 0.65 usgpm

#### Standard Flow Column

For Flow Rates: 0.07 to 2.70 usgpm

**TIP: To manually compute the flow rate required for your application, use the following formula:**

$$\text{FLOW RATE (us gal/minute)} = \text{Applied Rate (US Gal/Acre)} \times \text{Speed (MPH)} \times \text{Outlet Spacing (inches)} \times \text{\# of outlets per flow indicator} \times \text{Conversion Factor} \div 5940$$






Weight of Liquid (lbs/US Gallon)	10.00	10.50	11.00	11.50	12.00	12.50	13.00	13.50	14.00
Specific Gravity	1.20	1.26	1.32	1.38	1.44	1.50	1.56	1.62	1.68
Conversion Factor	1.10	1.12	1.15	1.17	1.20	1.22	1.25	1.27	1.30

**TIP: Use the Calculators to make calculating flow rates simple.**

### STEP ③ Ball Options






Depending on the column size chosen, weighted balls will be suspended at a certain level.

#### Ball Options for Ultra Low Flow

-  **Orange Plastic Ball** (#20460-13)  
Suggested Flow\*: 0.01-0.04 usgpm
-  **Green Plastic Ball** (#20460-08)  
Suggested Flow\*: 0.01-0.04 usgpm
-  **Red Plastic Ball** (#20460-07)  
Suggested Flow\*: 0.02-0.06 usgpm
-  **Red Glass Ball** (#20460-06)  
Suggested Flow\*: 0.06-0.13 usgpm
-  **1/2" Stainless Ball** (#20460-05)  
Suggested Flow\*: 0.13-0.24 usgpm






\*Suggested flow is based on water. Viscosity and density can influence flow levels. Lighter balls may float in dense liquids.

#### Ball Options for Low Flow

-  **Orange Plastic Ball** (#20460-13)  
Suggested Flow\*: 0.05-0.12 usgpm
-  **Green Plastic Ball** (#20460-08)  
Suggested Flow\*: 0.05-0.12 usgpm
-  **Red Plastic Ball** (#20460-07)  
Suggested Flow\*: 0.06-0.16 usgpm
-  **Red Glass Ball** (#20460-06)  
Suggested Flow\*: 0.12-0.26 usgpm
-  **1/2" Stainless Ball** (#20460-05)  
Suggested Flow\*: 0.18-0.65 usgpm

\*Suggested flow is based on water. Viscosity and density can influence flow levels. Lighter balls may float in dense liquids.

#### Ball Options for Standard Flow

-  **Green Plastic Ball**<sup>†</sup> (#20460-08)  
Suggested Flow\*: 0.07-0.25 usgpm
-  **Red Plastic Ball** (#20460-07)  
Suggested Flow\*: 0.10-0.35 usgpm
-  **Red Glass Ball** (#20460-06)  
Suggested Flow\*: 0.21-0.72 usgpm
-  **1/2" Stainless Ball** (#20460-05)  
Suggested Flow\*: 0.40-1.70 usgpm
-  **7/16" Stainless Ball** (#20460-10)  
Suggested Flow\*: 1.00-2.70 usgpm

\*Suggested flow is based on water. Viscosity and density can influence flow levels. Lighter balls may float in dense liquids.

<sup>†</sup>Green plastic ball also available in orange (#20460-13)

#### Example Application/Selection:

**RATE:** 4.5 US Gallons/Acre  
**WEIGHT of Liquid:** 11.5 lbs/ US Gal  
**SPEED:** 6 mph  
**OUTLET SPACING:** 30 inch  
**Calculated Flow Rate:** 0.16 usgpm  
**BALL SUGGESTION:** 1/2" Stainless Ball

#### Example Application/Selection:

**RATE:** 10 US Gallons/Acre  
**WEIGHT of Liquid:** 11.5 lbs/ US Gal  
**SPEED:** 6 mph  
**OUTLET SPACING:** 30 inch  
**Calculated Flow Rate:** 0.35 usgpm  
**BALL SUGGESTION:** 1/2" Stainless Ball

