

FRICITION LOSS OF PVC LAYFLAT HOSE (PSI/100 FT.)

GPM	1.5"	2"	2.5"	3"	4"	6"	8"	10"	12"	14"	16"
20	1.2	-	-	-	-	-	-	-	-	-	-
30	2.4	-	-	-	-	-	-	-	-	-	-
40	5.1	1.1	-	-	-	-	-	-	-	-	-
50	6.0	-	-	-	-	-	-	-	-	-	-
60	-	2.4	1.4	-	-	-	-	-	-	-	-
80	-	4.1	1.9	1.0	-	-	-	-	-	-	-
90	17.0	-	-	-	-	-	-	-	-	-	-
100	-	6.0	2.8	1.2	-	-	-	-	-	-	-
120	-	-	-	1.8	-	-	-	-	-	-	-
140	-	-	-	2.2	-	-	-	-	-	-	-
160	-	-	-	2.6	0.6	-	-	-	-	-	-
180	-	-	-	3.3	0.7	-	-	-	-	-	-
200	-	22	7	-	0.8	-	-	-	-	-	-
220	-	-	-	-	1.0	-	-	-	-	-	-
240	-	-	-	-	1.1	-	0.2	-	-	-	-
250	-	-	-	5	-	-	-	-	-	-	-
260	-	-	-	-	1.3	0.2	-	-	-	-	-
280	-	-	-	-	1.4	0.2	-	-	-	-	-
300	-	-	-	-	1.6	0.2	-	-	-	-	-
340	-	-	-	-	-	0.3	-	-	-	-	-
350	-	-	22	-	-	-	-	-	-	-	-
380	-	-	-	-	-	0.4	-	-	-	-	-
420	-	-	-	-	-	0.5	-	-	-	-	-
460	-	-	-	-	-	0.6	-	-	-	-	-
500	-	-	-	-	4	0.7	-	-	-	-	-
540	-	-	-	-	-	0.8	-	-	-	-	-
580	-	-	-	-	22	0.9	-	-	-	-	-
620	-	-	-	-	-	1.0	-	-	-	-	-
660	-	-	-	-	-	1.1	-	-	-	-	-
1,200	-	-	-	-	-	3.0	-	-	-	-	-
1,250	-	-	-	-	22	-	-	-	-	-	-
1,800	-	-	-	-	-	-	1.5	-	-	-	-
2,500	-	-	-	-	-	-	-	1.0	-	-	-
3,500	-	-	-	-	-	-	-	-	0.8	-	-
3,630	-	-	-	-	-	22	-	-	-	-	-
5,000	-	-	-	-	-	-	11	-	-	0.6	-
6,000	-	-	-	-	-	-	-	-	-	-	0.4
8,000	-	-	-	-	-	-	-	8	-	-	-
12,000	-	-	-	-	-	-	-	-	8	-	-
15,000	-	-	-	-	-	-	-	-	-	5	-
16,000	-	-	-	-	-	-	-	-	-	-	30

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.

FRICITION LOSS OF OROFLEX® LAYFLAT HOSES IN (PSI/100 FT.)

