GR Pipes

Quality, durability and performance should play an integral role in the pipe selection process. NDICO/Al Wataniyeh manufactures an expansive range of GR Pipes for open field and greenhouse irrigation. To ensure the highest quality of our broad product portfolio, we have implemented the most advanced manufacturing standards.

GR Pipes are ideal for the efficient irrigation of vegetables, trees, and greenhouses. Thanks to our quality design and top of the line ancillary products supported by technology, GR Pipes can be utilized across a multitude of topographies.

Our range includes various diameters, flow capacities, and sizes.

Advantages

- Can be used in all types of open field and greenhouse irrigation.
- Comes with cylindrical drippers that are attached to the inside wall of the pipe enabling a large turbulent flow path, which provides unmatched clogging resistance resulting in greater long-term reliability.
- Enhanced coefficient of variation (CV) that ensures water flows uniformly from each dripper.
- Less maintenance required, even in relatively poor water quality conditions.

Specs

- The ideal operating pressure for this pipe is 1 bar.
- Available in different flow capacities: 4 L/H and 8 L/H (approx. 1 gph and 2 gph).
- Two standardized sizes available: 16 mm and 20 mm (3/8 inch and ½ inch).
- The spacing between drippers starts from 20 cm up to 1 meter, or more.
- Filtration requirement is 120 mesh.

AL WATANIYEH NDICO DEEP ROOTED SOLUTIONS NATIONAL DRIP IRRIGATION CO.

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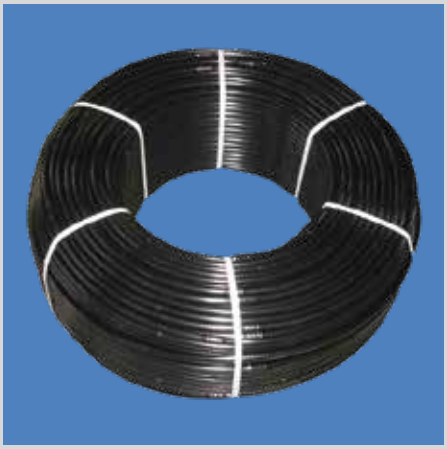
Fax: +962 6 4129977 **P. O. Box** 733 Amman 11621, Jordan

Maximum Recommended Lengths (in meters):



GR 16mm Pipes

Flow LPH	Spacing between drippers (cm)						
	20	30	40	50	60	80	100
4	25	35	45	55	65	80	86
8	15	20	25	30	35	45	55

GR 20mm Pipes

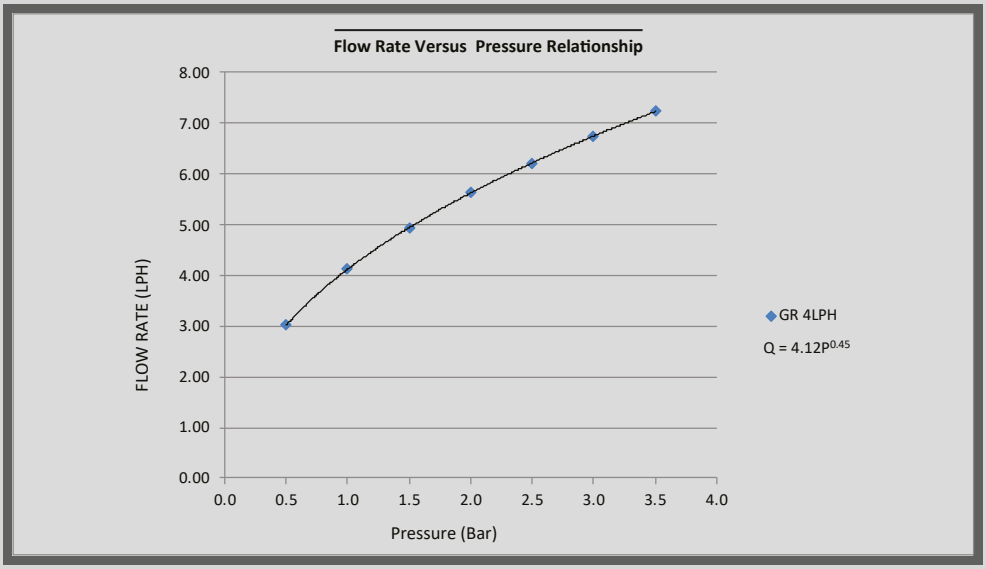
Flow LPH	Spacing between drippers (cm)						
	20	30	40	50	60	80	100
4	40	58	75	88	100	120	140

