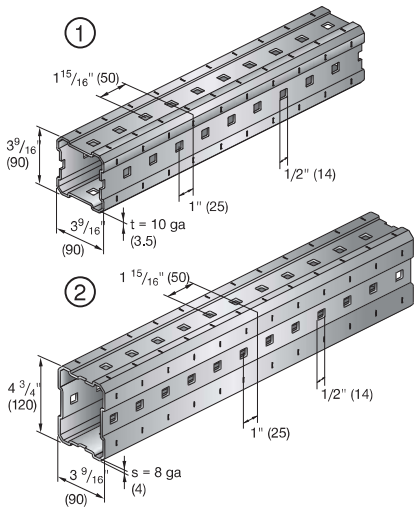
3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

MI GIRDER 90/120

Material Specifications

Material	S235 JRG2 DIN 10025, (ASTM A283 (D) 34 ksi)
Galvanizing	Hot-dip galvanized 3 mils (75 µm) DIN EN ISO 1461, (ASTM A123)

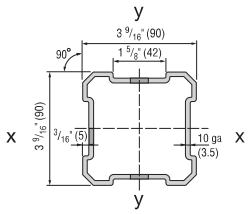


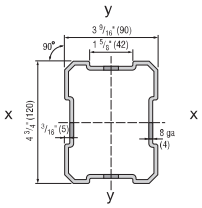
Ordering Information

Description		Section Height in (mm)	Length ft (m)	Metal Thickness Gauge (mm)	Weight lb/ft (kg/m)	Item No.
MI-90 3m	①	3-9/16" (90)	9' 10" (3)	10 (3.5)	6.3 (9.4)	304798
MI-90 6m	①	3-9/16" (90)	19' 8-1/4" (6)	10 (3.5)	6.3 (9.4)	304799
MI-120 3m	②	4-3/4" (120)	9' 10" (3)	8 (4)	8.4 (12.6)	304800
MI-120 6m	②	4-3/4" (120)	19' 8-1/4" (6)	8 (4)	8.4 (12.6)	304801

Technical Data

Values for cross sections include reduction of four square holes





Technical Data		MI-90	MI-120
Material thickness	t (in)	0.1378 (~10 ga)	0.1575 (~8 ga)
Cross sectional area — net	A (in²)	1.55	2.13
Weight of girder	(lb/ft)	6.34	8.47
Lengths available	(ft)	9' 10" / 19' 8-1/4"	9' 10" / 19' 8-1/4"
Material			
Yield strength	$f_{y,k}$ (ksi)	34	34
Ultimate strength	$f_{u,k}$ (ksi)	52	52
Allowable tensile stress	σ (ksi)	20.40	20.40
Allowable shear stress	τ (ksi)	11.80	11.80
Modulus of elasticity	E (ksi)	30388	30388
Shear modulus	G (ksi)	11721	11721
Cross section values[1] x-axis			
Moment of inertia	I_x (in⁴)	2.77	6.38
Section modulus	S_x (in³)	1.56	2.70
Radius of gyration	r_x (in)	1.33	1.73
Allowable moment	M_x/Ω (lb-ft)	2650	4585
y-axis			
Moment of inertia	I_y (in⁴)	2.77	4.17
Section modulus	S_y (in³)	1.56	2.35
Radius of gyration	r_y (in)	1.33	1.40
Allowable moment	M_y/Ω (lb-ft)	2650	3995
Torsion values			
Torsional moment of inertia	I_t (in⁴)	3.73	7.13
Torsional section modulus	S(in³)	2.76	4.37

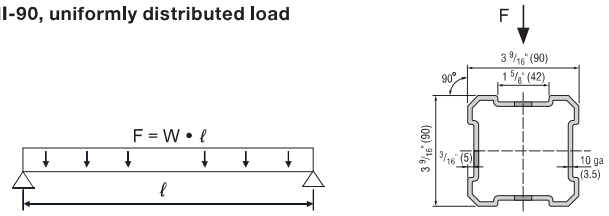
1 Cross section values are based on the gross section less the four square holes 14 mm x metal thickness 3.5 mm (MI 90) or 4 mm (MI 120) respectively.

3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN ONE AXIS MI-90

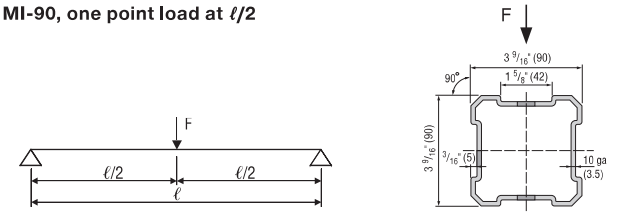
F_1 at Δ = ℓ/180; F_2 at Δ = ℓ/240; F_3 at Δ = ℓ/360; F at σ_{all} including weight of girder
Δ = deflection
σ_{all} = allowable stress

MI-90, uniformly distributed load



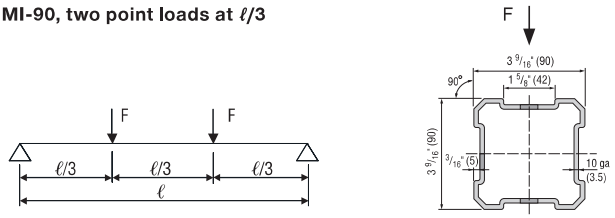
Length of span (ft)	w (lb/in)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	443	10630	0.02	-	-	-	-	-	-
3	197	7080	0.05	-	-	-	-	-	-
4	110	5300	0.09	-	-	-	-	-	-
5	71	4230	0.14	-	-	-	-	-	-
6	49	3510	0.20	-	-	-	-	3440	0.20
7	36	3000	0.28	-	-	-	-	2510	0.23
8	27	2610	0.36	-	-	-	-	1900	0.27
9	21	2310	0.46	-	-	2260	0.45	1490	0.30
10	17	2070	0.57	-	-	1810	0.50	1190	0.33
11	14	1870	0.69	-	-	1480	0.55	970	0.37
12	12	1700	0.82	1660	0.80	1230	0.60	790	0.40
13	10	1560	0.96	1400	0.87	1030	0.65	660	0.43
14	9	1430	1.11	1190	0.93	870	0.70	550	0.47
15	7	1330	1.28	1020	1.00	740	0.75	460	0.50
16	6	1230	1.45	880	1.07	630	0.80	390	0.53
17	6	1150	1.64	760	1.13	540	0.85	330	0.57
18	5	1070	1.84	660	1.20	470	0.90	280	0.60
19	4	1000	2.05	580	1.27	400	0.95	230	0.63
20	4	940	2.27	500	1.33	350	1.00	190	0.67