GPM	1	1 1/4	1 1/2	1 3/4	2	2 1/2	2 3/4	3	3 1/2	4	4 1/2	5	6	8	10	12
1	0.04	0.01	0.01	–	–	–	–	–	–	–	–	–	–	–	–	–
2	0.15	0.05	0.02	0.01	–	–	–	–	–	–	–	–	–	–	–	–
5	0.82	0.28	0.11	0.05	0.03	0.01	0.01	–	–	–	–	–	–	–	–	–
7	1.53	0.52	0.21	0.10	0.05	0.02	0.01	0.01	–	–	–	–	–	–	–	–
10	2.96	1.00	0.41	0.19	0.10	0.03	0.02	0.01	0.01	–	–	–	–	–	–	–
15	6.27	2.11	0.87	0.41	0.21	0.07	0.05	0.03	0.01	0.01	–	–	–	–	–	–
20	10.67	3.60	1.48	0.70	0.36	0.12	0.08	0.05	0.02	0.01	0.01	–	–	–	–	–
25	16.13	5.44	2.24	1.06	0.55	0.19	0.12	0.08	0.04	0.02	0.01	0.01	–	–	–	–
30	22.59	7.62	3.14	1.48	0.77	0.26	0.16	0.11	0.05	0.03	0.01	0.01	–	–	–	–
35	30.05	10.14	4.17	1.97	1.03	0.35	0.22	0.14	0.07	0.04	0.02	0.01	0.00	–	–	–
40	38.47	12.98	5.34	2.52	1.32	0.44	0.28	0.18	0.09	0.04	0.03	0.02	0.01	–	–	–
45	47.84	16.14	6.64	3.13	1.64	0.55	0.35	0.23	0.11	0.06	0.03	0.02	0.01	–	–	–
50	58.13	19.61	8.07	3.81	1.99	0.67	0.42	0.28	0.13	0.07	0.04	0.02	0.01	–	–	–
60	81.45	27.48	11.31	5.34	2.79	0.94	0.59	0.39	0.18	0.10	0.05	0.03	0.01	–	–	–
70	108.33	36.54	15.04	7.10	3.70	1.25	0.79	0.51	0.24	0.13	0.07	0.04	0.02	0.00	–	–
80	–	46.78	19.25	9.09	4.74	1.60	1.01	0.66	0.31	0.16	0.09	0.05	0.02	0.01	–	–
90	–	58.17	23.94	11.30	5.90	1.99	1.25	0.82	0.39	0.20	0.11	0.07	0.03	0.01	–	–
100	–	70.69	29.09	13.73	7.17	2.42	1.52	0.99	0.47	0.25	0.14	0.08	0.03	0.01	–	–
125	–	106.82	43.96	20.75	10.83	3.65	2.30	1.50	0.71	0.37	0.21	0.12	0.05	0.01	–	–
150	–	–	61.59	29.07	15.17	5.12	3.22	2.11	0.99	0.52	0.29	0.18	0.07	0.02	0.01	–
175	–	–	81.92	38.67	20.18	6.81	4.28	2.80	1.32	0.69	0.39	0.23	0.10	0.02	0.01	–
200	–	–	104.87	49.50	25.84	8.71	5.48	3.59	1.69	0.88	0.50	0.30	0.12	0.03	0.01	–
225	–	–	–	61.56	32.13	10.84	6.81	4.46	2.10	1.10	0.62	0.37	0.15	0.04	0.01	–
250	–	–	–	74.60	39.04	13.17	8.28	5.42	2.56	1.33	0.75	0.45	0.19	0.05	0.02	–
275	–	–	–	89.23	46.57	15.71	9.88	6.46	3.05	1.59	0.90	0.54	0.22	0.05	0.02	–
300	–	–	–	104.81	54.70	18.45	11.60	7.59	3.58	1.87	1.05	0.63	0.26	0.06	0.02	–
350	–	–	–	–	72.75	24.54	15.43	10.10	4.77	2.49	1.40	0.84	0.35	0.09	0.03	–
400	–	–	–	–	93.14	31.42	19.75	12.93	6.10	3.18	1.79	1.07	0.44	0.11	0.04	–
450	–	–	–	–	–	39.07	24.56	16.08	7.59	3.96	2.23	1.34	0.55	0.14	0.05	–
500	–	–	–	–	–	47.47	29.84	19.54	9.22	4.81	2.71	1.62	0.67	0.16	0.06	0.02
600	–	–	–	–	–	66.52	41.82	27.37	12.92	6.74	3.80	2.27	0.94	0.23	0.08	0.03
700	–	–	–	–	–	88.47	55.62	36.41	17.18	8.97	5.05	3.03	1.24	0.31	0.10	0.04
800	–	–	–	–	–	113.26	71.20	46.61	22.00	11.48	6.47	3.87	1.59	0.39	0.13	0.05
1000	–	–	–	–	–	–	107.59	70.43	33.24	17.35	9.78	5.85	2.41	0.59	0.20	0.08
1200	–	–	–	–	–	–	–	98.68	46.58	24.31	13.70	8.20	3.37	0.83	0.28	0.12
1400	–	–	–	–	–	–	–	131.24	61.95	32.33	18.22	10.91	4.49	1.11	0.37	0.15
1600	–	–	–	–	–	–	–	–	79.31	41.39	23.32	13.96	5.75	1.42	0.48	0.20
1800	–	–	–	–	–	–	–	–	98.62	51.47	29.00	17.36	7.14	1.76	0.59	0.24
2000	–	–	–	–	–	–	–	–	–	62.55	35.24	21.10	8.68	2.14	0.72	0.30
2500	–	–	–	–	–	–	–	–	–	94.51	53.26	31.88	13.12	3.23	1.09	0.45
3000	–	–	–	–	–	–	–	–	–	–	74.62	44.67	18.38	4.53	1.53	0.63
3500	–	–	–	–	–	–	–	–	–	–	99.24	59.41	24.45	6.02	2.03	0.84
4000	–	–	–	–	–	–	–	–	–	–	–	76.06	31.30	7.71	2.60	1.07
4500	–	–	–	–	–	–	–	–	–	–	–	94.58	38.92	9.59	3.23	1.33
5000	–	–	–	–	–	–	–	–	–	–	–	–	47.30	11.65	3.93	1.62
5500	–	–	–	–	–	–	–	–	–	–	–	–	56.42	13.90	4.69	1.93
6000	–	–	–	–	–	–	–	–	–	–	–	–	66.27	16.33	5.51	2.27
6500	–	–	–	–	–	–	–	–	–	–	–	–	76.84	18.93	6.39	2.63
7000	–	–	–	–	–	–	–	–	–	–	–	–	88.14	21.71	7.32	3.01
7500	–	–	–	–	–	–	–	–	–	–	–	–	100.14	24.67	8.32	3.42
8000	–	–	–	–	–	–	–	–	–	–	–	–	–	27.80	9.38	3.86