Charts

Flow rate versus pressure relationship for 9 samples

GR 16 4 LPH

BAR	1	2	3	4	5	6	7	8	9	Average
0.5	3.06	3.12	3.01	2.97	3.20	3.07	3.01	3.06	3.09	3.07
1	4.16	4.19	3.95	4.01	4.26	4.12	4.02	4.13	4.21	4.12
1.5	5.09	5.01	4.67	4.87	5.09	4.82	4.91	5.03	5.00	4.94
2	5.80	5.84	5.37	5.57	5.86	5.66	5.63	5.15	5.71	5.62
2.5	5.81	6.11	5.95	5.90	6.28	6.66	5.90	6.25	6.03	6.10
3	6.35	6.68	6.52	6.47	6.93	6.96	6.62	6.84	6.7	6.67
3.5	6.88	7.07	6.90	6.84	7.30	7.30	6.83	7.26	7.06	7.05



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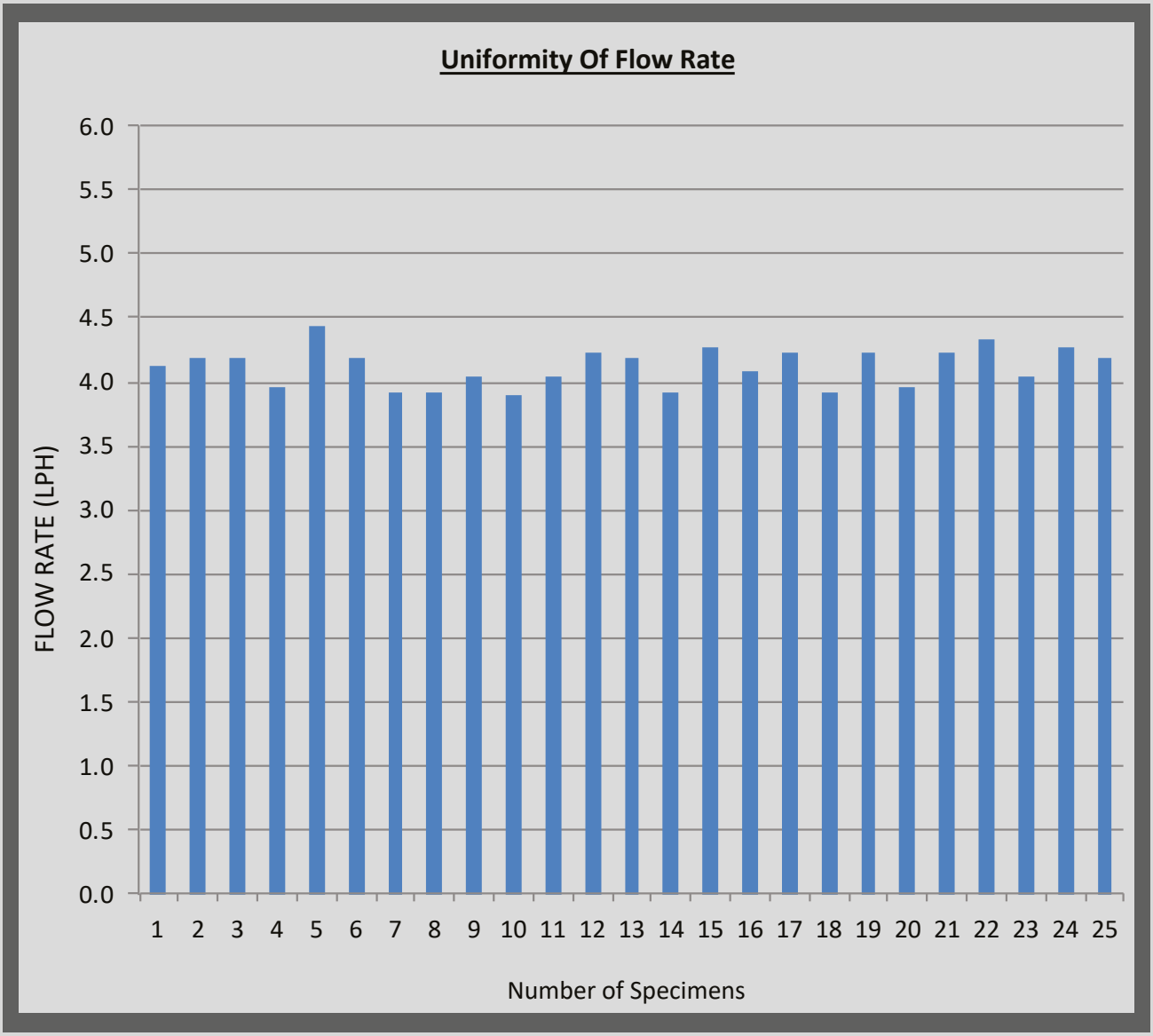
GR 16 4 LPH	
Number of Specimens	25
Min. Flow Rate LPH	3.90
Max. Flow Rate LPH	4.44
Nominal Flow Rate (Q)	4.00
Standard Deviation (SD)	0.15
Mean Flow Rate (Qave)	4.12
Coeff. of Variation (CV)	0.04
Emission Uniformity Coefficient (EUC)	95.12%



