



GREEN MAN®

INSTALLATION SYSTEM

MULTIPURPOSE PRODUCT CATALOG

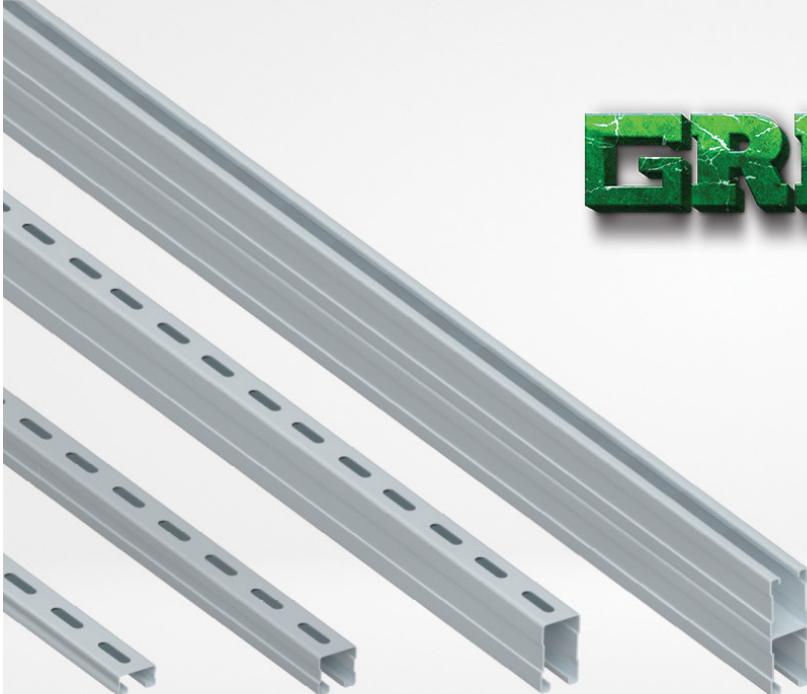
GLADIATOR GLADIATOR
BUILDING PRODUCTS LTD. UK





Strut Profile

GM41



Product Brief

Strut channels are structural components made from sheet steel, usually galvanized or coated to resist corrosion.

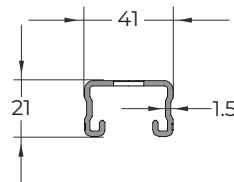
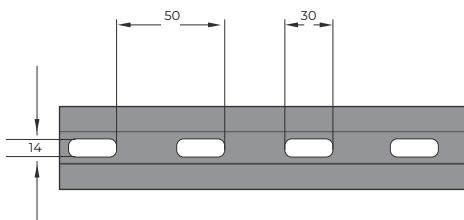
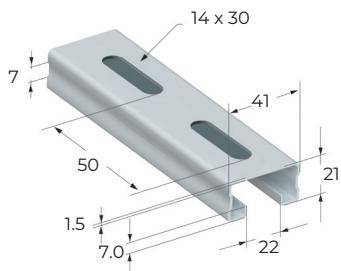
Their modular design allows them to be easily connected using bolts, nuts, and fittings, forming robust support structures. They can also support heavy loads depending on their configuration and installation.

They provide organized system to support electrical conduits, cable trays, wiring, plumbing and piping, HVAC ductwork, MS piping and other components, particularly in commercial and industrial buildings. They act as reliable mounting systems for solar panels, providing flexibility and durability for positioning panels on rooftops or ground based installations.

The combination of strength, versatility, and ease of use makes strut channels an indispensable component in a wide range of construction, industrial, and utility applications.

Sr#	Item Code	Size	Length (mtr)	Material	Coating		
1	GM412115	41x21x1.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
2	GM412120	41x21x2.0	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
3	GM412125	41x21x2.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
4	GM414115	41x41x1.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
5	GM414120	41x41x2.0	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
6	GM414125	41x41x2.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
7	GM416220	41x62x2.0	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
8	GM416225	41x62x2.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
9	GM417220	41x72x2.0	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
10	GM417225	41x72x2.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
11	GM418220	41x82x2.0	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
12	GM418225	41x82x2.5	3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
13	GMD414125	41x41x2.5][3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated
14	GMD416225	41x62x2.5][3,6	S250GD S235 JR	pre-galvanized (Z-275)	HDG	epoxy coated

Strut Profile GM412115



Specification

C-profile rail, perforated, toothed

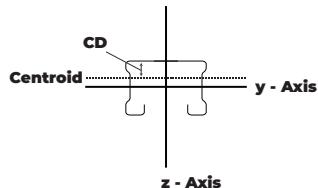
Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD
Material type: pre-galvanized (Z-275)

Material: S235JR
Material type: hot-dip galvanized
epoxy coated



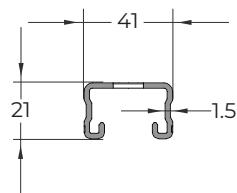
Type GM412115

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM412115	1.19	00	142	8.06	35895	9456	1738	742

Load Cases

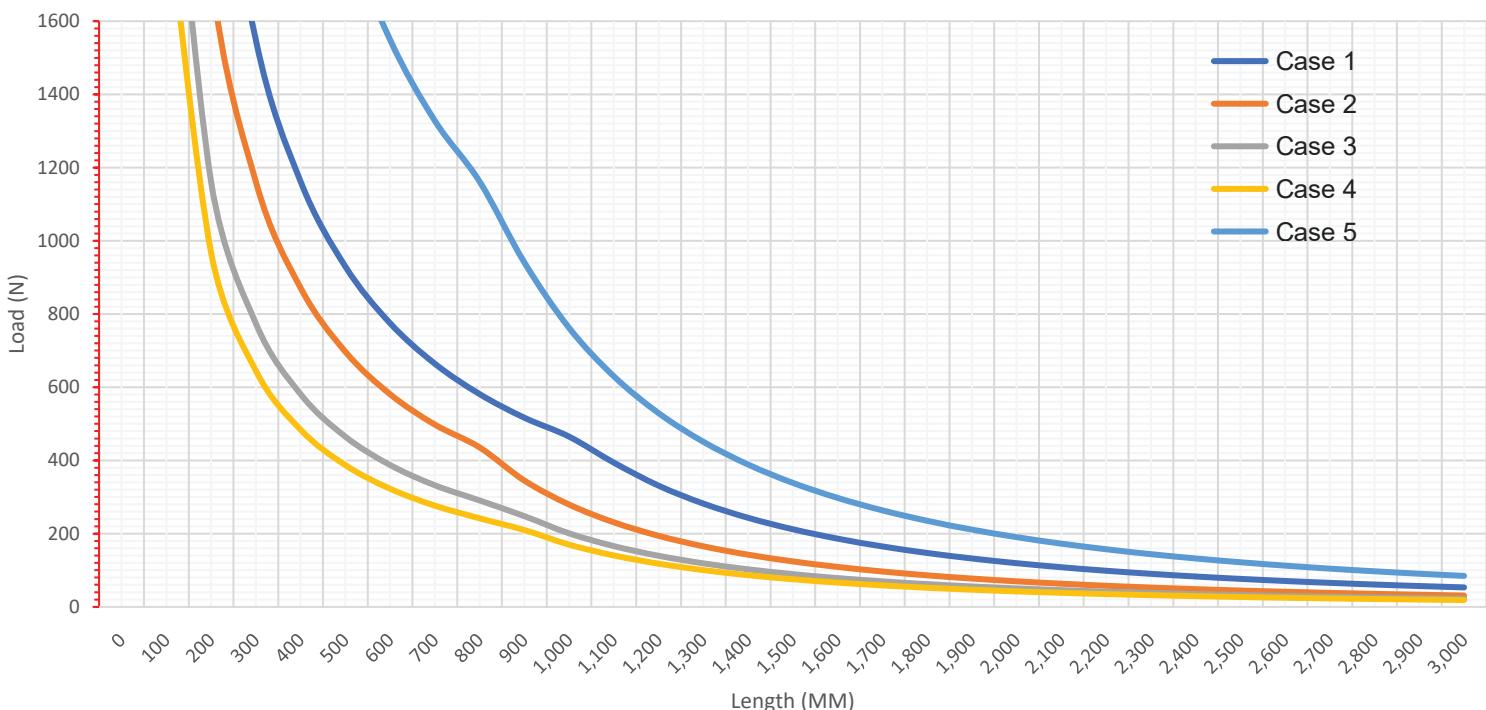
Max Recommended Load - N

F L	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load					
SPAN mm										
0	—	—	—	—	—					
100	4650	3487	2325	1937	9300					
200	2325	1744	1162	969	4650					
300	1550	1162	775	646	3100					
400	1162	872	581	484	2325					
500	930	697	465	387	1860					
600	775	581	387	323	1550					
700	664	498	332	277	1329					
800	581	416	291	242	1135					
900	517	329	236	215	897					
1000	454	266	191	177	726					
1100	375	220	158	147	600					
1200	315	185	133	123	504					
1300	269	158	113	105	430					
1400	232	136	98	90	371					
1500	202	118	85	79	323					
1600	177	104	75	69	284					
1700	157	92	66	61	251					
1800	140	82	59	55	224					
1900	126	74	53	49	201					
2000	113	67	48	44	182					