Note: This calculations are theoretical and based on staight lines . Liquid is water at 20°C.
 Recomended maximum velocity for constant work: 11.5 ft/s (3.5m/s).
 Maximum recommended velocity for non constant work: 16.4 ft/s (5 m/s).
 Values in red match with flows given 16.4 ft/s (5 m/s).

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.

VINYLFLOW® LONGITUDINAL ELONGATION PERCENTAGE (ON FLAT GROUND ONLY)

Series Number	Pressure (psi)							
	10	20	30	40	50	60	70	80
VF150	0.00	0.01	0.02	0.06	0.14	0.17	0.35	0.50
VF200	0.01	0.03	0.04	0.15	0.32	0.38	0.61	0.84
VF250	0.06	0.15	0.23	0.50	0.79	0.95	1.33	1.57
VF300	0.03	0.14	0.21	0.34	0.63	0.76	1.10	-
VF400	0.14	0.35	0.53	0.90	1.40	1.68	1.98	-
VF600	0.14	0.42	0.63	1.08	1.35	-	-	-
VF800	0.21	0.57	0.86	1.47	-	-	-	-
VF1000	0.15	0.39	0.59	-	-	-	-	-
VF1200	0.14	0.55	0.82	-	-	-	-	-
VF1600	0.00	0.28	0.42	-	-	-	-	-

IRONSIDES® LONGITUDINAL ELONGATION PERCENTAGE (ON FLAT GROUND ONLY)

Series Number	Pressure (psi)														
	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150
IS150	0.00	0.10	0.10	0.20	0.30	0.36	0.40	0.50	0.60	0.60	0.80	0.90	0.90	1.00	1.10
IS200	0.00	0.00	0.00	0.10	0.10	0.10	0.20	0.40	0.60	0.60	0.70	0.80	0.80	0.90	1.10
IS250	0.00	0.00	0.10	0.20	0.30	0.40	0.40	0.60	0.60	0.80	1.00	1.10	1.10	1.30	1.30
IS300	0.00	0.10	0.10	0.20	0.30	0.40	0.50	0.50	0.60	0.70	0.80	1.00	1.10	-	-
IS400	0.00	0.10	0.20	0.30	0.40	0.50	0.70	0.80	0.90	1.20	1.30	1.40	1.40	-	-
IS600	0.00	0.10	0.30	0.50	0.50	0.60	0.80	0.90	1.00	1.20	-	-	-	-	-
IS800	0.10	0.20	0.50	0.80	1.00	1.20	1.50	0.00	-	-	-	-	-	-	-