MI-90, one point load at ℓ/2



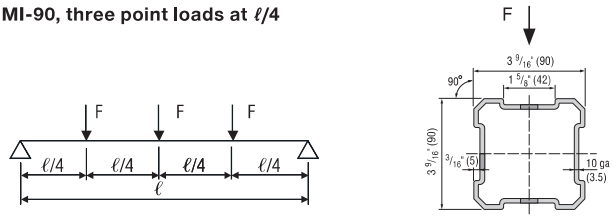
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	5260	0.02	-	-	-	-	-	-
3	3520	0.04	-	-	-	-	-	-
4	2640	0.07	-	-	-	-	-	-
5	2110	0.11	-	-	-	-	-	-
6	1750	0.16	-	-	-	-	-	-
7	1500	0.22	-	-	-	-	-	-
8	1300	0.29	-	-	-	-	1190	0.27
9	1150	0.37	-	-	-	-	930	0.30
10	1030	0.46	-	-	-	-	740	0.33
11	930	0.55	-	-	930	0.55	600	0.37
12	850	0.66	-	-	770	0.60	500	0.40
13	780	0.78	-	-	640	0.65	410	0.43
14	720	0.90	-	-	540	0.70	350	0.47
15	660	1.04	640	1.00	460	0.75	290	0.50
16	620	1.18	550	1.07	400	0.80	240	0.53
17	570	1.34	480	1.13	340	0.85	210	0.57
18	540	1.51	410	1.20	290	0.90	170	0.60
19	500	1.68	360	1.27	250	0.95	140	0.63
20	470	1.87	310	1.33	220	1.00	120	0.67

MI-90, two point loads at ℓ/3



Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	3890	0.02	-	-	-	-	-	-
3	2620	0.05	-	-	-	-	-	-
4	1970	0.09	-	-	-	-	-	-
5	1580	0.14	-	-	-	-	-	-
6	1310	0.21	-	-	-	-	-	-
7	1120	0.28	-	-	-	-	920	0.23
8	980	0.37	-	-	-	-	700	0.27
9	860	0.47	-	-	-	-	550	0.30
10	770	0.58	-	-	-	-	440	0.33
11	700	0.70	-	-	540	0.55	350	0.37
12	640	0.83	610	0.8	450	0.60	290	0.40
13	580	0.98	510	0.87	380	0.65	240	0.43
14	540	1.14	440	0.93	320	0.70	200	0.47
15	500	1.30	370	1.00	270	0.75	170	0.50
16	460	1.48	320	1.07	230	0.80	140	0.53
17	430	1.67	280	1.13	200	0.85	120	0.57
18	400	1.88	240	1.20	170	0.90	100	0.60
19	380	2.09	210	1.27	150	0.95	80	0.63
20	350	2.32	180	1.33	130	1.00	70	0.67

MI-90, three point loads at ℓ/4



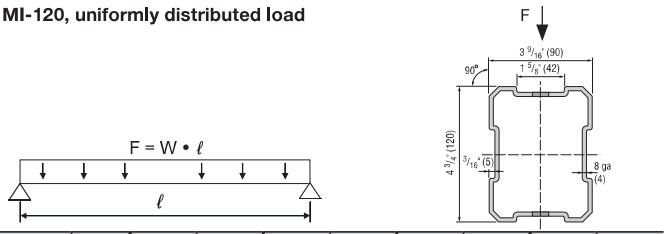
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	2590	0.02	-	-	-	-	-	-
3	1750	0.05	-	-	-	-	-	-
4	1320	0.09	-	-	-	-	-	-
5	1060	0.13	-	-	-	-	-	-
6	880	0.19	-	-	-	-	-	-
7	760	0.26	-	-	-	-	670	0.23
8	660	0.34	-	-	-	-	510	0.27
9	590	0.44	-	-	-	-	400	0.30
10	530	0.54	-	-	490	0.5	330	0.33
11	480	0.65	-	-	410	0.55	270	0.37
12	440	0.77	440	0.8	340	0.6	230	0.40
13	410	0.91	370	0.87	290	0.65	190	0.43
14	380	1.05	310	0.93	250	0.70	170	0.47
15	350	1.21	270	1.00	220	0.75	140	0.50
16	330	1.37	230	1.07	190	0.80	130	0.53
17	310	1.55	200	1.13	170	0.85	110	0.57
18	290	1.73	170	1.20	150	0.90	100	0.60
19	280	1.93	150	1.27	130	0.95	90	0.63
20	260	2.13	130	1.33	120	1.00	80	0.67

3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN ONE AXIS MI-120

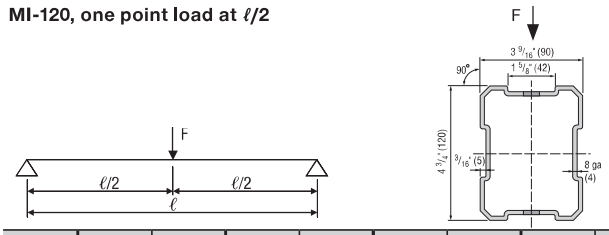
F_1 at $\Delta = \ell/180$; F_2 at $\Delta = \ell/240$; F_3 at $\Delta = \ell/360$; F at σ_{all} including weight of girder
Δ = deflection
σ_{all} = allowable stress

MI-120, uniformly distributed load



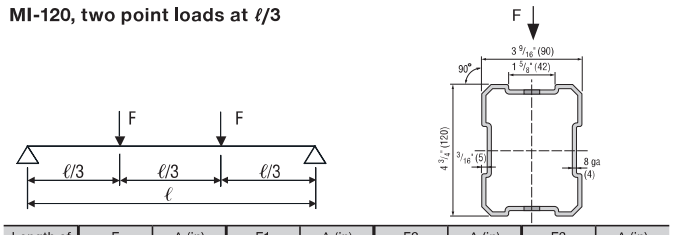
Length of span (ft)	w (lb/in)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	765	18370	0.02	-	-	-	-	-	-
3	340	12230	0.04	-	-	-	-	-	-
4	191	9160	0.07	-	-	-	-	-	-
5	122	7310	0.11	-	-	-	-	-	-
6	84	6080	0.15	-	-	-	-	-	-
7	62	5200	0.21	-	-	-	-	-	-
8	47	4530	0.27	-	-	-	-	4440	0.27
9	37	4010	0.34	-	-	-	-	3480	0.30
10	30	3600	0.43	-	-	-	-	2800	0.33
11	25	3250	0.52	-	-	-	-	2290	0.37
12	21	2970	0.61	-	-	2900	0.60	1900	0.40
13	17	2720	0.72	-	-	2450	0.65	1600	0.43
14	15	2510	0.83	-	-	2090	0.70	1350	0.47
15	13	2330	0.96	-	-	1800	0.75	1160	0.50
16	11	2170	1.09	2120	1.07	1560	0.80	990	0.53
17	10	2020	1.23	1850	1.13	1360	0.85	860	0.57
18	9	1890	1.38	1630	1.20	1190	0.90	740	0.60
19	7	1780	1.54	1440	1.27	1040	0.95	640	0.63
20	6	1670	1.70	1280	1.33	920	1.00	560	0.67