Maximum Recommended loads Graph for GM412115

Calculation Criteria		
Safety	X	= 1.5
Max. Bending	δ_{zul}	= L/200
Module of elasticity	E	= 210000 N/mm ²

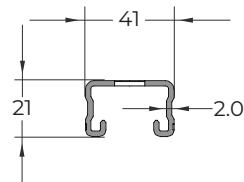
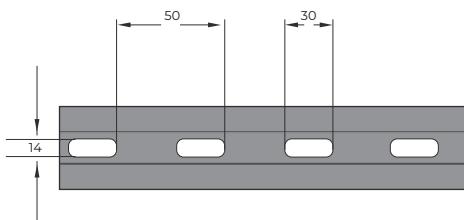
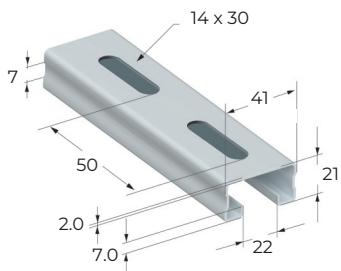


Unsupported Cantilever Load Case for GM412115

Max Recommended Load - N

CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
F L	Cantilever with single load at end of cantilever length L	F _{max}	Cantilever with single load in center of cantilever length L/2	F _{max}	Cantilever with 2 loads, each at L/3	F _{max}	Cantilever with 3 loads, each at L/4	F _{max}	Cantilever with uniform load, cantilever length
Span [mm]									
0	-		-		-		-		-
250	454		930		465		310		930
500	113		465		232		155		303
750	50		310		130		69		134
1000	28		227		73		39		76
1250	18		145		47		25		48
1500	13		101		32		17		34
1750	9		74		24		13		25
2000	7		57		18		10		19

Strut Profile GM412120



Specification

C-profile rail, perforated, toothed

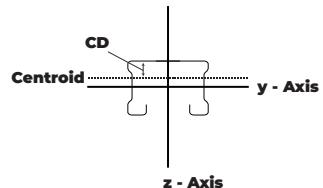
Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD
Material type: pre-galvanized (Z-275)

Material: S235JR
Material type: hot-dip galvanized
epoxy coated



Type GM 41 21 2.0

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM412120	1.5	00	186	8.06	45244	11616	2190	911

Load Cases

Max Recommended Load - N

CASE 1

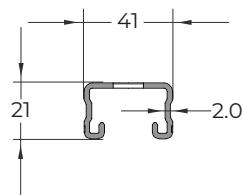
CASE 2

CASE 3

CASE 4

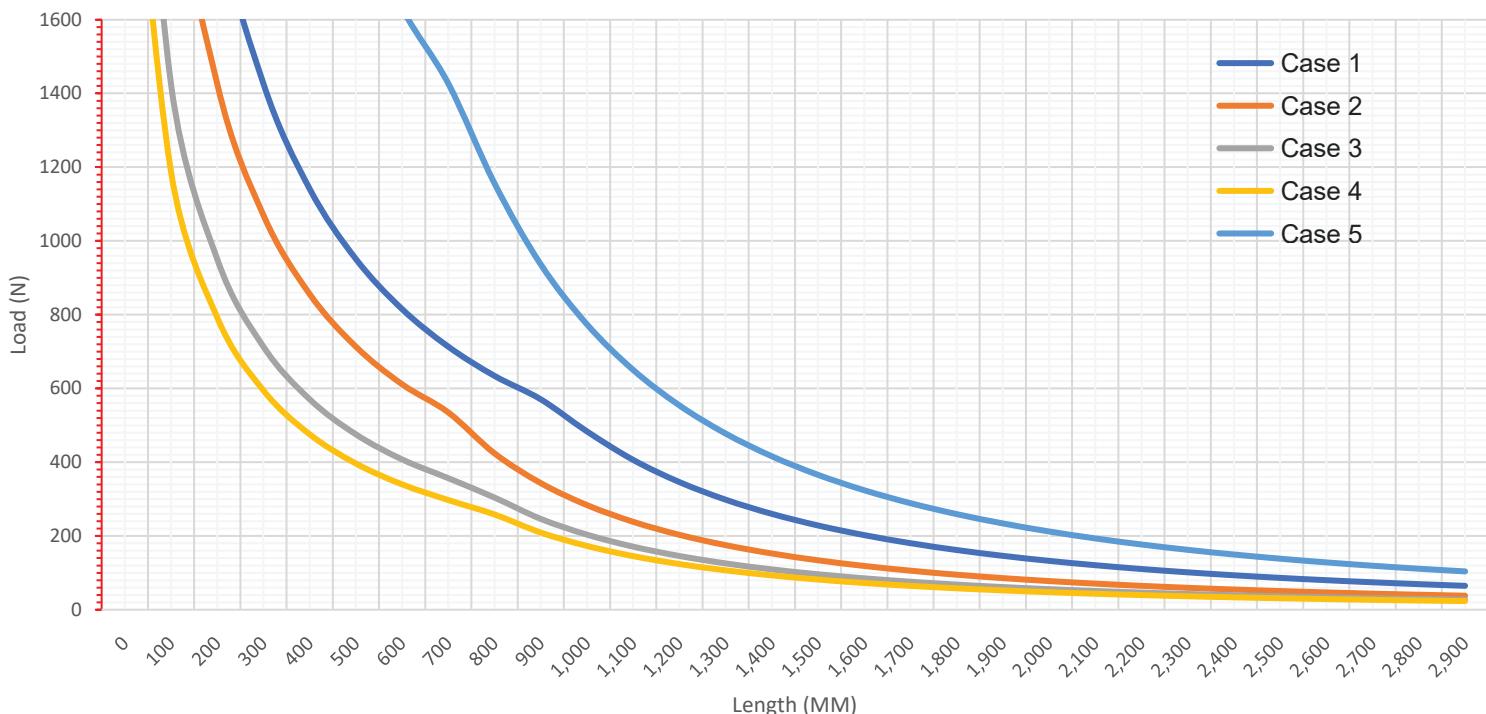
CASE 5

F L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	5709	4282	2854	2379	11418
200	2854	2141	1427	1189	5709
300	1903	1427	951	793	3806
400	1427	1070	714	595	2854
500	1142	856	571	476	2284
600	951	714	476	396	1903
700	816	612	408	340	1631
800	714	511	357	297	1394
900	634	404	290	264	1101
1000	558	327	235	218	892
1100	461	270	194	180	737
1200	387	227	163	151	620
1300	330	194	139	129	528
1400	284	167	120	111	455
1500	248	145	104	97	396
1600	218	128	92	85	348
1700	193	113	81	75	309
1800	172	101	72	67	275
1900	154	91	65	60	247
2000	139	82	59	54	223



Maximum Recommended loads Graph for GM412120

Calculation Criteria		
Safety	X	= 1.5
Max. Bending	δ_{zul}	= L/200
Module of elasticity	E	= 210000 N/mm ²

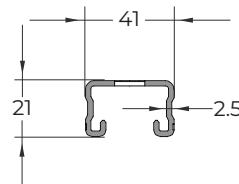
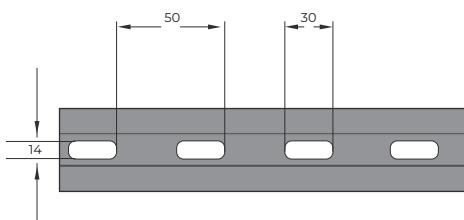
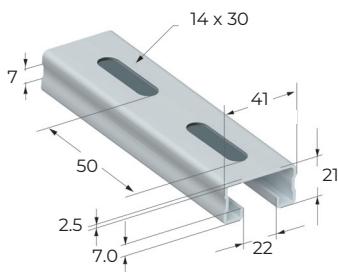


Unsupported Cantilever Load Case for GM412120

Max Recommended Load - N

CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
F L	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length				
Span [mm]									
0	-	-	-	-	-	-	-	-	-
250	558	1142	571	381	1142				
500	139	571	285	190	372				
750	62	381	159	85	165				
1000	35	279	90	48	93				
1250	22	178	57	31	59				
1500	15	124	40	21	41				
1750	11	91	29	16	30				
2000	9	70	22	12	23				