VINYLFLOW® EZ-LITE™ LONGITUDINAL ELONGATION PERCENTAGE (ON FLAT GROUND ONLY)

Series Number	Pressure (psi)					
	10	20	30	40	50	60
VFL150	0.00	0.10	0.20	0.30	0.40	0.60
VFL200	0.00	0.20	0.30	0.60	0.80	-
VFL300	0.20	0.40	0.80	1.20	-	-
VFL400	0.20	0.50	1.40	1.90	-	-
VFL600	0.00	0.40	0.80	1.40	-	-
VFL800	0.20	0.80	1.60	2.20	-	-
VF800	0.21	0.57	0.86	1.47	-	-
VF1000	0.15	0.39	0.59	-	-	-
VF1200	0.14	0.55	0.82	-	-	-
VF1600	0.00	0.28	0.42	-	-	-

LAYFLAT HOSE ID SIZE GUIDE

Hose ID	3/4	1	1-1/2	2	3	4	5	6	8	10	12	14	16
Hose Width When Flat	5/8	1-5/8	2-1/2	3-1/2	5	6-1/2	8	9-1/2	13	16	19	22	25

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.

**VINYLFLOW[®], VINYLFLOW[®]
EZ-LITE MAXIMUM
LENGTH AVAILABILITY**

Series Number	Max. Available Length
VF/VFL150	1000
VF/VFL200	1000
VF250	800
VF/VFL300	800
VF/VFL400	750
VF/VFL600	700
VF/VFL800	650
VF1000	500
VF1200	500
VF1400	500
VF1600	500

**IRONSIDES[®] MAXIMUM
LENGTH AVAILABILITY**

Series Number	Max. Available Length
IS150	700
IS200	650
IS250	600
IS300	550
IS400	500
IS600	450
IS800	450
IS1000	450

**FOR SLOPED GROUND, ADD
HEAD PRESSURE SHOWN
BELOW**

Hose	Slope Angle	Additional Head Pressure
Vinylflow [®]	5°	11
	10°	23
Vinylflow [®] EZ-Lite [™]	15°	34
	20°	44
Ironsides [®]	30°	65
	35°	75

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.

LAYFLAT HOSE MATERIAL PROPERTIES

Product Name	Series	Tube Material	General Applications	Overall Durability	Drag Application Suitability	Water	Liquid Manure
Vinylflow® EZ-Lite™	VFL	PVC	Water transfer	Standard	Limited	Excellent	Limited
Vinylflow®	VFL	PVC	Water transfer & drip irrigation	Standard	Limited	Excellent	Limited
Ironsides™	IS	PVC	Water transfer and mining applications	Good	Limited	Excellent	Limited
PVC Layflat Assemblies	LF & LFR	PVC	Water transfer	Standard	Not Recommended	Excellent	Not Recommended
OROFLEX® 10	OF10	PVC/NBR	Water	Very Good	Limited	Excellent	Excellent
OROFLEX® 20	OF20B & OF20Y	PVC/NBR	Water & liquid manure transfer	Excellent	Good	Excellent	Excellent
OROFLEX® Drag	OFDG	TPU	Manure spreaders	Excellent	Excellent	Excellent	Excellent
OROFLEX® Bandama	BD	PVC/NBR	Traveling irrigators	Excellent	Very Good	Excellent	Excellent
OROFLEX® Aqua	OFAQ	Polyurethane	Water Bypass	Excellent	Very Good	Excellent	Excellent
OROFLEX® Terrain	OFTR	Polyurethane	Frac Water Transfer	Excellent	Very Good	Excellent	Excellent
OROFLEX® Oil	OFOIL	Polyurethane	Military Oil Transfer	Excellent	Very Good	Excellent	Excellent
Mill Discharge Hose	SJMD & DJMD	Rubber/ Polyester	Water transfer	Standard	Not Recommended	Excellent	Not Recommended
Mill Discharge Assemblies	DJ	Rubber/ Polyester	Water transfer	Standard	Not Recommended	Excellent	Not Recommended

Because we continually examine ways to improve our products, we reserve the right to alter specifications or discontinue products without prior notice.