MI-120, one point load at ℓ/2



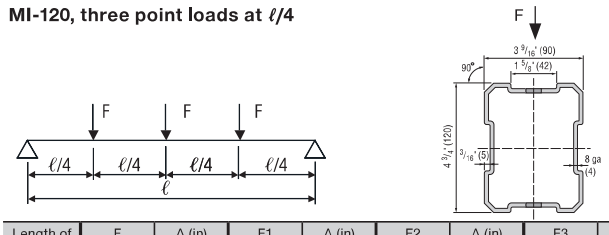
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	9080	0.01	-	-	-	-	-	-
3	6090	0.03	-	-	-	-	-	-
4	4570	0.05	-	-	-	-	-	-
5	3650	0.09	-	-	-	-	-	-
6	3040	0.12	-	-	-	-	-	-
7	2600	0.17	-	-	-	-	-	-
8	2260	0.22	-	-	-	-	-	-
9	2010	0.28	-	-	-	-	-	-
10	1800	0.34	-	-	-	-	1750	0.33
11	1630	0.41	-	-	-	-	1430	0.37
12	1480	0.49	-	-	-	-	1190	0.40
13	1360	0.58	-	-	-	-	1000	0.43
14	1260	0.67	-	-	-	-	850	0.47
15	1160	0.78	-	-	1120	0.75	720	0.50
16	1080	0.88	-	-	970	0.80	620	0.53
17	1010	1.00	-	-	850	0.85	540	0.57
18	950	1.12	-	-	740	0.90	460	0.60
19	890	1.25	-	-	650	0.95	400	0.63
20	840	1.39	800	1.33	570	1.00	350	0.67

MI-120, two point loads at ℓ/3



Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	6720	0.02	-	-	-	-	-	-
3	4540	0.04	-	-	-	-	-	-
4	3410	0.07	-	-	-	-	-	-
5	2730	0.11	-	-	-	-	-	-
6	2270	0.16	-	-	-	-	-	-
7	1940	0.21	-	-	-	-	-	-
8	1700	0.28	-	-	-	-	-	-
9	1500	0.35	-	-	-	-	-	-
10	1350	0.43	-	-	-	-	1030	0.33
11	1220	0.53	-	-	-	-	840	0.37
12	1110	0.63	-	-	1060	0.60	700	0.40
13	1020	0.73	-	-	900	0.65	590	0.43
14	940	0.85	-	-	770	0.70	500	0.47
15	870	0.98	-	-	660	0.75	420	0.50
16	810	1.11	780	1.07	570	0.80	360	0.53
17	760	1.26	680	1.13	500	0.85	310	0.57
18	710	1.41	600	1.20	430	0.90	270	0.60
19	670	1.57	530	1.27	380	0.95	240	0.63
20	630	1.74	470	1.33	340	1.00	200	0.67