Strut Profile GM412125



Specification

C-profile rail, perforated, toothed

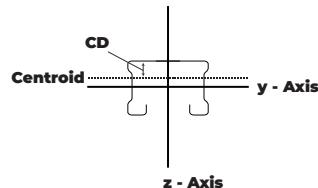
Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD
Material type: pre-galvanized (Z-275)

Material: S235JR
Material type: hot-dip galvanized
epoxy coated



Type GM 41 21 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM412125	1.87	00	226	8.06	53387	13345	2585	1047

Load Cases

Max Recommended Load - N

CASE 1

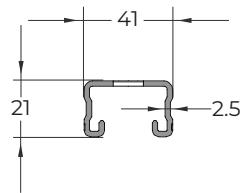
CASE 2

CASE 3

CASE 4

CASE 5

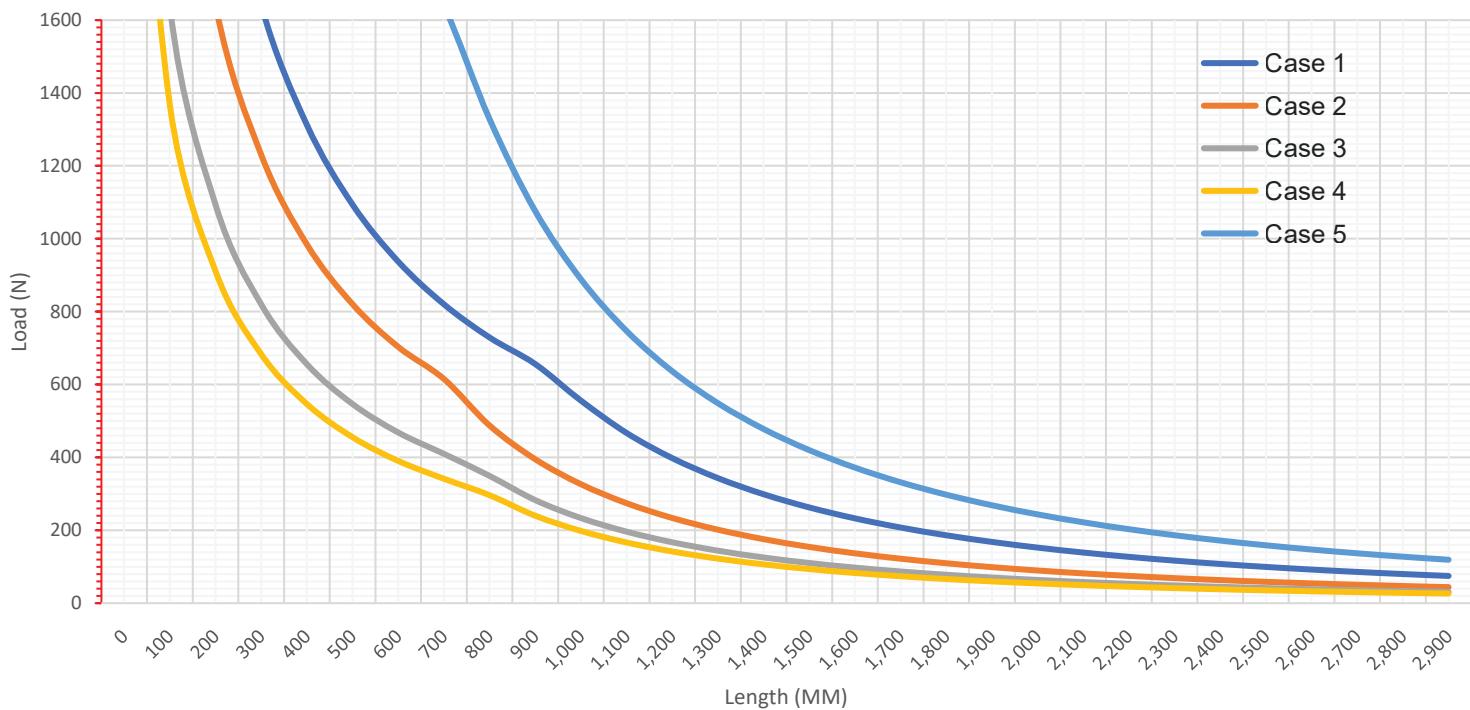
F L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	6561	4921	3281	2734	13122
200	3281	2460	1640	1367	6561
300	2187	1640	1094	911	4374
400	1640	1230	820	683	3281
500	1312	984	656	547	2624
600	1094	820	547	456	2187
700	937	703	469	391	1875
800	820	587	410	342	1601
900	729	464	333	304	1265
1000	641	376	270	250	1025
1100	529	311	223	207	847
1200	445	261	187	174	712
1300	379	222	160	148	606
1400	327	192	138	128	523
1500	285	167	120	111	456
1600	250	147	105	98	400
1700	222	130	93	87	355
1800	198	116	83	77	316
1900	177	104	75	69	284
2000	160	94	67	63	256



Maximum Recommended loads Graph for GM412125

Calculation Criteria

Safety Factor $X = 1.5$
 Max. Bending Deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

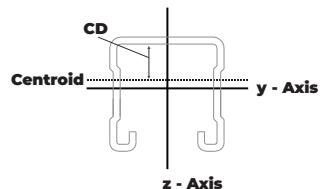
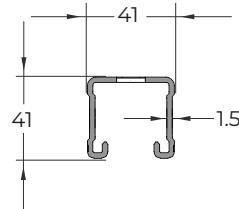
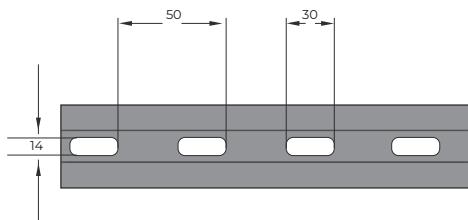
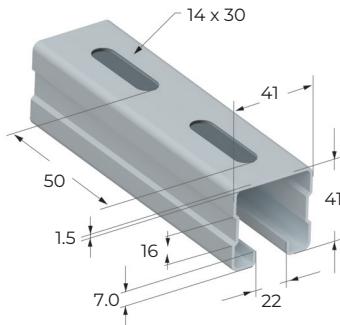


Unsupported Cantilever Load Case for GM412125

Max Recommended Load - N

CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
F L	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length				
Span [mm]									
0	-	-	-	-	-				
250	641	1312	656	437	1312				
500	160	656	328	219	427				
750	71	437	183	98	190				
1000	40	320	103	55	107				
1250	26	205	66	35	68				
1500	18	142	46	24	47				
1750	13	105	34	18	35				
2000	10	80	26	14	27				

Strut Profile GM414115



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

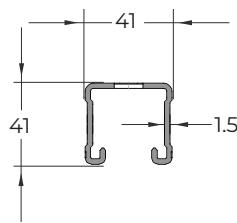
Type GM41 41 115

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM414115	1.95	00	203	17.7	59656	46953	2889	1989