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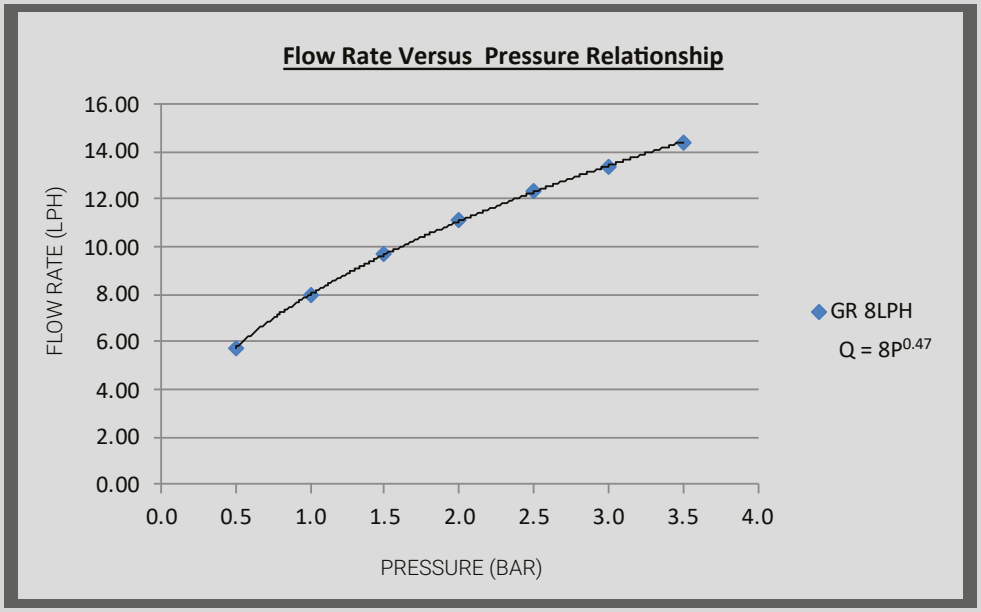
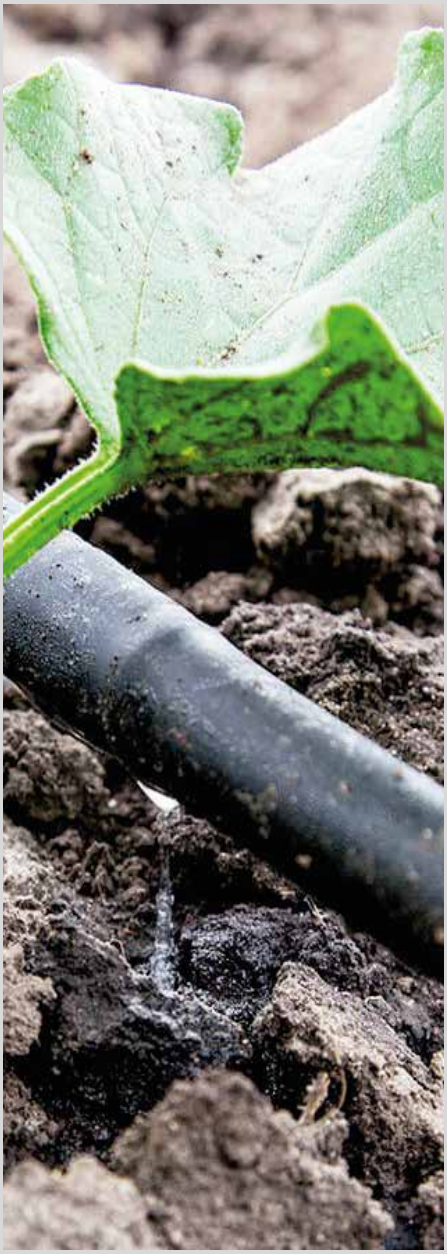
Charts