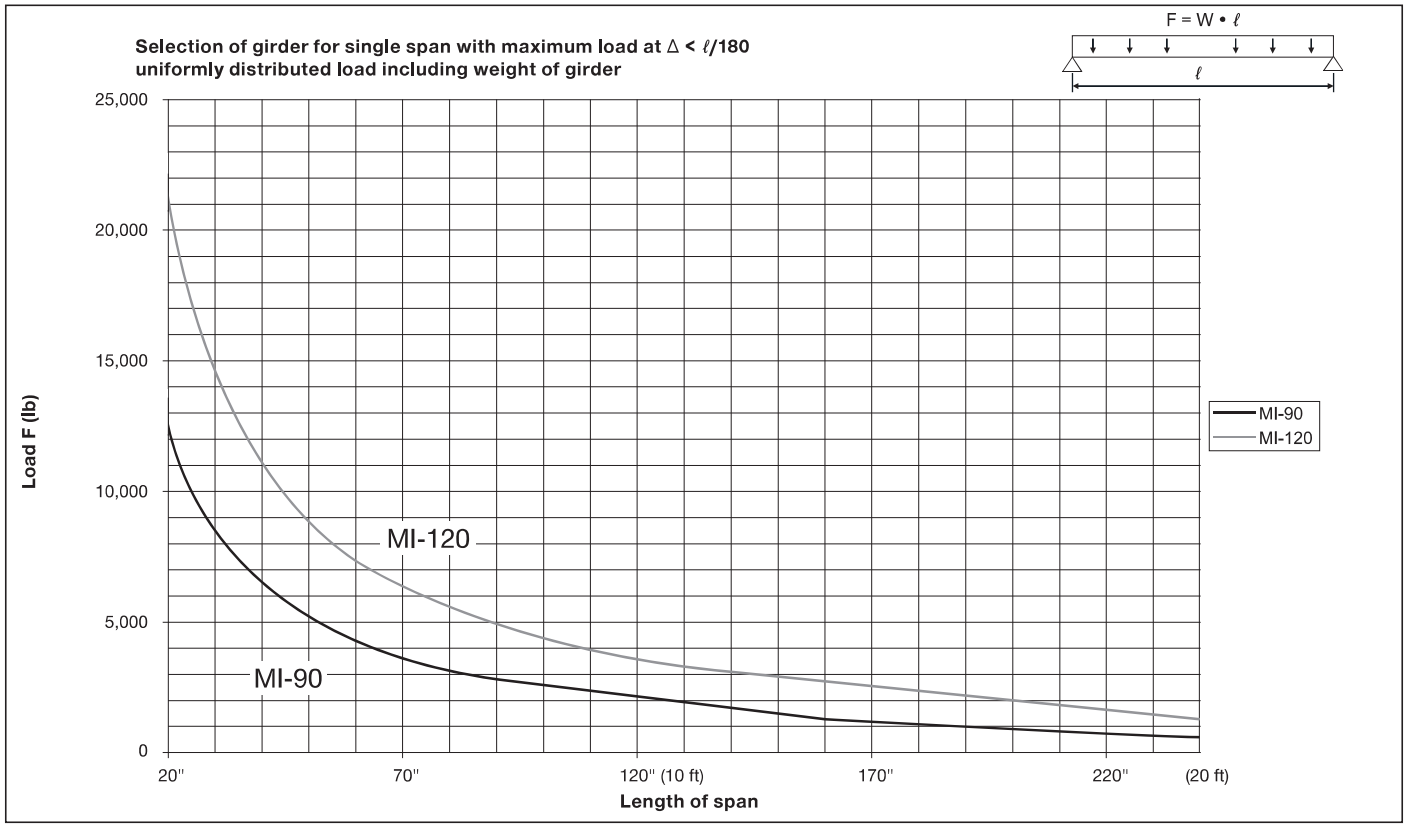
MI-120, three point loads at ℓ/4

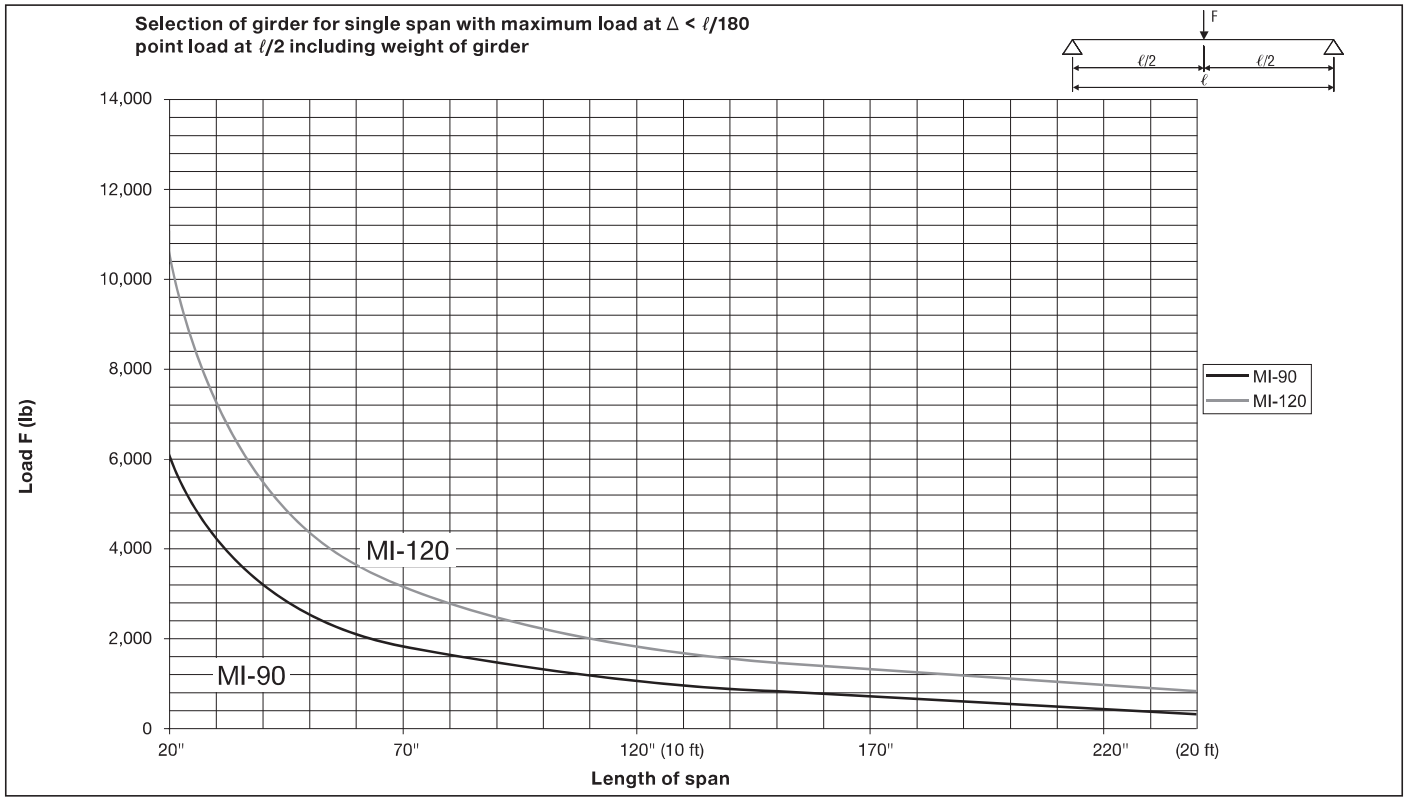


Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	4480	0.02	-	-	-	-	-	-
3	3030	0.04	-	-	-	-	-	-
4	2280	0.06	-	-	-	-	-	-
5	1830	0.10	-	-	-	-	-	-
6	1530	0.15	-	-	-	-	-	-
7	1310	0.20	-	-	-	-	-	-
8	1150	0.26	-	-	-	-	-	-
9	1020	0.33	-	-	-	-	930	0.30
10	920	0.40	-	-	-	-	760	0.33
11	830	0.49	-	-	-	-	620	0.37
12	760	0.58	-	-	-	-	520	0.40
13	700	0.68	-	-	670	0.65	450	0.43
14	650	0.79	-	-	580	0.70	380	0.47
15	610	0.91	-	-	500	0.75	330	0.50
16	570	1.03	560	1.07	440	0.80	290	0.53
17	540	1.16	490	1.13	390	0.85	260	0.57
18	510	1.30	430	1.20	350	0.90	230	0.60
19	480	1.45	380	1.27	310	0.95	210	0.63
20	460	1.60	340	1.33	280	1.00	190	0.67

3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

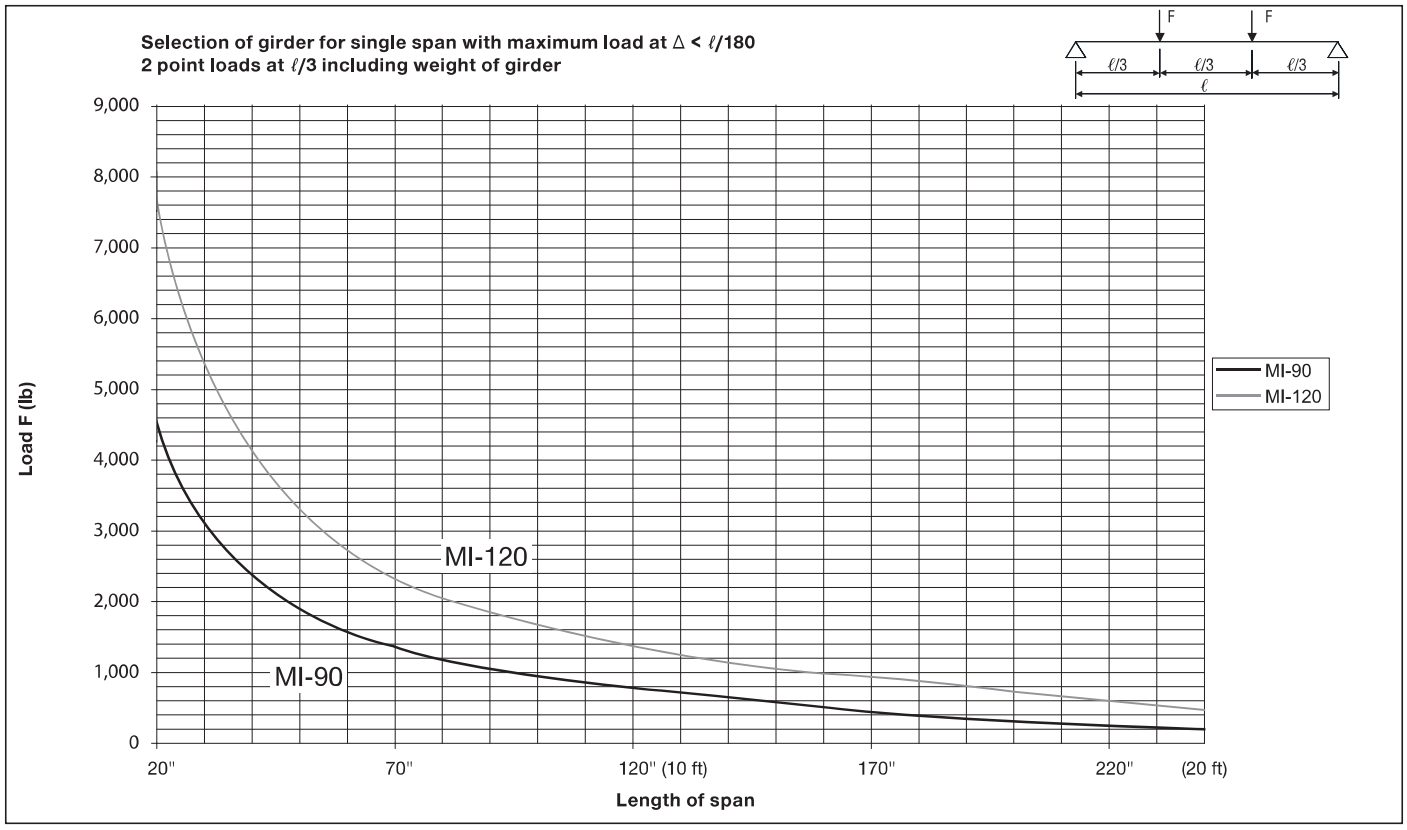
SINGLE-SPAN WITH BENDING LOAD IN ONE AXIS