#### Example Application/Selection:

**RATE:** 15 US Gallons/Acre  
**WEIGHT of Liquid:** 11.5 lbs/ US Gal  
**SPEED:** 6 mph  
**OUTLET SPACING:** 30 inch  
**CALCULATED FLOW RATE:** 0.53 usgpm  
**BALL SUGGESTION:** Red Glass Ball





# Cost Effective, Modular & Flexible Ball Flow Indicator Configurations

## STEP ④ Flow Indicator Check Valve Bodies

Using check valve bodies greatly reduces fluid run on, and allow for orifice changing without leaking fluid. Wilger has many shut-off options and check valves which make it simple to control your flow, right at the flow indicator.

### ORS (O-ring seal) to ORS Fitting



Best for updating an existing flow indicator setup, with large metering orifices that plug into any ORS fitting.

The tough u-clip design attaches ORS fittings to the control body for trouble-free use.



ORS Fitting Metering

The ORS orifice is large, so it is easy to change and handle.

### ORS (O-ring seal) to Radialock Cap



Provides access to all radialock caps, adapters, and **COMBO-JET**® snap-in metering orifices and strainers.

Convenient radialock cap allows for easy cleaning of orifice and strainer.



COMBO-JET® Cap Metering

The Combo-Jet® orifices snap into a cap, and allow for a snap in strainer too.

Entire assembly snaps into one piece for safer handling

## STEP ⑤ Shut-Off & Control Module Options [For use with ④ Flow Indicator Check Valve Bodies]

Flow Indicators can operate without check valve bodies, but are recommended.

### Manual ON/OFF Option



Great for running alternate spacing for the same machine. Go from 15" rows to 30" rows in seconds.

When 'ON', acts as a check valve\*. When 'OFF', shuts off flow.

### Diaphragm Check Valve Option



Easy setup if all applications are based on the same spacing.

Standard\* check valve turns on flow at 10PSI.

### Air-Off Module



A more advanced setup, allowing for custom control through an air manifold controller.

Air pressure determines if a body is shut off. If no air pressure, acts as check valve.

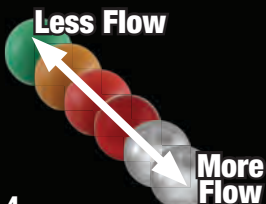


### Open Thread Option

Bodies can also be ordered without a control module, for use with other compatible flow control systems, or for body replacement.

Flow Indicator control bodies require a module to operate. Use only compatible control modules.

**TIP: All check valves come standard in 10 PSI shut-offs, but are available in low pressure (4PSI) and high pressure (15PSI) check valves as well. These are orderable by replacing the part numbers' suffix from -00 to -P4 (for 4PSI) or -P15 (15PSI)**



## Still not sure which flow indicator balls to use?

Every application is different. Wilger's calculators and tools can help guide to which ball(s) will work best. Liquid viscosity and even temperature changes can influence where a ball floats, so ensure to test the floating level of balls (and switch if needed) until satisfied.

**Build your Flow Indicator Kit in 10 Easy Steps**

**STEP ⑥ ORS Feed Fittings** [For Manifold Feed columns only]

Wilger has a many fittings for feeding into your flow indicator manifold.

**ORS Tee Fittings (Best)**



Center fed tee fittings provide split flow suited to manifolds.

Optional 1/4" thread for pressure gauge mounting.

Available in 1" NPT-F or ORS Fitting feeds (up to 3/4" hose).

**ORS Side Feed Fittings (Good)**



Manifolds can be fed from a side fitting.

Stacking consecutive flow indicators can impact accuracy of level shown on indicator.

Fittings available in hose barb sizes up to 3/4".

**ORS End Feed Fittings (Extra)**



As an alternative to simply capping off manifold ends, using end feed fittings can improve flow performance.

Fittings available up to 1/2" NPT-F.

**STEP ⑦ ORS Outlet Fittings**

Fittings for the flow directly from your flow indicators to your outlet or opener.

