

# QJ-VR & PTC-VR

## VARIABLE RATE FERTILIZER ASSEMBLIES

The QJ-VR and PTC-VR line of variable rate fertilizer assemblies feature a variable diameter orifice that produces a wide range of flow rates - its like having several metering orifices in one. This allows for a wider range of ground speeds and/or application rates from a single size for improved productivity. These assemblies are also ideal for variable rate prescription map applications. The elastomer orifice design provides consistent flow rate performance while utilizing a simple, reliable design with no springs or moving parts.

### FEATURES:

- Both QJ-VR and PTC-VR are ideal for installation on planters and toolbars for liquid fertilizer metering and application.
- PTC-VR features nylon construction for excellent strength and chemical resistance.
- QJ-VR features acetal and nylon construction with choice of nylon or stainless steel hose barbs for strength and excellent chemical resistance.
- Simple, elastomer (EPDM) variable orifice for reliable, long-term operation.
- Recommended operating pressure: 10-100 PSI (0.7-7.0 bar).

### SIZE OPTIONS

Model	Hose Size (I.D.)				Tubing Size (O.D.)		
	1/4"	5/16"	3/8"	1/2"	1/4"	5/16"	3/8"
QJ-VR-X0.5	X	X	X				
QJ-VR-X1.0	X	X	X				
QJ-VR-X2.0			X	X			
PTC-VR-X0.5					X	X	X
PTC-VR-X1.0					X	X	X
PTC-VR-X2.0						X	X

Note: 1/4" and 5/16" hose barb sizes offered in stainless steel only.  
3/8" and 1/2" hose barbs offered in choice of stainless steel or nylon.

### SPEED RANGE FOR VARIOUS APPLICATION RATES

Nozzle	Ground Speed Range (MPH) for 20" Spacing							
	5 GPA	10 GPA	15 GPA	20 GPA	25 GPA	30 GPA	35 GPA	40 GPA
QJ/PTC-VR-X0.5	5.3 - 32	2.7 - 16	1.8 - 11	1.3 - 8.0	1.1 - 6.4	0.9 - 5.3	0.8 - 4.6	0.7 - 4.0
QJ/PTC-VR-X1.0	7.7 - 61	3.9 - 31	2.6 - 20	1.9 - 15	1.5 - 12	1.3 - 10	1.1 - 8.7	1 - 7.6
QJ/PTC-VR-X2.0	-	11.3 - 61	7.5 - 41	5.6 - 31	4.5 - 25	3.8 - 20	3.2 - 18	2.8 - 15

Nozzle	Ground Speed Range (MPH) for 30" Spacing							
	5 GPA	10 GPA	15 GPA	20 GPA	25 GPA	30 GPA	35 GPA	40 GPA
QJ/PTC-VR-X0.5	3.6 - 21	1.8 - 11	1.2 - 7.1	0.9 - 5.3	0.7 - 4.3	0.6 - 3.6	0.5 - 3.1	0.4 - 2.7
QJ/PTC-VR-X1.0	5.1 - 41	2.6 - 20	1.7 - 14	1.3 - 10	1.0 - 8.2	0.9 - 6.8	0.7 - 5.8	0.6 - 5.1
QJ/PTC-VR-X2.0	15 - 82	7.5 - 41	5.0 - 27	3.8 - 20	3.0 - 16	2.5 - 14	2.1 - 12	1.9 - 10



PTC-VR PUSH-TO-CONNECT METERING ASSEMBLY



QJ-VR METERING ASSEMBLY



QJ-VR HOSE BARB METERING ASSEMBLY

## APPLICATION INFORMATION

Assembly	Liquid Pressure in PSI	Capacity 1 Nozzle in GPM	GPA for 20" Spacing (water)							
			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	12 MPH	16 MPH	20 MPH
QJ-VR-X0.5 & PTC-VR-X0.5	10	0.09	6.7	5.3	4.5	3.3	2.7	2.2	1.7	1.3
	20	0.13	9.7	7.7	6.4	4.8	3.9	3.2	2.4	1.9
	30	0.17	12.6	10.1	8.4	6.3	5.0	4.2	3.2	2.5
	40	0.21	15.6	12.5	10.4	7.8	6.2	5.2	3.9	3.1
	50	0.24	17.8	14.3	11.9	8.9	7.1	5.9	4.5	3.6
	60	0.29	22	17.2	14.4	10.8	8.6	7.2	5.4	4.3
	70	0.34	25	20	16.8	12.6	10.1	8.4	6.3	5.0
	80	0.40	30	24	19.8	14.9	11.9	9.9	7.4	5.9
	90	0.46	34	27	23	17.1	13.7	11.4	8.5	6.8
100	0.54	40	32	27	20	16.0	13.4	10.0	8.0	
QJ-VR-X1.0 & PTC-VR-X1.0	10	0.13	9.7	7.7	6.4	4.8	3.9	3.2	2.4	1.9
	20	0.21	15.6	12.5	10.4	7.8	6.2	5.2	3.9	3.1
	30	0.28	21	16.6	13.9	10.4	8.3	6.9	5.2	4.2
	40	0.35	26	21	17.3	13.0	10.4	8.7	6.5	5.2
	50	0.44	33	26	22	16.3	13.1	10.9	8.2	6.5
	60	0.53	39	31	26	19.7	15.7	13.1	9.8	7.9
	70	0.64	48	38	32	24	19.0	15.8	11.9	9.5
	80	0.77	57	46	38	29	23	19.1	14.3	11.4
	90	0.90	67	53	45	33	27	22	16.7	13.4
100	1.03	76	61	51	38	31	25	19.1	15.3	
QJ-VR-X2.0 & PTC-VR-X2.0	10	0.38	28	23	18.8	14.1	11.3	9.4	7.1	5.6
	20	0.57	42	34	28	21	16.9	14.1	10.6	8.5
	30	0.73	54	43	36	27	22	18.1	13.6	10.8
	40	0.87	65	52	43	32	26	22	16.1	12.9
	50	1.03	76	61	51	38	31	25	19.1	15.3
	60	1.20	89	71	59	45	36	30	22	17.8
	70	1.40	104	83	69	52	42	35	26	21
	80	1.61	120	96	80	60	48	40	30	24
	90	1.84	137	109	91	68	55	46	34	27
100	2.07	154	123	102	77	61	51	38	31	