Load Cases

Max Recommended Load - N

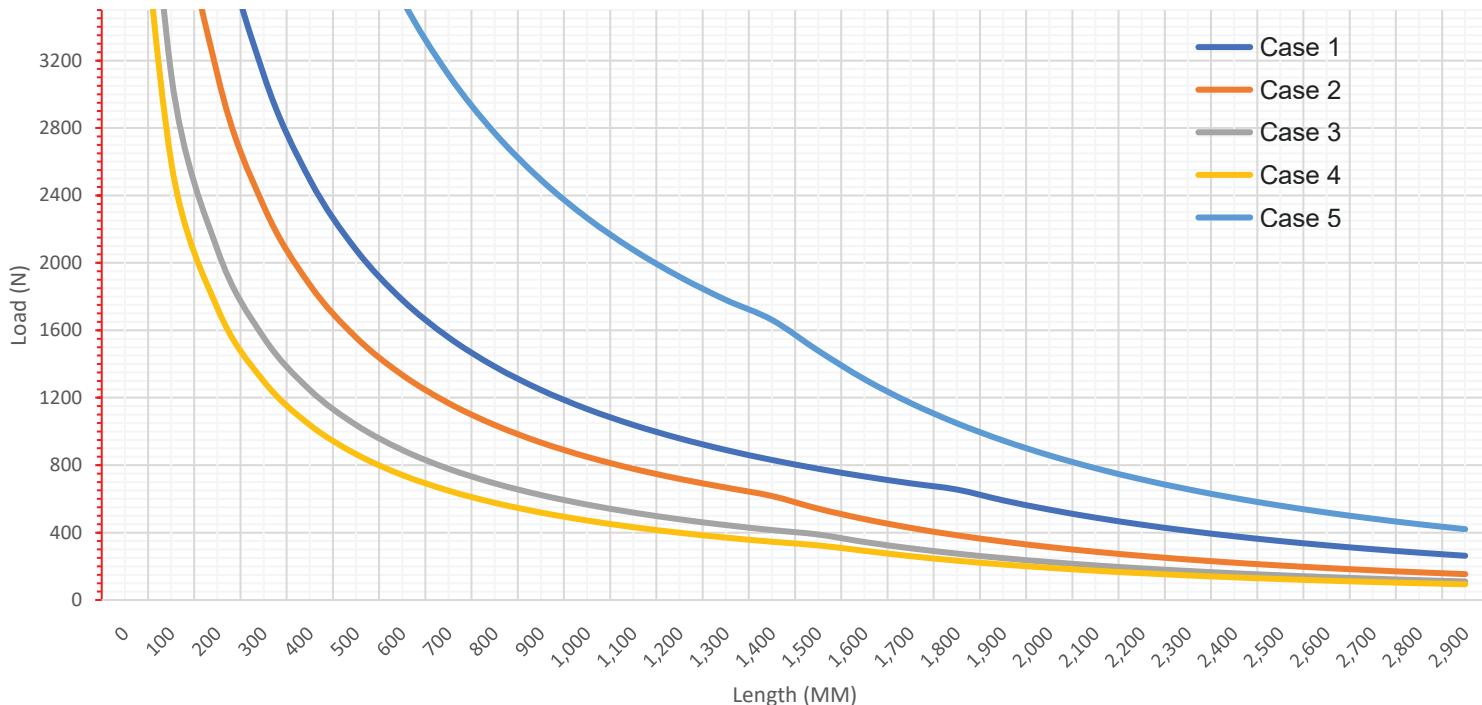
F L	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load					
SPAN mm										
0	-	-	-	-	-					
100	12464	9348	6232	5194	24929					
200	6232	4674	3116	2597	12464					
300	4155	3116	2077	1731	8310					
400	3116	2337	1558	1298	6232					
500	2493	1870	1246	1039	4986					
600	2077	1558	1039	866	4155					
700	1781	1335	890	742	3561					
800	1558	1169	779	649	3116					
900	1385	1039	692	577	2770					
1000	1246	935	623	519	2493					
1100	1133	850	567	472	2266					
1200	1039	779	519	433	2077					
1300	959	719	479	400	1918					
1400	890	668	445	371	1781					
1500	831	588	415	346	1603					
1600	779	517	371	325	1409					
1700	733	458	328	305	1248					
1800	692	408	293	272	1113					
1900	624	366	263	244	999					
2000	563	331	237	220	901					



Maximum Recommended loads Graph for GM414115

Calculation Criteria

Safety Factor $X = 1.5$
 Max. Bending Deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

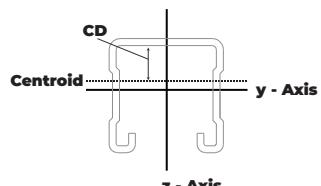
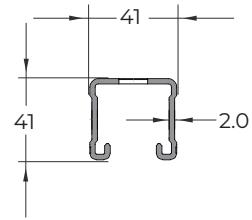
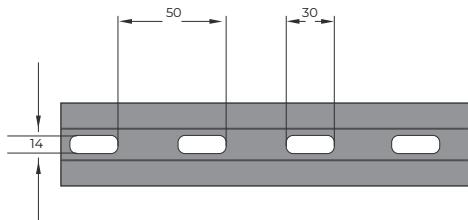
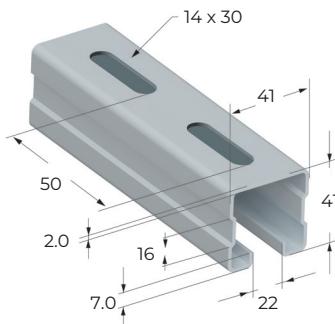


Unsupported Cantilever Load Case for GM414115

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F/L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length L
0	-	-	-	-	-	-
250	1246	2493	1246	831	2493	
500	563	1246	623	415	1246	
750	250	831	415	277	668	
1000	141	623	312	194	376	
1250	90	499	232	124	240	
1500	63	415	161	86	167	
1750	46	356	118	63	123	
2000	35	282	91	48	94	

Strut Profile GM414120



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

Type GM41 41 20

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM414120	2.17	00	266	17.7	76133	59610	2687	2523

Load Cases

Max Recommended Load - N

CASE 1

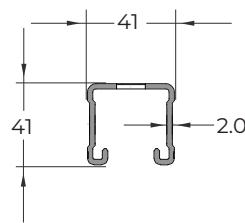
CASE 2

CASE 3

CASE 4

CASE 5

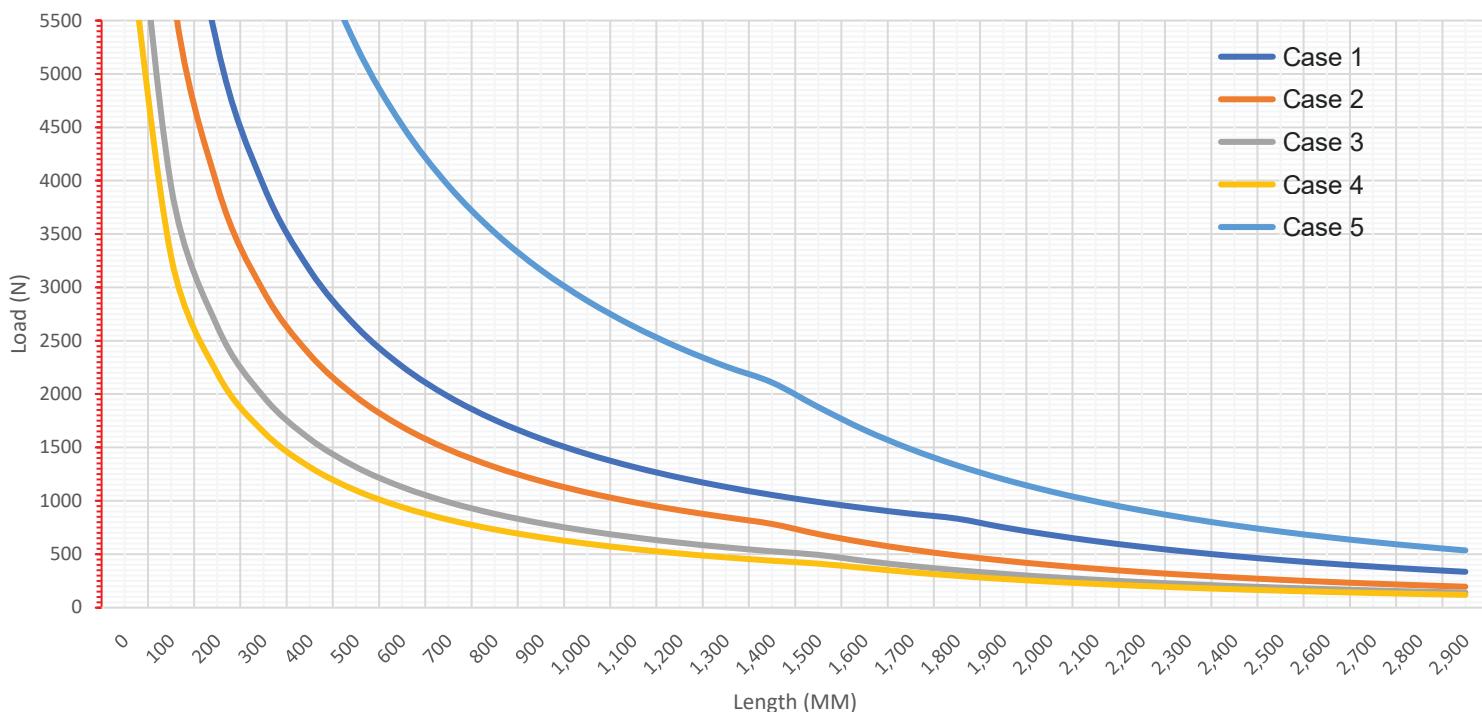
F L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	15811	11858	7905	6588	31622
200	7905	5929	3953	3294	15811
300	5270	3953	2635	2196	10541
400	3953	2965	1976	1647	7905
500	3162	2372	1581	1318	6324
600	2635	1976	1318	1098	5270
700	2259	1694	1129	941	4517
800	1976	1482	988	823	3953
900	1757	1318	878	732	3514
1000	1581	1186	791	659	3162
1100	1437	1078	719	599	2875
1200	1318	988	659	549	2635
1300	1216	912	608	507	2432
1400	1129	847	565	471	2259
1500	1054	746	527	439	2035
1600	988	656	471	412	1788
1700	930	581	417	387	1584
1800	878	518	372	345	1413
1900	793	465	334	310	1268
2000	715	420	301	279	1145