**Push-In Tube Fittings**



Push-in tube fittings for easy hook-up without hose clamps

Ideally use semi-rigid polyethylene or vinyl tubing.

1/4", 3/8" and 5/16" sizes avail.

**Hose Barb Fittings**



Straight and 90° hose barb fittings

3/8", 1/2", 5/8" \*, 3/4" sizes avail.

\*5/8" size only available in 90° hose barb fittings

**Threaded Fittings**



1/4" NPT-F threads available in both straight and 90° fittings.

**STEP ⑧ ORS End Caps, Adapters & Misc.**

Fittings for the end of each manifold, as well as fittings that serve as adapters in advanced setups.

**Female Caps**



Serves as an end cap for the end of manifold flow indicator setups

**Female to Male Adapters**



90° & straight adapters available

**Male Plugs**



Serves as a plug for any flow indicator setup

**Wilger Flow Indicator Columns have the Best In Class Clarity and Chemical Resistance**

All of the Wilger ball flow indicator columns are molded as a single piece out of a specialty plastic that provides the best chemical resistance possible while maintaining the utmost clarity.

When used with VITON® O-rings, it becomes a veritable powerhouse for most chemical applications.

As all O-ring seal fittings do not require any threading, they can be spun 360° without risk of disconnection or leaking.





## Cost Effective, Modular & Flexible Ball Flow Indicator Configurations

### STEP 9 **Metering Orifices**

Selecting the correct size of orifices is crucial to having an accurate and consistent application.



#### **Standard Sized Orifices (ISO Color coded to flow rate)**

Available in incremental flow rates which are precision molded to provide pinpoint application.

Use the standard orifice calculators to determine which size/pressure will work best for your application.



#### **Custom Sized Orifices (specific hole size)**

Available in a number of incremental hole sizes, which are precision drilled to match any required application flow rate.

Use the custom orifice calculators to determine which size/pressure will work best for your application.



#### **Standard Sized Combo-Jet® Cap Orifices**

For selecting metering orifices for ORS to Radialock check valve bodies [step 4],

use Tip Wizard or refer to the Combo-Jet® tip-cap brochure for orifice flow rates and part numbers.

### STEP 10 **Flow Indicator Kit Assembly**

It will now be easy to assemble and install each flow indicator column into their respective manifolds.

#### **A Note on Consecutive Manifold Stacking for High Flow Applications**

Even though Flow Indicator manifolds can be stacked infinitely, to maximize accurate responsiveness with the least amount of pressure loss through the manifold, stacking of max 5 consecutive columns. For any manifold requiring more than 5 columns, simply split the manifold bank(s) with ORS Tee feeds or use an ORS end feed to supplement flow. [For examples of ORS Tee/End Feeds - See Step 6]

Each ORS fitting comes with the required stainless steel u-clip(s) (part #20460-04) to assemble it correctly.

#### **1. Female ORS to Male ORS Assembly**

Simply, remove the u-clip from the ORS female end, insert the ORS male end, and insert the u-clip through the lined up hole until it comes out the other side. Installation is universal (there is no left/right).

#### **2. 1/4" Bolt Mount Assembly**

Use the standard 1/4" bolt mount holes with slotted plate or square/round tube brackets (refer to Wilger catalog) to conveniently mount Flow Indicators to any equipment.

#### **3. Final Configurations and Considerations**

Many applications can benefit from non-standard configurations, so it is recommended to review all component options (i.e. tees with 1/4" NPT-F threads for pressure gauges) to ensure the configuration provides as much benefit as possible.

### **Want to assemble O-ring seal (ORS) parts like a PRO?**

To easily assemble flow indicator manifolds, lightly lubricate each O-ring seal with liquid silicone. Lubrication ensures that each ORS fitting slips together effortlessly.