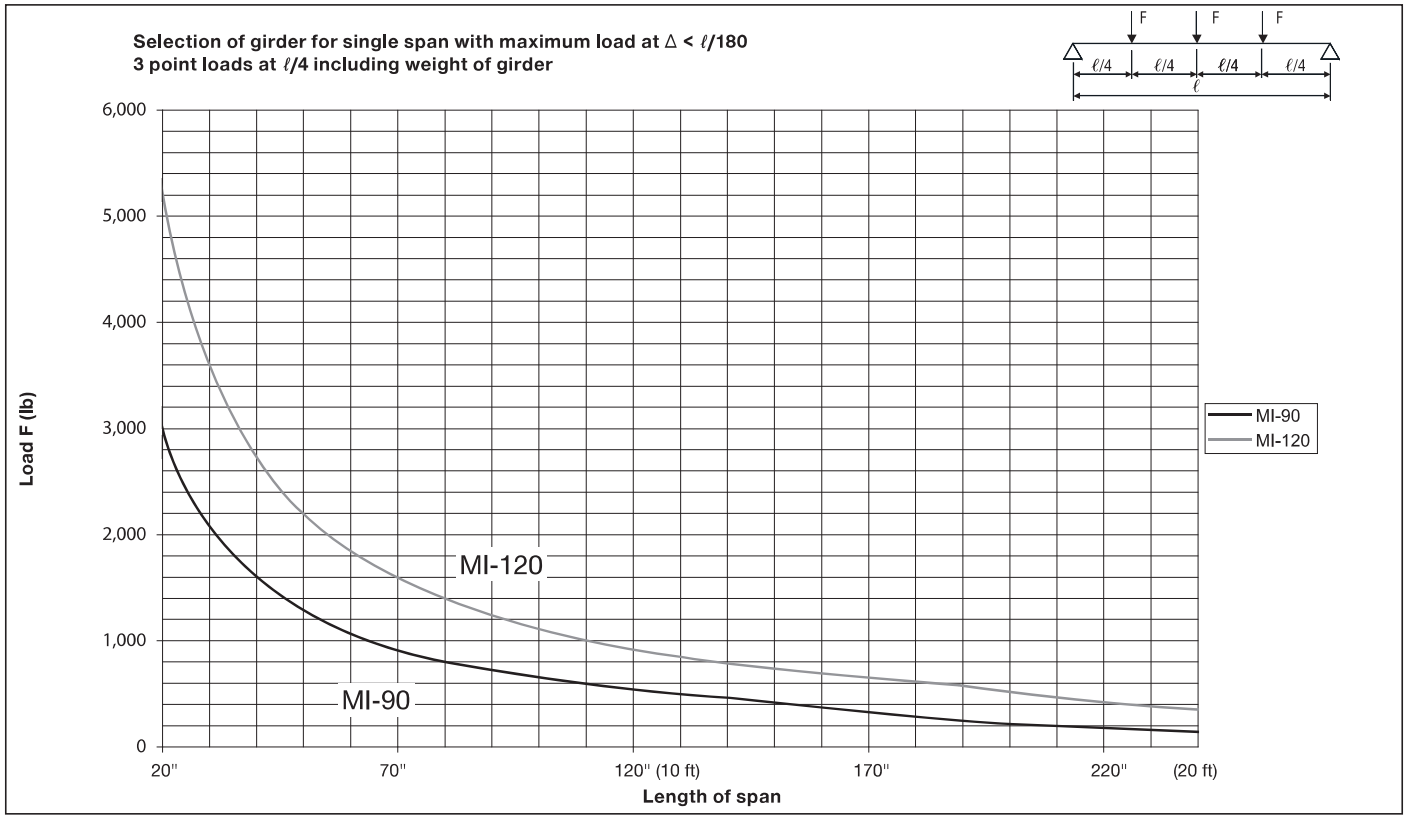




3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN ONE AXIS



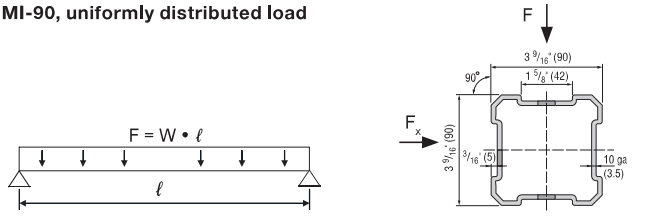


3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN TWO AXES (F_X = F*0.15) MI-90

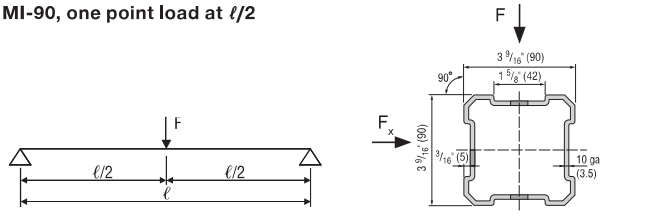
F_1 at Δ = ℓ/180; F_2 at Δ = ℓ/240; F_3 at Δ = ℓ/360; F at σ_{all} including weight of girder
Δ = deflection
σ_{all} = allowable stress