Maximum Recommended loads Graph for GM414120

Calculation Criteria

Safety Factor $X = 1.5$
 Max. Bending Deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

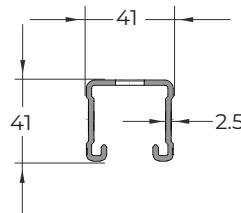
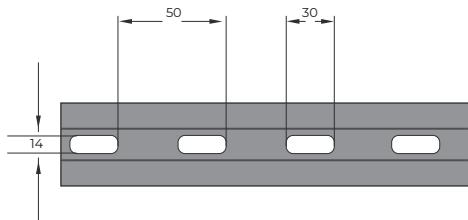
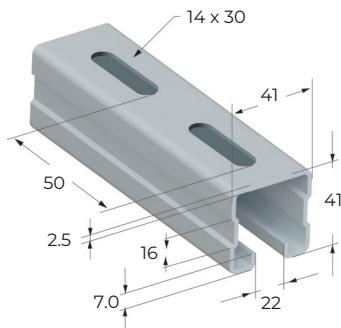


Unsupported Cantilever Load Case for GM414120

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5
F L	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length L
Span [mm]					
0	-	-	-	-	-
250	1581	3162	1581	1054	3162
500	715	1581	791	527	1581
750	318	1054	527	351	848
1000	179	791	395	246	477
1250	114	632	294	158	305
1500	79	527	204	109	212
1750	58	452	150	80	156
2000	45	358	115	62	119

Strut Profile GM414125



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

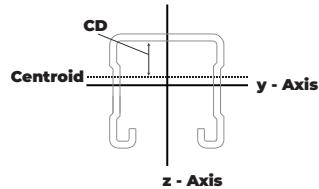
Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated



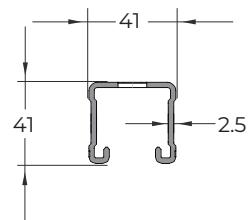
Type GM 41 41 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM414125	2.66	00	326	17.7	91022	70880	4408	2998

Load Cases

Max Recommended Load - N

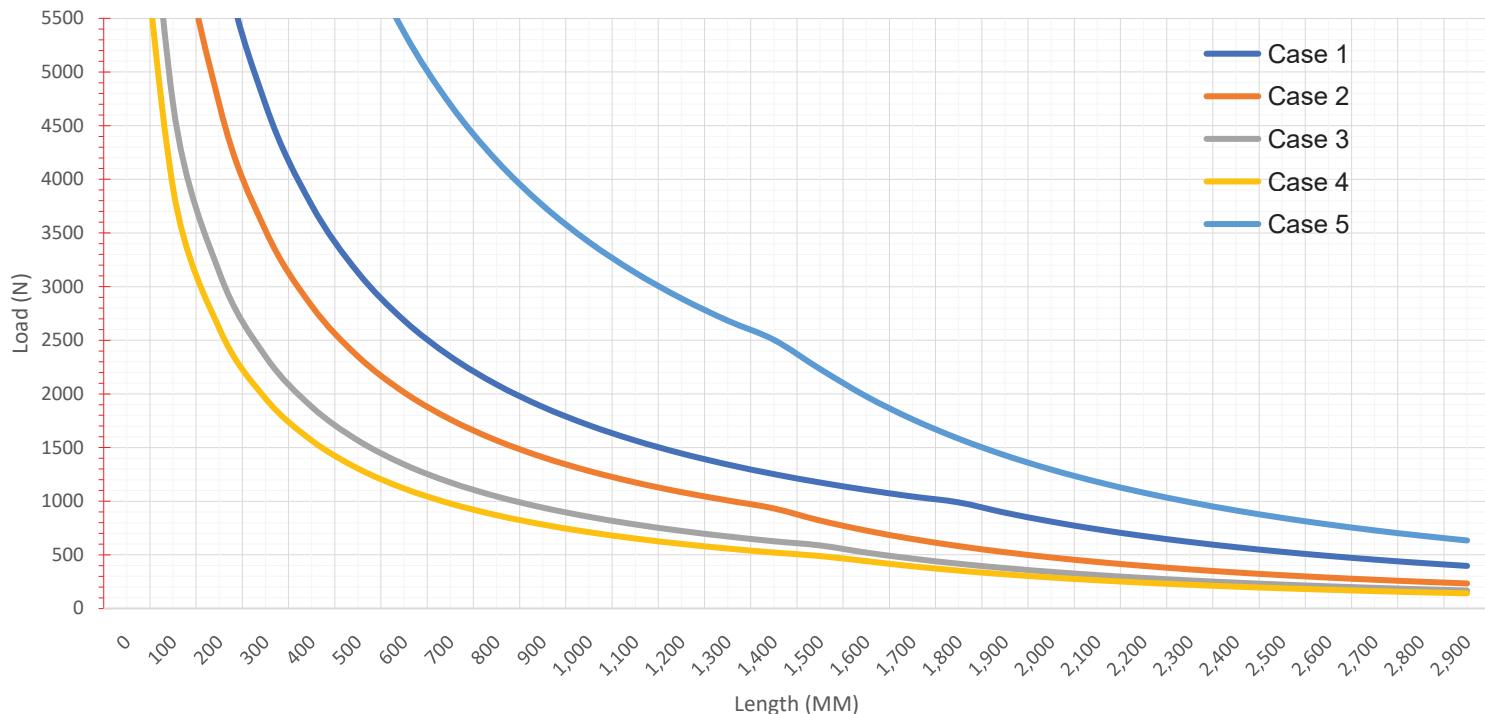
CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
F L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load				
SPAN mm	Diagram: Single point load at center	Diagram: 2 point loads, equidistant	Diagram: 3 point loads, equidistant	Diagram: 4 point loads, equidistant	Diagram: Uniformly distributed load				
0	-	-	-	-	-				
100	18787	14091	9394	7828	37575				
200	9394	7045	4697	3914	18787				
300	6262	4697	3131	2609	12525				
400	4697	3523	2348	1957	9394				
500	3757	2818	1879	1566	7515				
600	3131	2348	1566	1305	6262				
700	2684	2013	1342	1118	5368				
800	2348	1761	1174	979	4697				
900	2087	1566	1044	870	4175				
1000	1879	1409	939	783	3757				
1100	1708	1281	854	712	3416				
1200	1566	1174	783	652	3131				
1300	1445	1084	723	602	2890				
1400	1342	1006	671	559	2684				
1500	1252	888	626	522	2419				
1600	1174	780	560	489	2126				
1700	1105	691	496	460	1884				
1800	1044	616	442	410	1680				
1900	942	553	397	368	1508				
2000	851	499	358	332	1361				



Maximum Recommended loads Graph for GM414125

Calculation Criteria

Safety Factor $X = 1.5$
 Max. Bending Deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

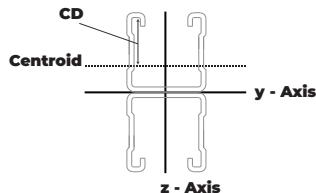
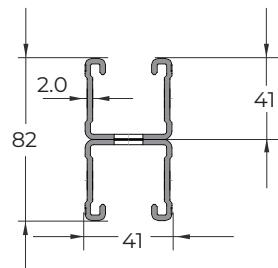
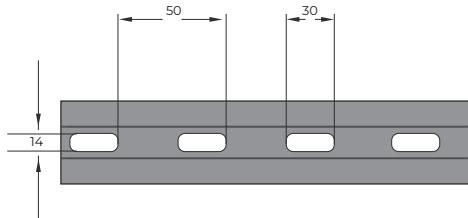
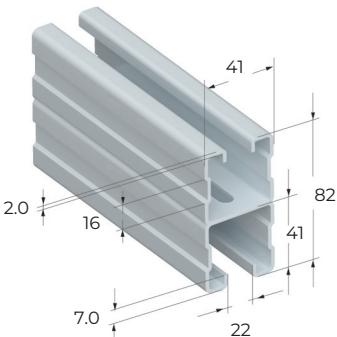


Unsupported Cantilever Load Case for GM414125

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F/L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
0	0	-	-	-	-	-
250	3757	1879	1879	1252	3757	3757
500	1879	851	939	626	1879	1879
750	1252	378	626	417	1008	1008
1000	939	213	470	293	567	567
1250	751	136	350	187	363	363
1500	626	95	243	130	252	252
1750	537	69	179	96	185	185
2000	425	53	137	73	142	142