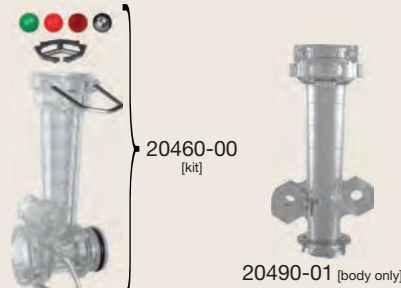
## Flow Indicator & O-ring Seal (ORS) Parts List

### Parts for STEP ①-③ Flow Indicator Columns, Balls, & Kits

#### Manifold Feed Columns

MODEL	KIT*	PART#
ULTRA LOW FLOW 0.01-0.24 us gpm	VITON® KIT	20475-V0
	BUNA-N KIT	20475-00
	BODY ONLY	20475-01
LOW FLOW 0.05-0.65 us gpm	VITON® KIT	20470-V0
	BUNA-N KIT	20470-00
	BODY ONLY	20470-01
STANDARD FLOW 0.07-2.7 us gpm	VITON® KIT	20460-V0
	BUNA-N KIT	20460-00
	BODY ONLY	20460-01

\*MANIFOLD KITS INCLUDE: Flow Indicator Body, Ball Retainer (#20460-02), O-ring seal (#20460-XX), 2x U-clips (#20460-04), Green Ball (#20460-08), Red Plastic Ball (#20460-07), Red Glass Ball (#20460-06), 1/2" Stainless Ball (#20460-15)



TYPICAL* OPERATING RANGES FOR FLOW INDICATOR BALLS (US Gal/min)				
BALL	PART#	USING THE FLOW INDICATOR MODEL		
		ULTRA LOW	LOW	STANDARD
ORANGE POLYPROP BALL	20460-13	0.01-0.04	0.05-0.12	0.07-0.25
GREEN POLYPROP BALL	20460-08	0.01-0.04	0.05-0.12	0.07-0.25
RED CELCON BALL	20460-07	0.02-0.06	0.06-0.16	0.10-0.35
RED GLASS BALL	20460-06	0.06-0.13	0.12-0.26	0.21-0.72
1/2" STAINLESS STEEL	20460-05	0.13-0.24	0.18-0.65	0.40-1.70
7/16" STAINLESS STEEL	20460-10	n/a	n/a	1.00-2.70

\*Density/Viscosity of liquid used can effect operating range. In very dense liquids, balls may float.



#### Isolated Feed Columns

MODEL	KIT**	PART#
LOW FLOW 0.05-0.65 us gpm	ISOLATED KIT	20490-00
	BODY ONLY	20490-01
STANDARD FLOW 0.07-2.7 us gpm	ISOLATED KIT	20480-00
	BODY ONLY	20480-01

\*\*ISOLATED KITS INCLUDE: Flow Indicator Body, Ball Retainer (#20460-02), U-clip (#20460-04), Green Ball (#20460-08), Red Plastic Ball (#20460-07), Red Glass Ball (#20460-06), 1/2" Stainless Ball (#20460-15)

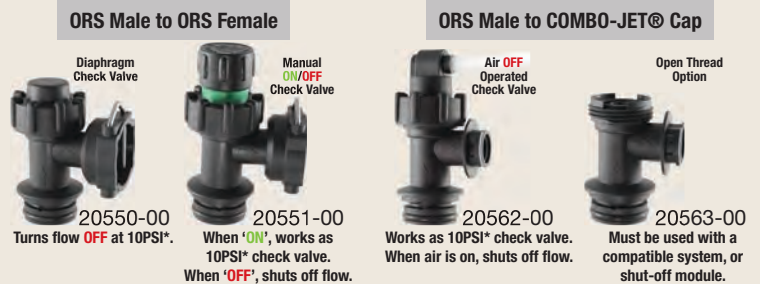
Flow Indicator Column Specifications*	
Max Operating Pressure:	100 PSI (7 BAR)
Max Metered Flow Rate:	Up to 8.0 US gpm
Max Operating Temperature:	185°F / 85° C
O-ring Seal Materials:	Buna-N or VITON®
U-clip Material:	Stainless Steel
ORS Fitting Material:	Glass-Reinforced Polypropylene
Body Material: Molded from special UV and chemically resistant material.	