MI-90, uniformly distributed load



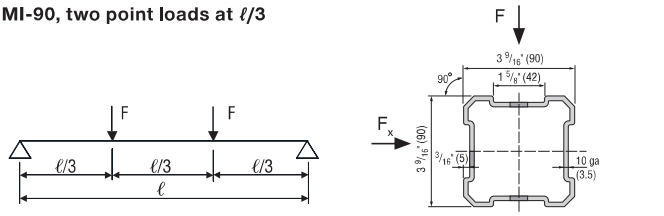
Length of span (ft)	w (lb/in)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	385	9240	0.02	-	-	-	-	-	-
3	171	6150	0.04	-	-	-	-	-	-
4	96	4600	0.08	-	-	-	-	-	-
5	61	3670	0.12	-	-	-	-	-	-
6	42	3050	0.18	-	-	-	-	-	-
7	31	2610	0.24	-	-	-	-	2510	0.23
8	24	2270	0.32	-	-	-	-	1900	0.27
9	19	2010	0.40	-	-	-	-	1490	0.30
10	15	1800	0.50	-	-	-	-	1190	0.33
11	12	1620	0.60	-	-	1480	0.55	970	0.37
12	10	1480	0.72	-	-	1230	0.60	790	0.40
13	9	1350	0.84	-	-	1030	0.65	660	0.43
14	7	1250	0.98	1190	0.93	870	0.70	550	0.47
15	6	1150	1.12	1020	1.00	740	0.75	460	0.50
16	6	1070	1.28	880	1.07	630	0.80	390	0.53
17	5	1000	1.44	760	1.13	540	0.85	330	0.57
18	4	930	1.62	660	1.20	470	0.90	280	0.60
19	4	870	1.81	580	1.27	400	0.95	230	0.63
20	3	820	2.01	500	1.33	350	1.00	190	0.67

MI-90, one point load at ℓ/2



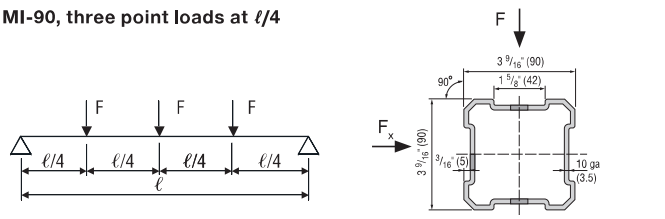
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	4580	0.02	-	-	-	-	-	-
3	3060	0.04	-	-	-	-	-	-
4	2300	0.06	-	-	-	-	-	-
5	1830	0.10	-	-	-	-	-	-
6	1520	0.14	-	-	-	-	-	-
7	1300	0.19	-	-	-	-	-	-
8	1130	0.25	-	-	-	-	-	-
9	1000	0.32	-	-	-	-	930	0.30
10	900	0.40	-	-	-	-	740	0.33
11	810	0.49	-	-	-	-	600	0.37
12	740	0.58	-	-	-	-	500	0.40
13	680	0.68	-	-	640	0.65	410	0.43
14	620	0.79	-	-	540	0.70	350	0.47
15	580	0.91	-	-	460	0.75	290	0.50
16	540	1.04	-	-	400	0.80	240	0.53
17	500	1.18	480	1.13	340	0.85	210	0.57
18	470	1.33	410	1.20	290	0.90	170	0.60
19	440	1.49	360	1.27	250	0.95	140	0.63
20	410	1.66	310	1.33	220	1.00	120	0.67

MI-90, two point loads at ℓ/3



Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	3400	0.02	-	-	-	-	-	-
3	2290	0.05	-	-	-	-	-	-
4	1720	0.08	-	-	-	-	-	-
5	1370	0.13	-	-	-	-	-	-
6	1140	0.18	-	-	-	-	-	-
7	980	0.25	-	-	-	-	920	0.23
8	850	0.32	-	-	-	-	700	0.27
9	750	0.41	-	-	-	-	550	0.30
10	670	0.51	-	-	-	-	440	0.33
11	610	0.61	-	-	540	0.55	350	0.37
12	550	0.73	-	-	450	0.60	290	0.40
13	510	0.86	-	-	380	0.65	240	0.43
14	470	1.00	440	0.93	320	0.70	200	0.47
15	430	1.14	370	1.00	270	0.75	170	0.50
16	400	1.30	320	1.07	230	0.80	140	0.53
17	370	1.47	280	1.13	200	0.85	120	0.57
18	350	1.65	240	1.20	170	0.90	100	0.60
19	330	1.85	210	1.27	150	0.95	80	0.63
20	310	2.05	180	1.33	130	1.00	70	0.67

MI-90, three point loads at ℓ/4



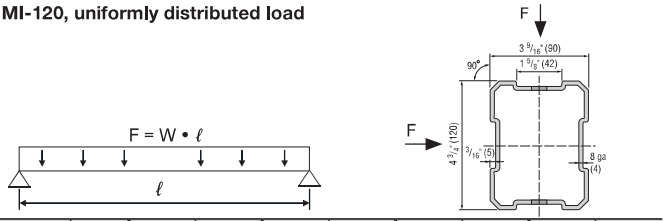
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	2270	0.02	-	-	-	-	-	-
3	1530	0.04	-	-	-	-	-	-
4	1150	0.07	-	-	-	-	-	-
5	920	0.12	-	-	-	-	-	-
6	770	0.17	-	-	-	-	-	-
7	660	0.23	-	-	-	-	-	-
8	580	0.30	-	-	-	-	510	0.27
9	510	0.38	-	-	-	-	400	0.30
10	460	0.47	-	-	-	-	330	0.33
11	420	0.57	-	-	410	0.55	270	0.37
12	380	0.67	-	-	340	0.60	230	0.40
13	350	0.79	-	-	290	0.65	190	0.43
14	330	0.91	310	0.93	250	0.70	170	0.47
15	310	1.05	270	1.00	220	0.75	140	0.50
16	290	1.19	230	1.07	190	0.80	130	0.53
17	270	1.34	200	1.13	170	0.85	110	0.57
18	250	1.51	170	1.20	150	0.90	100	0.60
19	240	1.68	150	1.27	130	0.95	90	0.63
20	230	1.85	130	1.33	120	1.00	80	0.67

3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN TWO AXIS (F_X=F*0.15) MI-120

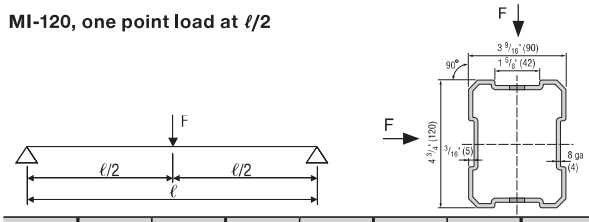
F_1 at Δ = ℓ/180; F_2 at Δ = ℓ/240; F_3 at Δ = ℓ/360; F at σ_{all} including weight of girder
Δ = deflection
σ_{all} = allowable stress

