

## Guide Rail FC-1A

Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
AWWA	14	20.60	62.4	1285.7	8	8	500.0	30.9	15.4
AWWA	20	14.42	62.4	900.0	8	8	500.0	30.9	15.4
AWWA	26	11.09	62.4	692.3	8	8	500.0	30.9	15.4
AWWA	32	9.01	62.4	562.5	8	8	500.0	30.9	15.4
AWWA	38	7.59	62.4	473.7	8	8	500.0	30.9	15.4
AWWA	44	6.56	62.4	409.1	8	8	500.0	30.9	15.4
AWWA	50	5.77	62.4	360.0	8	8	500.0	30.9	15.4
AWWA	56	5.15	62.4	321.4	8	8	500.0	30.9	15.4
AWWA	62	4.65	62.4	290.3	8	8	500.0	30.9	15.4
AWWA	74	3.90	62.4	243.2	8	8	500.0	30.9	15.4
Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
Full Stress	14	39.97	62.4	2494.3	8	8	970.0	59.3	29.8
Full Stress	20	27.98	62.4	1746.0	8	8	970.0	59.3	29.8
Full Stress	26	21.52	62.4	1343.1	8	8	970.0	59.3	29.8
Full Stress	32	17.49	62.4	1091.3	8	8	970.0	59.3	29.8
Full Stress	38	14.73	62.4	918.9	8	8	970.0	59.3	29.8
Full Stress	44	12.72	62.4	793.6	8	8	970.0	59.3	29.8
Full Stress	50	11.19	62.4	698.4	8	8	970.0	59.3	29.8
Full Stress	56	9.99	62.4	623.6	8	8	970.0	59.3	29.8
Full Stress	62	9.03	62.4	563.2	8	8	970.0	59.3	29.8
Full Stress	74	7.56	62.4	471.9	8	8	970.0	59.3	29.8

## Guide Rail FC-1B

Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
AWWA	14	29.88	62.4	1864.3	8	8	725.0	25.9	15.5
AWWA	20	20.91	62.4	1305.0	8	8	725.0	25.9	15.5
AWWA	26	16.09	62.4	1003.8	8	8	725.0	25.9	15.5
AWWA	32	13.07	62.4	815.6	8	8	725.0	25.9	15.5
AWWA	38	11.01	62.4	686.8	8	8	725.0	25.9	15.5
AWWA	44	9.51	62.4	593.2	8	8	725.0	25.9	15.5
AWWA	50	8.37	62.4	522.0	8	8	725.0	25.9	15.5
AWWA	56	7.47	62.4	466.1	8	8	725.0	25.9	15.5
AWWA	62	6.75	62.4	421.0	8	8	725.0	25.9	15.5
AWWA	74	5.65	62.4	352.7	8	8	725.0	25.9	15.5
Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
Full Stress	14	57.69	62.4	3600.0	8	8	1400.0	49.3	29.7
Full Stress	20	40.38	62.4	2520.0	8	8	1400.0	49.3	29.7
Full Stress	26	31.07	62.4	1938.5	8	8	1400.0	49.3	29.7
Full Stress	32	25.24	62.4	1575.0	8	8	1400.0	49.3	29.7
Full Stress	38	21.26	62.4	1326.3	8	8	1400.0	49.3	29.7
Full Stress	44	18.36	62.4	1145.5	8	8	1400.0	49.3	29.7
Full Stress	50	16.15	62.4	1008.0	8	8	1400.0	49.3	29.7
Full Stress	56	14.42	62.4	900.0	8	8	1400.0	49.3	29.7
Full Stress	62	13.03	62.4	812.9	8	8	1400.0	49.3	29.7
Full Stress	74	10.91	62.4	681.1	8	8	1400.0	49.3	29.7