### Parts for STEP ④-⑤ Check Valve Bodies†

MODEL	O-RING	PART#			
		DIA. CHK VALVE	MANUAL ON/OFF	AIR-OFF OPERATED	OPTIONAL NUT
ORS Male to ORS Female	VITON®	20550-V0	20551-V0	20552-V0	20553-V0
	BUNA-N	20550-00	20551-00	20552-00	20553-00
ORS Male to COMBO-JET® Cap	VITON®	20560-V0	20561-V0	20562-V0	20563-V0
	BUNA-N	20560-00	20561-00	20562-00	20563-00

†optional - if check valve body is not used, in-line check valve is recommended.  
\*10PSI check valves are standard. Contact factory for 4PSI & 15PSI check valve options.



### Parts for STEP ⑥ Tee & Feed Fittings

#### Tee Feeds

TEE Feeds	O-RING	PART#
ORS TEE [ORS-M x ORS-F x ORS-M]	VITON®	20522-V0
	BUNA-N	20522-00
ORS TEE w/ 1/4" NPT-F [ORS-M x 1/4" NPT-F x ORS-F x ORS-M]	VITON®	20526-V0
	BUNA-N	20526-00
3/8" NPT-F x ORS TEE [ORS-F x 3/8" NPT-F x ORS-M]	VITON®	20524-V0
	BUNA-N	20524-00
1" NPT-F x ORS TEE [ORS-M x 1" NPT-F x ORS-M]	VITON®	20525-V0
	BUNA-N	20525-00



#### Hose Barb Feeds

ORS Male Hose Barbs	O-RING	PART#	
		Straight Hose Barb	90° Hose Barb
3/8"	VITON®	20501-V0	20511-V0
	BUNA-N	20501-00	20511-00
1/2"	VITON®	20502-V0	20512-V0
	BUNA-N	20502-00	20512-00
5/8"	VITON®	-	20514-V0
	BUNA-N	-	20514-00
3/4"	VITON®	20503-V0	20513-V0
	BUNA-N	20503-00	20513-00



#### Threaded End Cap Feeds

End Cap Model	PART#
1/4" NPT-M	20530-00
1/4" NPT-F	20535-00
3/8" NPT-F	20536-00
1/2" NPT-F	20537-00



### ORS Fittings are TOUGH.

ORS Fittings are made out of premium glass-reinforced polypropylene for the ultimate durability and chemical resistance. All ORS fittings are available with VITON® O-rings, for those tough applications that require better chemical resistant O-rings. As all O-ring seal fittings do not require any threading, they can be spun 360° without risk of disconnection.





## Parts for STEP 7-9 ORS Outlet Fittings, End Caps, Plugs & Metering Orifices

### Push-In Tube ORS Fittings

MODEL	O-RING	PART#
1/4" 90° Push-In Tube	VITON®	20516-V0
	BUNA-N	20516-00
5/16" 90° Push-In Tube	VITON®	20528-V0
	BUNA-N	20528-00
3/8" 90° Push-In Tube	VITON®	20517-V0
	BUNA-N	20517-00



### Hose Barb ORS Fittings (more pictures on previous page)

ORS Male Hose Barbs	O-RING	PART#	
		Straight Hose Barb	90° Hose Barb
3/8"	VITON®	20501-V0	20511-V0
	BUNA-N	20501-00	20511-00
1/2"	VITON®	20502-V0	20512-V0
	BUNA-N	20502-00	20512-00
5/8"	VITON®	-	20514-V0
	BUNA-N	-	20514-00
3/4"	VITON®	20503-V0	20513-V0
	BUNA-N	20503-00	20513-00



### Female Thread ORS Fittings

MODEL	O-RING	PART#
90° 1/4" NPT-F	VITON®	20518-V0
	BUNA-N	20518-00
1/4" NPT-F	VITON®	20519-V0
	BUNA-N	20519-00



### Adapters

TEES & FEEDS	O-RING	PART#
90° ORS ELBOW [ORS-M x ORS-F]	VITON®	20520-V0
	BUNA-N	20520-00
3/8" NPT-F x BLIND ORS TEE [BLIND ORS-F x 3/8" NPT-F x ORS-M]	VITON®	20523-V0
	BUNA-N	20523-00
3/8" NPT-F x ORS TEE [ORS-F x 3/8" NPT-F x ORS-M]	VITON®	20524-V0
	BUNA-N	20524-00