MI-120, uniformly distributed load



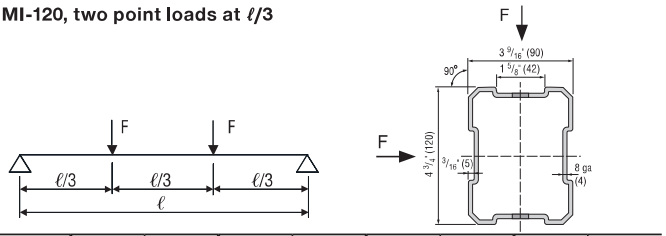
Length of span (ft)	w (lb/in)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	653	15670	0.01	-	-	-	-	-	-
3	290	10440	0.03	-	-	-	-	-	-
4	163	7820	0.06	-	-	-	-	-	-
5	104	6240	0.09	-	-	-	-	-	-
6	72	5190	0.13	-	-	-	-	-	-
7	53	4430	0.18	-	-	-	-	-	-
8	40	3870	0.23	-	-	-	-	-	-
9	32	3420	0.30	-	-	-	-	-	-
10	26	3070	0.36	-	-	-	-	2800	0.33
11	21	2770	0.44	-	-	-	-	2290	0.37
12	18	2530	0.53	-	-	-	-	1900	0.40
13	15	2320	0.62	-	-	-	-	1600	0.43
14	13	2140	0.72	-	-	2090	0.70	1350	0.47
15	11	1990	0.82	-	-	1800	0.75	1160	0.50
16	10	1850	0.94	-	-	1560	0.80	990	0.53
17	8	1730	1.06	-	-	1360	0.85	860	0.57
18	8	1620	1.19	-	-	1190	0.90	740	0.60
19	7	1520	1.33	1440	1.27	1040	0.95	640	0.63
20	6	1430	1.48	1280	1.33	920	1.00	560	0.67

MI-120, one point load at ℓ/2



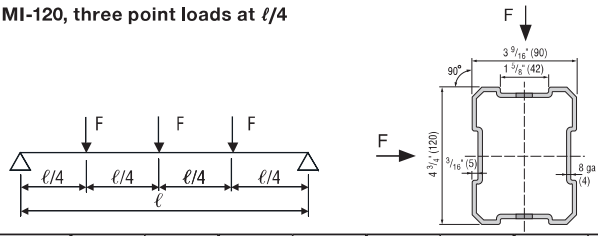
Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	7770	0.01	-	-	-	-	-	-
3	5200	0.03	-	-	-	-	-	-
4	3900	0.05	-	-	-	-	-	-
5	3120	0.07	-	-	-	-	-	-
6	2590	0.10	-	-	-	-	-	-
7	2210	0.14	-	-	-	-	-	-
8	1930	0.19	-	-	-	-	-	-
9	1710	0.24	-	-	-	-	-	-
10	1530	0.29	-	-	-	-	-	-
11	1390	0.36	-	-	-	-	-	-
12	1260	0.42	-	-	-	-	1190	0.40
13	1160	0.50	-	-	-	-	1000	0.43
14	1070	0.58	-	-	-	-	850	0.47
15	990	0.67	-	-	-	-	720	0.50
16	920	0.76	-	-	-	-	620	0.53
17	860	0.87	-	-	850	0.85	540	0.57
18	810	0.97	-	-	740	0.90	460	0.60
19	760	1.09	-	-	650	0.95	400	0.63
20	710	1.21	-	-	570	1.00	350	0.67

MI-120, two point loads at ℓ/3



Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	5770	0.01	-	-	-	-	-	-
3	3880	0.03	-	-	-	-	-	-
4	2920	0.06	-	-	-	-	-	-
5	2330	0.09	-	-	-	-	-	-
6	1940	0.13	-	-	-	-	-	-
7	1660	0.18	-	-	-	-	-	-
8	1450	0.24	-	-	-	-	-	-
9	1280	0.30	-	-	-	-	-	-
10	1150	0.37	-	-	-	-	1030	0.33
11	1040	0.45	-	-	-	-	840	0.37
12	950	0.54	-	-	-	-	700	0.40
13	870	0.63	-	-	-	-	590	0.43
14	800	0.73	-	-	770	0.70	500	0.47
15	740	0.84	-	-	660	0.75	420	0.50
16	690	0.96	-	-	570	0.80	360	0.53
17	650	1.08	-	-	500	0.85	310	0.57
18	610	1.22	600	1.20	430	0.90	270	0.60
19	570	1.36	530	1.27	380	0.95	240	0.63
20	540	1.50	470	1.33	340	1.00	200	0.67