Strut Profile GMD414120



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

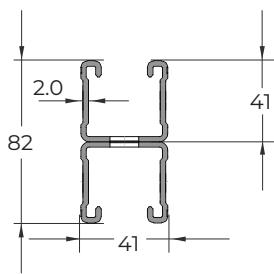
Type GMD 41 41 2.0

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GMD414120	5.32	00	652	41.3	181800	344600	8804	8344

Load Cases

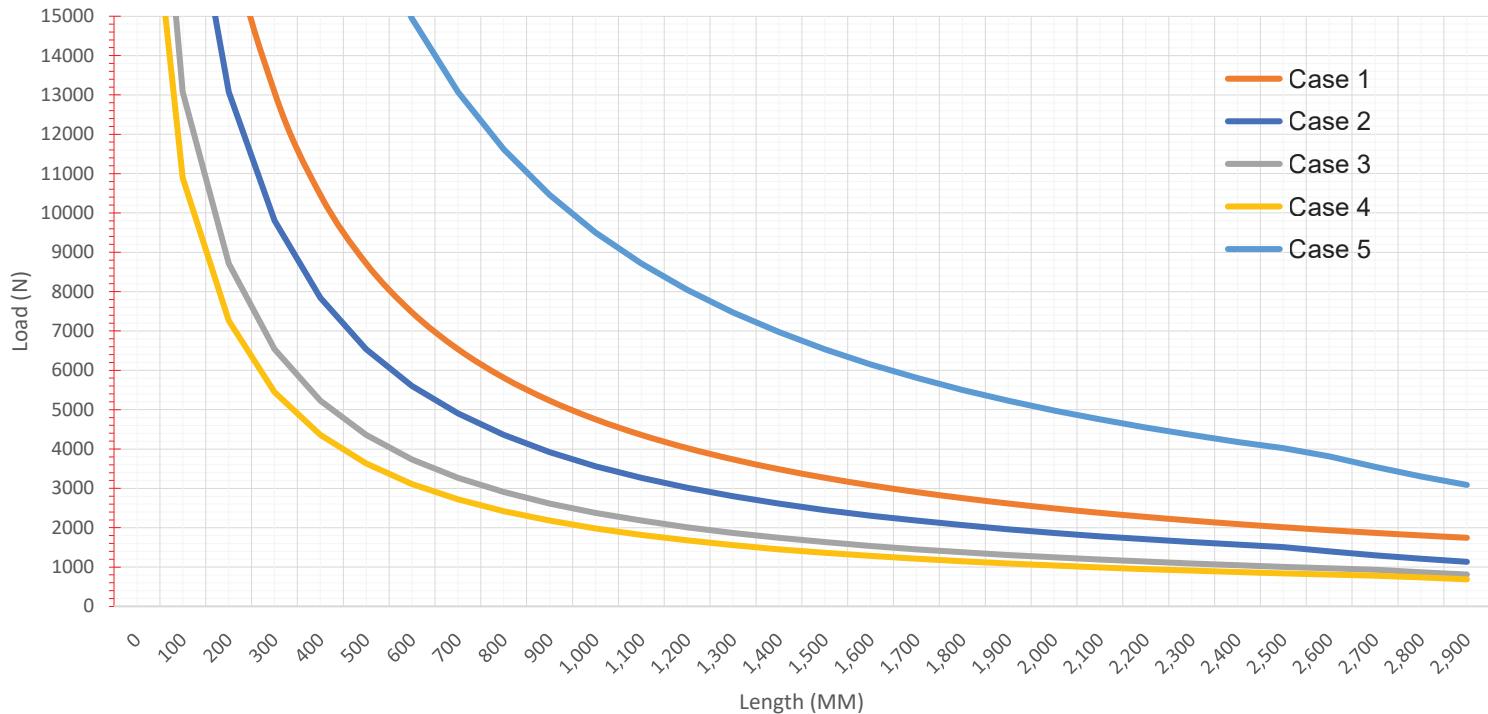
Max Recommended Load - N

F L	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	52289	39217	26145	21787	104578
200	26145	19608	13072	10894	52289
300	17430	13072	8715	7262	34859
400	13072	9804	6536	5447	26145
500	10458	7843	5229	4357	20916
600	8715	6536	4357	3631	17430
700	7470	5602	3735	3112	14940
800	6536	4902	3268	2723	13072
900	5810	4357	2905	2421	11620
1000	5229	3922	2614	2179	10458
1100	4754	3565	2377	1981	9507
1200	4357	3268	2179	1816	8715
1300	4022	3017	2011	1676	8044
1400	3735	2801	1867	1556	7470
1500	3486	2614	1743	1452	6972
1600	3268	2451	1634	1362	6536
1700	3076	2307	1538	1282	6152
1800	2905	2179	1452	1210	5810
1900	2752	2064	1376	1147	5504
2000	2614	1961	1307	1089	5229



Maximum Recommended loads Graph for GMD414120

Calculation Criteria		
Safety	X	= 1.5
Max. Bending	δ_{zul}	= L/200
Module of elasticity	E	= 210000 N/mm ²

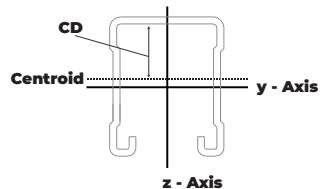
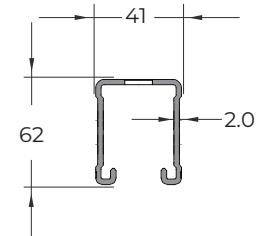
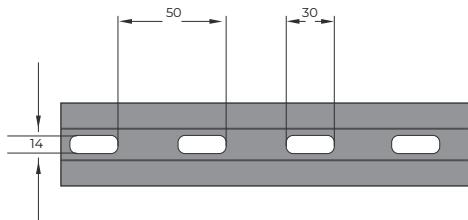
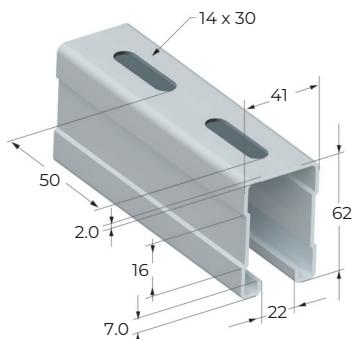


Unsupported Cantilever Load Case for GMD414120

Max Recommended Load - N

$\frac{F}{L}$	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length				
0	-	-	-	-	-	-	-	-	-	-
250	5229	-	10458	-	5229	-	3486	-	10458	-
500	2614	-	5229	-	2614	-	1743	-	5229	-
750	1743	-	3486	-	1743	-	1162	-	3486	-
1000	1034	-	2614	-	1307	-	871	-	2614	-
1250	662	-	2092	-	1046	-	697	-	1764	-
1500	459	-	1743	-	871	-	581	-	1225	-
1750	338	-	1494	-	747	-	465	-	900	-
2000	258	-	1307	-	654	-	356	-	689	-

Strut Profile GM416220



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

Type GM 41 62 2.0

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM416220	2.84	00	350	27.7	108568	167227	5258	4830