Flow rate versus pressure relationship for 9 samples

GR 16 8 LPH										
BAR	1	2	3	4	5	6	7	8	9	Average
0.5	6.06	6.10	6.10	5.96	5.97	6.17	6.00	6.10	6.35	6.09
1	8.12	8.00	7.76	8.06	8.25	8.00	7.90	7.77	8.12	8.00
1.5	9.64	9.31	9.63	9.65	9.73	9.65	9.40	9.15	9.81	9.55
2	11.02	11.02	11.02	11.25	11.02	11.02	10.60	10.80	11.13	10.99
2.5	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50	12.50
3	14.04	14.04	14.04	14.04	14.04	14.04	14.04	14.04	14.04	14.04
3.5	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41	14.41





Uniformity Of Flow Rate

GR 16 8 LPH	
Number of Specimens	25
Min. Flow Rate LPH	7.65
Max. Flow Rate LPH	8.37
Nominal Flow Rate (Q)	8.00
Standard Deviation (SD)	0.19
Mean Flow Rate (Qave)	8.04
Coeff. of Variation (CV)	0.02
Emission Uniformity Coefficient (EUC)	96.87%

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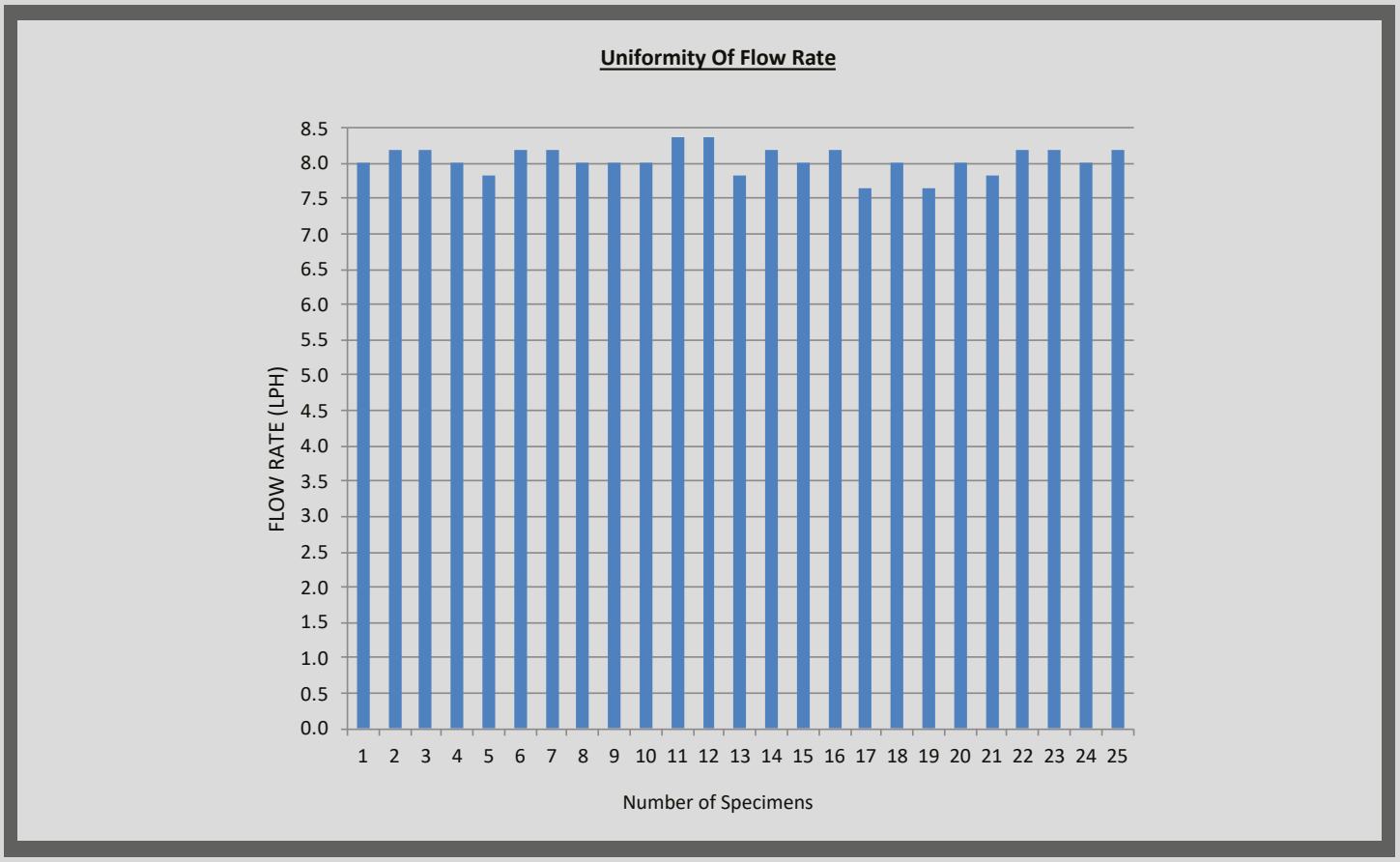
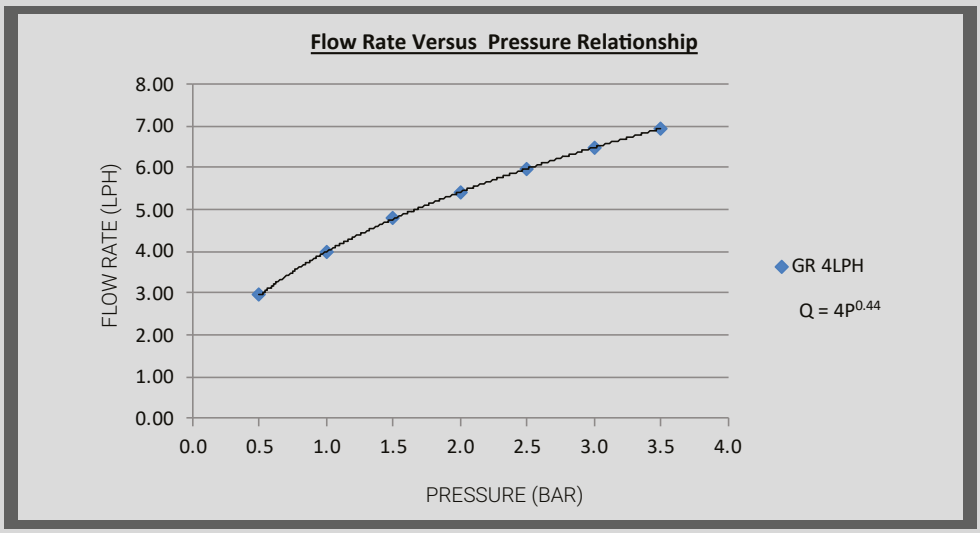