### End Caps & Plugs

MODEL	PART#
1/4" Male Plug	20529-V0 (VITON®)
	20529-00 (BUNA-N)
1/4" Male NPT	20530-00
1/4" Female NPT	20535-00
3/8" Female NPT	20536-00
1/2" Female NPT	20537-00
Female Plug Cap	20521-00



### ORS Metering Orifices - Use the calculators to easily pick metering orifices

Orifice Part#*	Flow Rate (US gallons/minute)					
	5PSI	10PSI	15PSI	20PSI	30PSI	40PSI
21009-XX	0.00	0.01	0.01	0.01	0.01	0.01
21011-XX	0.01	0.01	0.01	0.01	0.01	0.02
21013-XX	0.01	0.01	0.01	0.02	0.02	0.02
21015-XX	0.01	0.01	0.02	0.02	0.03	0.03
21018-XX	0.01	0.02	0.03	0.03	0.04	0.04
21500-V005	0.02	0.03	0.03	0.04	0.04	0.05
21020-XX	0.02	0.03	0.03	0.04	0.05	0.05
21022-XX	0.02	0.03	0.04	0.04	0.05	0.06
21500-V007	0.02	0.03	0.04	0.05	0.06	0.07
21025-XX	0.03	0.04	0.05	0.06	0.07	0.08
21026-XX	0.03	0.04	0.05	0.06	0.07	0.09
21027-XX	0.32	0.46	0.56	0.65	0.79	0.91
21028-XX	0.03	0.05	0.06	0.07	0.09	0.10
21500-V01	0.04	0.05	0.06	0.07	0.09	0.10
21029-XX	0.04	0.05	0.07	0.08	0.09	0.11
21031-XX	0.04	0.06	0.07	0.09	0.11	0.12
21500-V015	0.05	0.07	0.09	0.10	0.13	0.15
21035-XX	0.06	0.08	0.10	0.11	0.14	0.16
21037-XX	0.06	0.09	0.11	0.12	0.15	0.17
21039-XX	0.07	0.10	0.12	0.13	0.17	0.19
21500-V02	0.07	0.10	0.13	0.14	0.18	0.20
21041-XX	0.08	0.11	0.13	0.15	0.19	0.21

Orifice Part#*	Flow Rate (US gallons/minute)					
	5PSI	10PSI	15PSI	20PSI	30PSI	40PSI
21043-XX	0.08	0.12	0.14	0.16	0.20	0.23
21500-V025	0.09	0.13	0.16	0.18	0.22	0.25
21046-XX	0.09	0.13	0.16	0.19	0.23	0.27
21047-XX	0.10	0.14	0.17	0.19	0.24	0.27
21049-XX	0.10	0.15	0.18	0.21	0.26	0.29
21500-V03	0.11	0.15	0.18	0.21	0.26	0.30
21051-XX	0.11	0.16	0.20	0.23	0.28	0.32
21052-XX	0.12	0.17	0.21	0.24	0.29	0.33
21055-XX	0.13	0.19	0.23	0.27	0.33	0.38
21500-V04	0.14	0.20	0.24	0.28	0.35	0.40
21060-XX	0.16	0.22	0.27	0.32	0.39	0.45
21061-XX	0.16	0.23	0.29	0.33	0.40	0.47
21063-XX	0.17	0.25	0.30	0.35	0.43	0.49
21500-V05	0.18	0.25	0.31	0.35	0.43	0.50
21064-XX	0.18	0.25	0.31	0.36	0.44	0.51
21065-XX	0.18	0.26	0.32	0.37	0.45	0.52
21067-XX	0.20	0.28	0.34	0.39	0.48	0.56
21500-V06	0.21	0.30	0.37	0.42	0.52	0.60
21070-XX	0.22	0.31	0.37	0.43	0.53	0.61
21073-XX	0.23	0.33	0.40	0.47	0.57	0.66
21075-XX	0.25	0.35	0.42	0.49	0.60	0.69
21078-XX	0.27	0.39	0.47	0.54	0.67	0.77