Load Cases

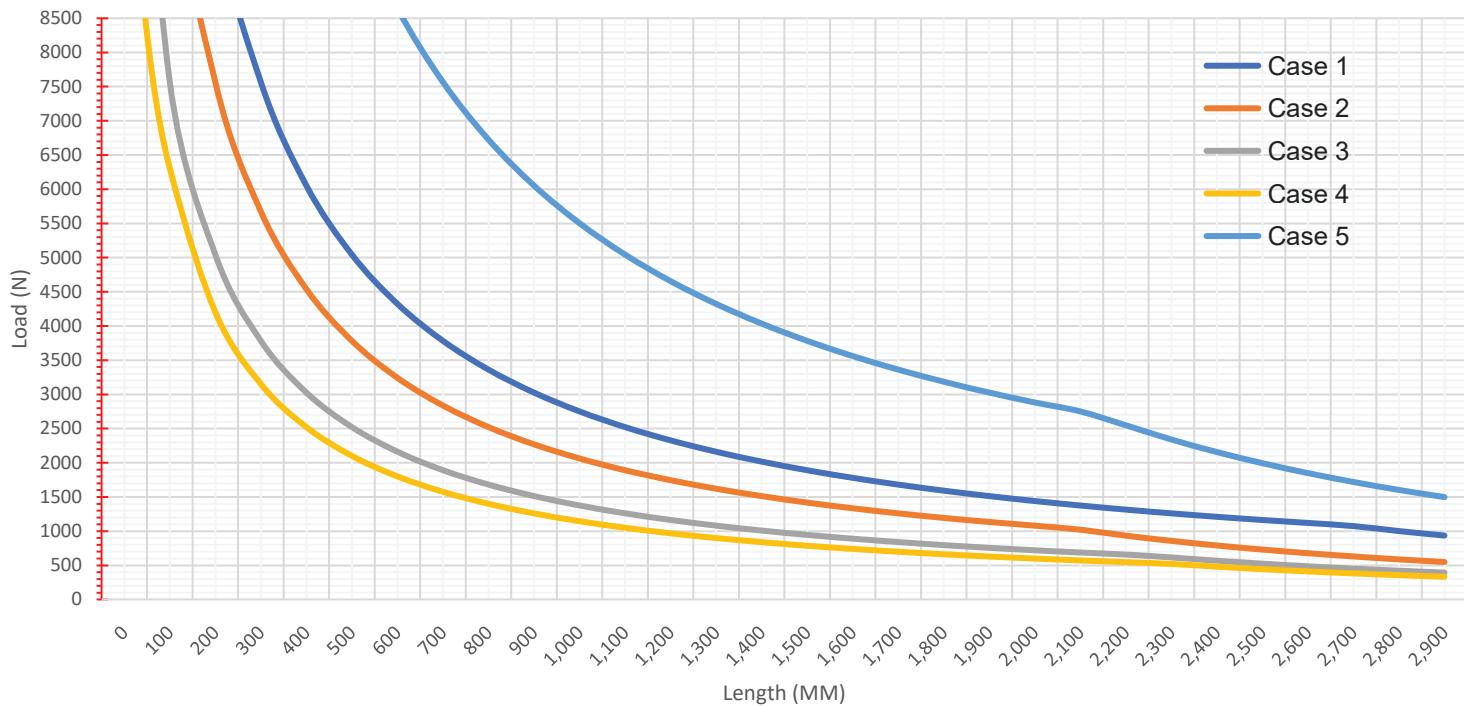
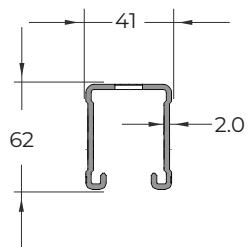
Max Recommended Load - N

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
F / L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	30268	22701	15134	12612	60536
200	15134	11351	7567	6306	30268
300	10089	7567	5045	4204	20179
400	7567	5675	3784	3153	15134
500	6054	4540	3027	2522	12107
600	5045	3784	2522	2102	10089
700	4324	3243	2162	1802	8648
800	3784	2838	1892	1576	7567
900	3363	2522	1682	1401	6726
1000	3027	2270	1513	1261	6054
1100	2752	2064	1376	1147	5503
1200	2522	1892	1261	1051	5045
1300	2328	1746	1164	970	4657
1400	2162	1622	1081	901	4324
1500	2018	1513	1009	841	4036
1600	1892	1419	946	788	3784
1700	1780	1335	890	742	3561
1800	1682	1261	841	701	3363
1900	1593	1195	797	664	3186
2000	1513	1135	757	631	3027

Maximum Recommended loads Graph for GM416220

Calculation Criteria

Safety factor $X = 1.5$
 Max. Bending deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

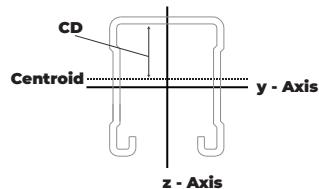
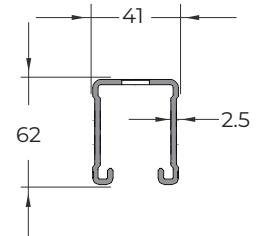
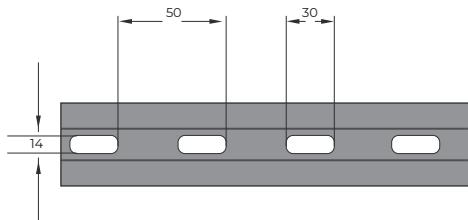
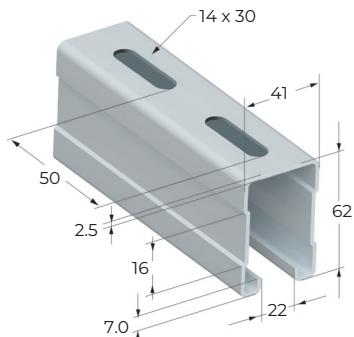


Unsupported Cantilever Load Case for GM416220

Max Recommended Load - N

F/L	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length				
0		-	-	-	-	-	-	-	-	-
250		3027	6054	3027	2018	6054				
500		1513	3027	1513	1009	3027				
750		936	2018	1009	673	2018				
1000		527	1513	757	504	1405				
1250		337	1211	605	404	899				
1500		234	1009	504	322	624				
1750		172	865	432	237	459				
2000		132	757	339	181	351				

Strut Profile GM416225



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

Type GM 41 62 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM416225	3.48	00	431	27.7	130540	201514	6321	5818

Load Cases

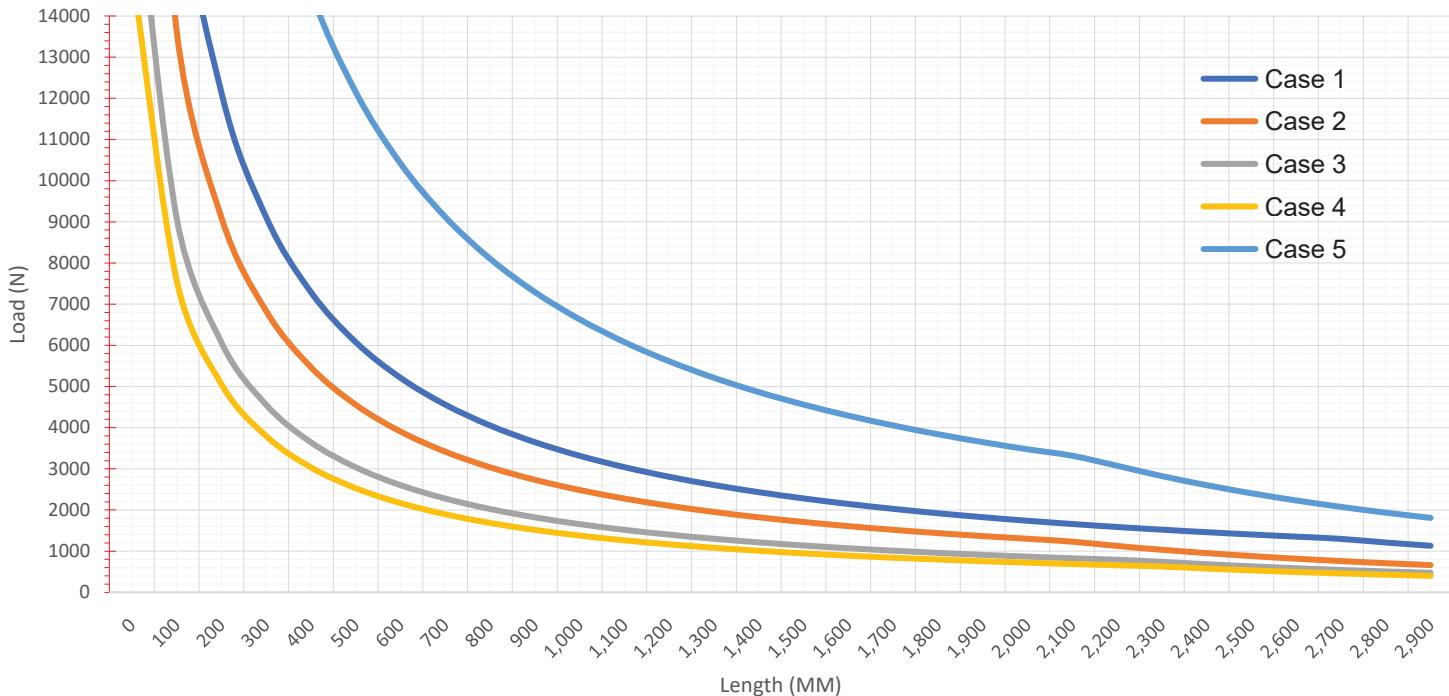
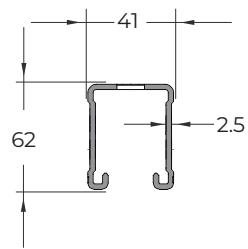
Max Recommended Load - N

F L	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	36459	27345	18230	15191	72919
200	18230	13672	9115	7596	36459
300	12153	9115	6077	5064	24306
400	9115	6836	4557	3798	18230
500	7292	5469	3646	3038	14584
600	6077	4557	3038	2532	12153
700	5208	3906	2604	2170	10417
800	4557	3418	2279	1899	9115
900	4051	3038	2026	1688	8102
1000	3646	2734	1823	1519	7292
1100	3314	2486	1657	1381	6629
1200	3038	2279	1519	1266	6077
1300	2805	2103	1402	1169	5609
1400	2604	1953	1302	1085	5208
1500	2431	1823	1215	1013	4861
1600	2279	1709	1139	949	4557
1700	2145	1609	1072	894	4289
1800	2026	1519	1013	844	4051
1900	1919	1439	959	800	3838
2000	1823	1367	911	760	3646