Flow Rate Versus Pressure Relationship For 9 Samples

GR 20 4 LPH

BAR	1	2	3	4	5	6	7	8	9	Average
0.5	3.13	2.75	2.83	3.00	2.33	3.05	2.82	3.19	3.04	2.90
1	4.13	3.78	3.89	3.92	4.08	3.97	4.08	4.18	3.93	4.00
1.5	4.69	4.49	4.59	5.11	4.82	4.77	4.57	5.04	4.86	4.77
2	5.68	5.11	5.24	5.40	5.59	5.42	5.07	5.47	5.44	5.38
2.5	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01	6.01
3	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48	6.48
3.5	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84	6.84



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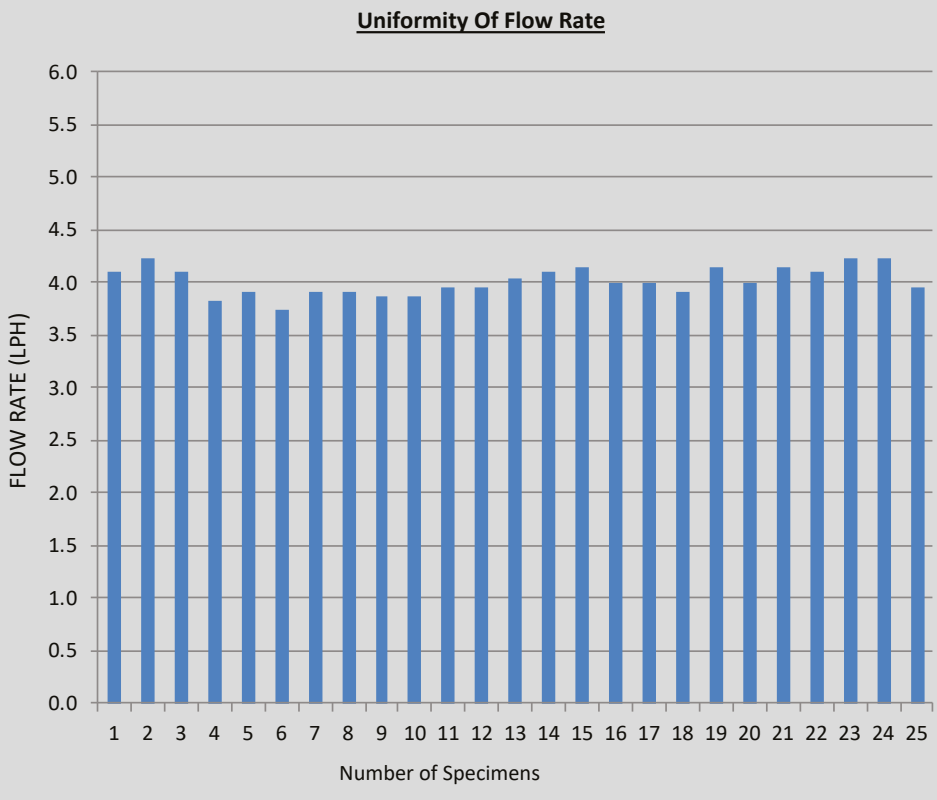
GR 20 4 LPH	
Number of Specimens	25
Min. Flow Rate LPH	3.73
Max. Flow Rate LPH	4.23
Nominal Flow Rate (Q)	4.00
Standard Deviation (SD)	0.13
Mean Flow Rate (Qave)	4.01
Coeff. of Variation (CV)	0.03
Emission Uniformity Coefficient (EUC)	96.04%



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