Assembly	Liquid Pressure in PSI	Capacity 1 Nozzle in GPM	GPA for 30" Spacing (water)							
			4 MPH	5 MPH	6 MPH	8 MPH	10 MPH	12 MPH	16 MPH	20 MPH
QJ-VR-X0.5 & PTC-VR-X0.5	10	0.09	4.5	3.6	3.0	2.2	1.8	1.5	1.1	0.9
	20	0.13	6.4	5.1	4.3	3.2	2.6	2.1	1.6	1.3
	30	0.17	8.4	6.7	5.6	4.2	3.4	2.8	2.1	1.7
	40	0.21	10.4	8.3	6.9	5.2	4.2	3.5	2.6	2.1
	50	0.24	11.9	9.5	7.9	5.9	4.8	4.0	3.0	2.4
	60	0.29	14.4	11.5	9.6	7.2	5.7	4.8	3.6	2.9
	70	0.34	16.8	13.5	11.2	8.4	6.7	5.6	4.2	3.4
	80	0.40	19.8	15.8	13.2	9.9	7.9	6.6	5.0	4.0
	90	0.46	23	18.2	15.2	11.4	9.1	7.6	5.7	4.6
100	0.54	27	21	17.8	13.4	10.7	8.9	6.7	5.3	
QJ-VR-X1.0 & PTC-VR-X1.0	10	0.13	6.4	5.1	4.3	3.2	2.6	2.1	1.6	1.3
	20	0.21	10.4	8.3	6.9	5.2	4.2	3.5	2.6	2.1
	30	0.28	13.9	11.1	9.2	6.9	5.5	4.6	3.5	2.8
	40	0.35	17.3	13.9	11.6	8.7	6.9	5.8	4.3	3.5
	50	0.44	22	17.4	14.5	10.9	8.7	7.3	5.4	4.4
	60	0.53	26	21	17.5	13.1	10.5	8.7	6.6	5.2
	70	0.64	32	25	21	15.8	12.7	10.6	7.9	6.3
	80	0.77	38	30	25	19.1	15.2	12.7	9.5	7.6
	90	0.90	45	36	30	22	17.8	14.9	11.1	8.9
100	1.03	51	41	34	25	20	17.0	12.7	10.2	
QJ-VR-X2.0 & PTC-VR-X2.0	10	0.38	18.8	15.0	12.5	9.4	7.5	6.3	4.7	3.8
	20	0.57	28	23	18.8	14.1	11.3	9.4	7.1	5.6
	30	0.73	36	29	24	18.1	14.5	12.0	9.0	7.2
	40	0.87	43	34	29	22	17.2	14.4	10.8	8.6
	50	1.03	51	41	34	25	20	17.0	12.7	10.2
	60	1.20	59	48	40	30	24	19.8	14.9	11.9
	70	1.40	69	55	46	35	28	23	17.3	13.9
	80	1.61	80	64	53	40	32	27	19.9	15.9
	90	1.84	91	73	61	46	36	30	23	18.2
100	2.07	102	82	68	51	41	34	26	20	

Note: Always double check your application rates. Tabulations are based on spraying water at 70°F (21°C).

## How To Order:

### Example:

PART NUMBER	DESCRIPTION
QJ-VR-X2.0	Quick TeeJet® Variable Rate Metering Assembly (no hose barb)
QJ-VR-X1.0-1/4-SS	1/4" Stainless Steel Hose Barb Variable Rate Metering Assembly
PTC-VR-X1.0-3/8	3/8" Push-to-Connect Variable Rate Metering Assembly
PTC-VR-X1.0-1/4-10	1/4" Push-to-Connect Variable Rate Metering Assembly with 10 PSI (0.7 bar) Diaphragm Check Valve

WEIGHT OF SOLUTION	SPECIFIC GRAVITY	CONVERSION FACTOR
7.0 lbs./gal	0.84	0.92
8.0 lbs./gal	0.96	0.98
8.34 lbs./gal	1.00 - WATER	1.00
9.0 lbs./gal	1.08	1.04
10.0 lbs./gal	1.20	1.10
10.65 lbs./gal	1.28 - 28% NITROGEN	1.13
11.0 lbs./gal	1.32	1.15
12.0 lbs./gal	1.44	1.20
14.0 lbs./gal	1.68	1.30

\*NOTE: Conversion factors must be used when spraying solutions heavier or lighter than water. First, multiply desired application rate by the appropriate conversion factor above. Then use the new application rate to select the most appropriate operating pressure from the application chart on this page.