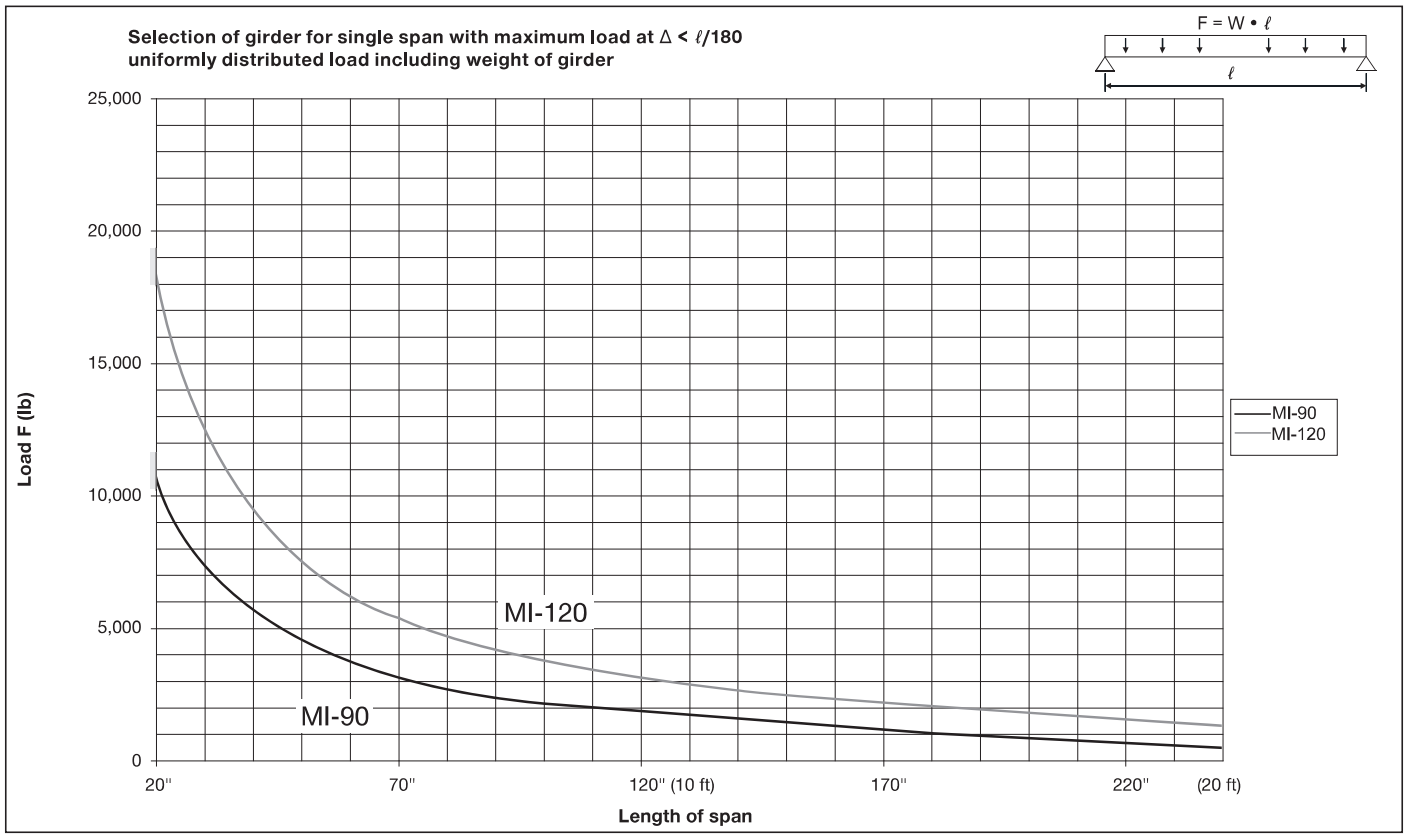
MI-120, three point loads at ℓ/4

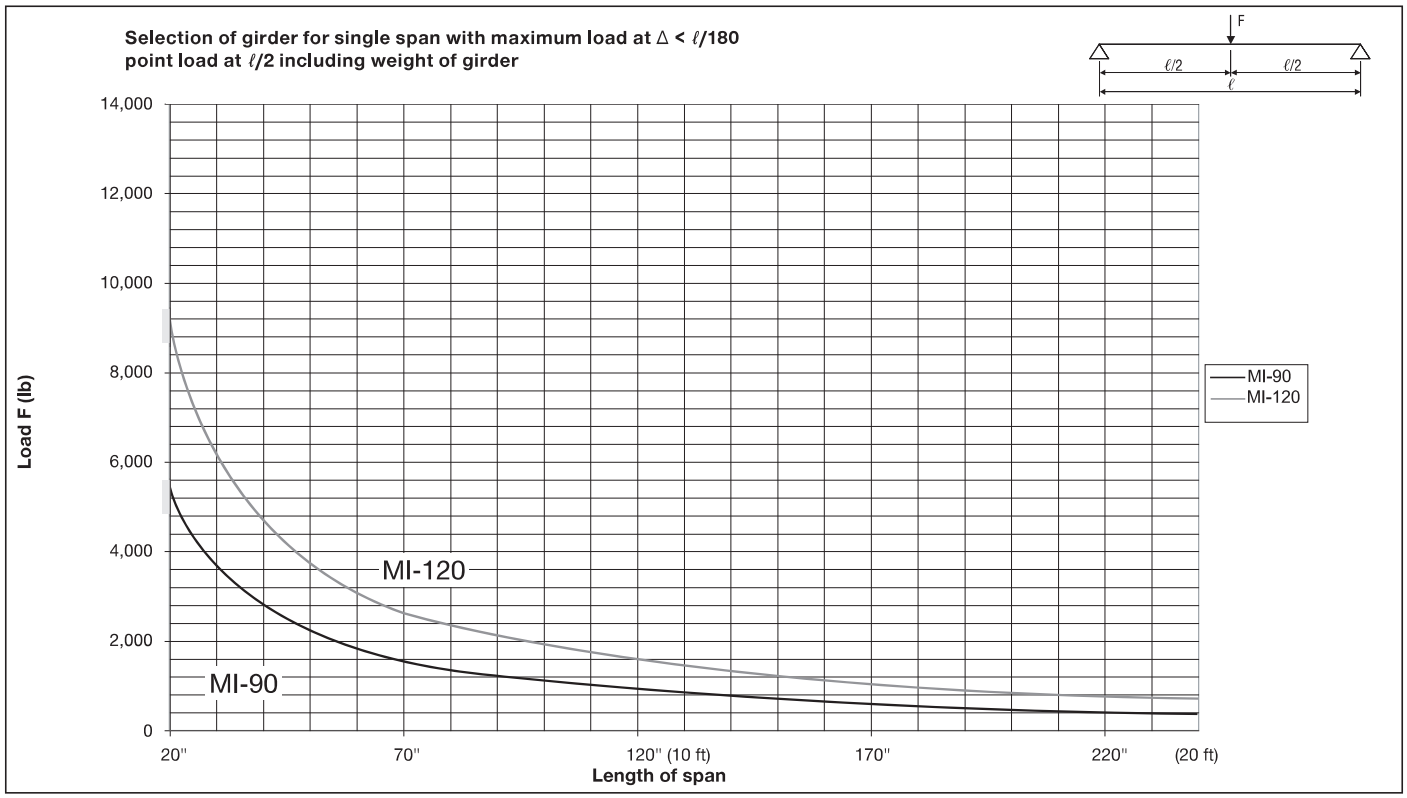


Length of span (ft)	F (lb)	Δ (in) at σ_{all}	F1 (lb)	Δ (in) ≤ℓ/180	F2 (lb)	Δ (in) ≤ℓ/240	F3 (lb)	Δ (in) ≤ℓ/360
2	3850	0.01	-	-	-	-	-	-
3	2590	0.03	-	-	-	-	-	-
4	1950	0.05	-	-	-	-	-	-
5	1560	0.09	-	-	-	-	-	-
6	1300	0.12	-	-	-	-	-	-
7	1120	0.17	-	-	-	-	-	-
8	980	0.22	-	-	-	-	-	-
9	870	0.28	-	-	-	-	-	-
10	780	0.34	-	-	-	-	760	0.33
11	710	0.42	-	-	-	-	620	0.37
12	650	0.50	-	-	-	-	520	0.40
13	600	0.58	-	-	-	-	450	0.43
14	560	0.67	-	-	-	-	380	0.47
15	520	0.77	-	-	500	0.75	330	0.50
16	490	0.88	-	-	440	0.80	290	0.53
17	460	0.99	-	-	390	0.85	260	0.57
18	430	1.11	430	1.20	350	0.90	230	0.60
19	410	1.24	380	1.27	310	0.95	210	0.63
20	390	1.37	340	1.33	280	1.00	190	0.67

3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN TWO AXES (F_x = F*0.15)





3.2 MI COMPONENTS, ALLOWABLE LOAD DATA AND SPECIFICATIONS

SINGLE-SPAN WITH BENDING LOAD IN TWO AXES (F_x = F*0.15)