Orifice Part#*	Flow Rate (us gallons/minute)					
	5PSI	10PSI	15PSI	20PSI	30PSI	40PSI
21500-V08	0.28	0.40	0.49	0.57	0.69	0.80
21081-XX	0.29	0.41	0.50	0.58	0.71	0.82
21083-XX	0.32	0.45	0.55	0.64	0.78	0.90
21086-XX	0.33	0.47	0.57	0.66	0.81	0.94
21089-XX	0.35	0.49	0.60	0.69	0.85	0.98
21500-V10	0.35	0.50	0.61	0.71	0.87	1.00
21091-XX	0.37	0.52	0.64	0.74	0.91	1.05
21093-XX	0.39	0.55	0.67	0.77	0.95	1.09
21096-XX	0.42	0.59	0.72	0.83	1.02	1.18
21500-V125	0.44	0.62	0.76	0.88	1.08	1.25
21102-XX	0.46	0.65	0.80	0.92	1.13	1.30
21104-XX	0.48	0.68	0.83	0.96	1.17	1.35
21107-XX	0.52	0.73	0.90	1.04	1.27	1.47
21500-V15	0.53	0.75	0.92	1.06	1.30	1.50
21110-XX	0.55	0.77	0.95	1.09	1.34	1.55
21113-XX	0.58	0.82	1.01	1.16	1.42	1.64
21116-XX	0.61	0.86	1.05	1.22	1.49	1.72
21120-XX	0.63	0.89	1.09	1.26	1.54	1.78
21125-XX	0.69	0.98	1.20	1.39	1.70	1.96
21500-V20	0.71	1.00	1.22	1.41	1.73	2.00
21128-XX	0.72	1.02	1.25	1.45	1.77	2.04
21130-XX	0.75	1.06	1.30	1.50	1.84	2.12

Orifice Part#*	Flow Rate (US gallons/minute)					
	5PSI	10PSI	15PSI	20PSI	30PSI	40PSI
21136-XX	0.84	1.19	1.46	1.68	2.06	2.38
21140-XX	0.89	1.26	1.55	1.79	2.19	2.53
21144-XX	0.93	1.31	1.61	1.85	2.27	2.62
21147-XX	0.95	1.35	1.65	1.90	2.33	2.69
21150-XX	1.02	1.44	1.77	2.04	2.50	2.89
21152-XX	1.05	1.49	1.82	2.10	2.58	2.98
21156-XX	1.10	1.55	1.90	2.20	2.69	3.11
21161-XX	1.16	1.63	2.00	2.31	2.83	3.27
21166-XX	1.21	1.71	2.10	2.42	2.97	3.43
21172-XX	1.33	1.88	2.30	2.66	3.26	3.76
21177-XX	1.41	2.00	2.45	2.83	3.46	4.00
21182-XX	1.47	2.08	2.55	2.95	3.61	4.17
21187-XX	1.56	2.21	2.70	3.12	3.82	4.41
21196-XX	1.73	2.45	3.00	3.46	4.24	4.90
21205-XX	1.87	2.65	3.25	3.75	4.59	5.30
21213-XX	2.02	2.85	3.49	4.03	4.94	5.70
21218-XX	2.11	2.98	3.65	4.21	5.16	5.96
21234-XX	2.45	3.47	4.25	4.91	6.01	6.94
21250-XX	2.83	4.00	4.90	5.66	6.93	8.00

\*Replace -XX with:  
 -00 for Buna-N O-ring assembly (Replacement O-ring #40225-04)  
 -V0 for Viton® O-ring assembly (Replacement O-ring #40225-05)  
 Note: Viton® O-rings are standard with 21500-VXXX orifice series

### COMBO-JET® Fertilizer Streamer Tips



### COMBO-JET® Nozzle Bodies



### COMBO-RATE® Modular Nozzle Bodies



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