## Guide Rail FC-2A

Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
AWWA	14	32.97	62.4	2057.1	8	8	800.0	25.7	15.3
AWWA	20	23.08	62.4	1440.0	8	8	800.0	25.7	15.3
AWWA	26	17.75	62.4	1107.7	8	8	800.0	25.7	15.3
AWWA	32	14.42	62.4	900.0	8	8	800.0	25.7	15.3
AWWA	38	12.15	62.4	757.9	8	8	800.0	25.7	15.3
AWWA	44	10.49	62.4	654.5	8	8	800.0	25.7	15.3
AWWA	50	9.23	62.4	576.0	8	8	800.0	25.7	15.3
AWWA	56	8.24	62.4	514.3	8	8	800.0	25.7	15.3
AWWA	62	7.44	62.4	464.5	8	8	800.0	25.7	15.3
AWWA	74	6.24	62.4	389.2	8	8	800.0	25.7	15.3
Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
Full Stress	14	64.70	62.4	4037.1	8	8	1570.0	49.9	29.9
Full Stress	20	45.29	62.4	2826.0	8	8	1570.0	49.9	29.9
Full Stress	26	34.84	62.4	2173.8	8	8	1570.0	49.9	29.9
Full Stress	32	28.31	62.4	1766.3	8	8	1570.0	49.9	29.9
Full Stress	38	23.84	62.4	1487.4	8	8	1570.0	49.9	29.9
Full Stress	44	20.59	62.4	1284.5	8	8	1570.0	49.9	29.9
Full Stress	50	18.12	62.4	1130.4	8	8	1570.0	49.9	29.9
Full Stress	56	16.17	62.4	1009.3	8	8	1570.0	49.9	29.9
Full Stress	62	14.61	62.4	911.6	8	8	1570.0	49.9	29.9
Full Stress	74	12.24	62.4	763.8	8	8	1570.0	49.9	29.9

## Guide Rail FC-2B

Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
AWWA	14	61.81	62.4	3857.1	8	8	1500.0	21.8	15.2
AWWA	20	43.27	62.4	2700.0	8	8	1500.0	21.8	15.2
AWWA	26	33.28	62.4	2076.9	8	8	1500.0	21.8	15.2
AWWA	32	27.04	62.4	1687.5	8	8	1500.0	21.8	15.2
AWWA	38	22.77	62.4	1421.1	8	8	1500.0	21.8	15.2
AWWA	44	19.67	62.4	1227.3	8	8	1500.0	21.8	15.2
AWWA	50	17.31	62.4	1080.0	8	8	1500.0	21.8	15.2
AWWA	56	15.45	62.4	964.3	8	8	1500.0	21.8	15.2
AWWA	62	13.96	62.4	871.0	8	8	1500.0	21.8	15.2
AWWA	74	11.69	62.4	729.7	8	8	1500.0	21.8	15.2
Analysis Type	Width of Opening (IN)	Hydrostatic Head (FT)	Weight of Water (PCF)	Pressure on Gate (PSF)	Bolt Spacing (Poly Seal to Rail) (IN)	Stiffener Spacing (IN)	Load to Bolt (LBS)	Steel Stress (KSI) (Max Local @ AB)	Steel Stress (KSI) (Max General)
Full Stress	14	119.51	62.4	7457.1	8	8	2900.0	41.8	29.2
Full Stress	20	83.65	62.4	5220.0	8	8	2900.0	41.8	29.2
Full Stress	26	64.35	62.4	4015.4	8	8	2900.0	41.8	29.2
Full Stress	32	52.28	62.4	3262.5	8	8	2900.0	41.8	29.2
Full Stress	38	44.03	62.4	2747.4	8	8	2900.0	41.8	29.2
Full Stress	44	38.02	62.4	2372.7	8	8	2900.0	41.8	29.2
Full Stress	50	33.46	62.4	2088.0	8	8	2900.0	41.8	29.2
Full Stress	56	29.88	62.4	1864.3	8	8	2900.0	41.8	29.2
Full Stress	62	26.99	62.4	1683.9	8	8	2900.0	41.8	29.2
Full Stress	74	22.61	62.4	1410.8	8	8	2900.0	41.8	29.2