Maximum Recommended loads Graph for GM416225

Calculation Criteria

Safety	X	= 1.5
Max. Bending	δ_{zul}	= $L/200$
Module of elasticity	E	= 210000 N/mm ²

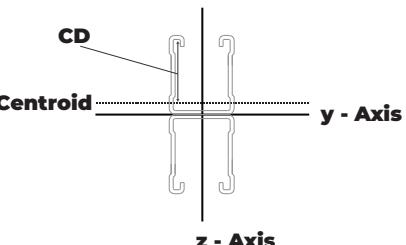
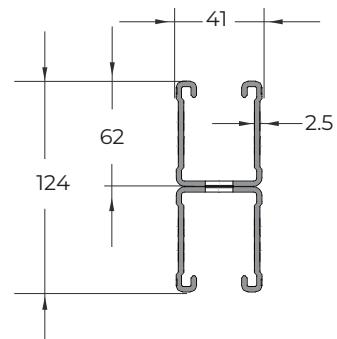
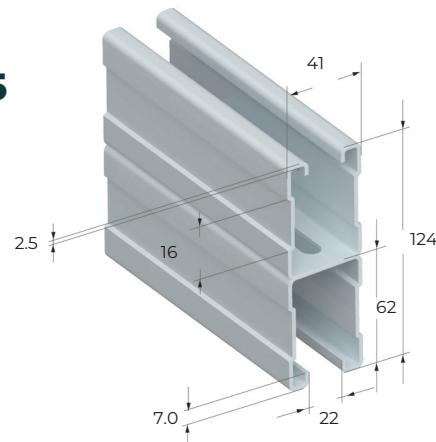
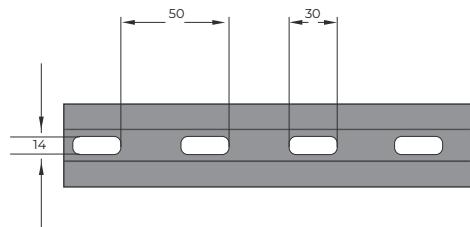


Unsupported Cantilever Load Case for GM416225

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
0	0	-	-	-	-	-
250	3646	7292	3646	2431	7292	
500	1823	3646	1823	1215	3646	
750	1128	2431	1215	810	2431	
1000	635	1823	911	608	1693	
1250	406	1458	729	486	1083	
1500	282	1215	608	388	752	
1750	207	1042	521	285	553	
2000	159	911	408	218	423	

Strut Profile GMD416225



Specification

C-profile rail, double perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD
Material type: pre-galvanized (Z-275)

Material: S235JR
Material type: hot-dip galvanized epoxy coated

Type GMD 41 62 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GMD416225	6.96	00	862	62.3	260800	1061500	12630	17039

Load Cases

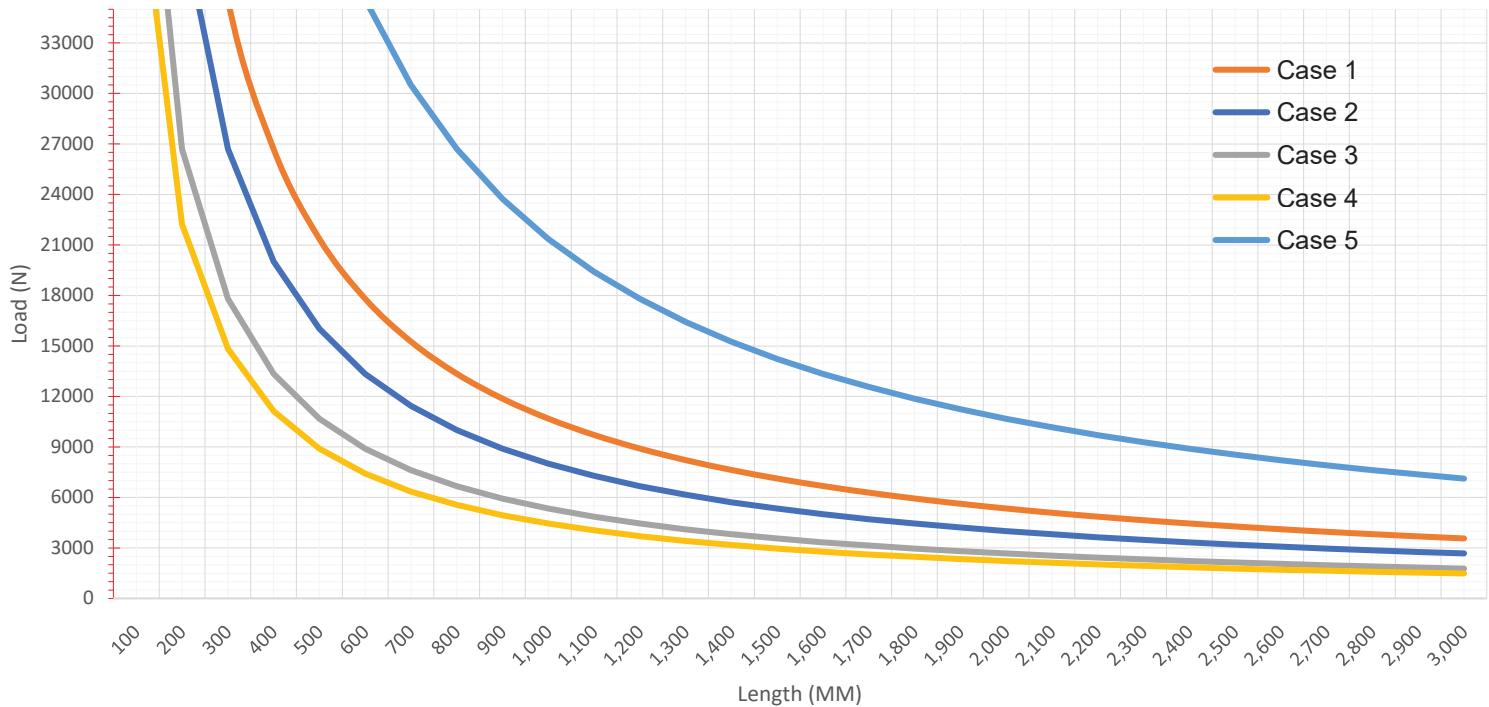
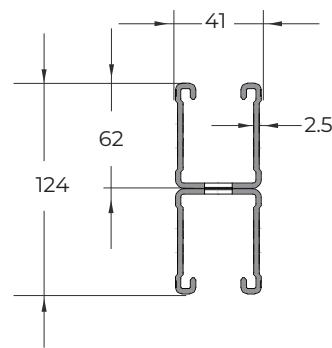
Max Recommended Load - N

$\frac{F}{L}$	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load					
SPAN mm										
0	—	—	—	—	—					
100	106778	80083	53389	44491	213555					
200	53389	40042	26694	22245	106778					
300	35593	26694	17796	14830	71185					
400	26694	20021	13347	11123	53389					
500	21356	16017	10678	8898	42711					
600	17796	13347	8898	7415	35593					
700	15254	11440	7627	6356	30508					
800	13347	10010	6674	5561	26694					
900	11864	8898	5932	4943	23728					
1000	10678	8008	5339	4449	21356					
1100	9707	7280	4854	4045	19414					
1200	8898	6674	4449	3708	17796					
1300	8214	6160	4107	3422	16427					
1400	7627	5720	3813	3178	15254					
1500	7119	5339	3559	2966	14237					
1600	6674	5005	3337	2781	13347					
1700	6281	4711	3141	2617	12562					
1800	5932	4449	2966	2472	11864					
1900	5620	4215	2810	2342	11240					
2000	5339	4004	2669	2225	10678					

Maximum Recommended loads Graph for GMD416225

Calculation Criteria

$$\begin{aligned} \text{Safety Factor} & X = 1.5 \\ \text{Max. Bending Deflection} & \delta_{zul} = L/200 \\ \text{Module of elasticity} & E = 210000 \text{ N/mm}^2 \end{aligned}$$

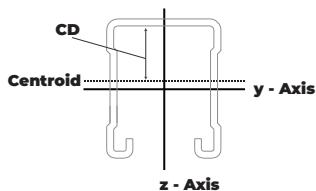
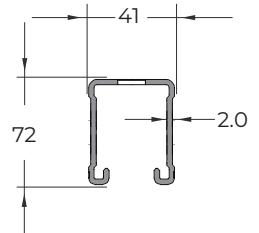
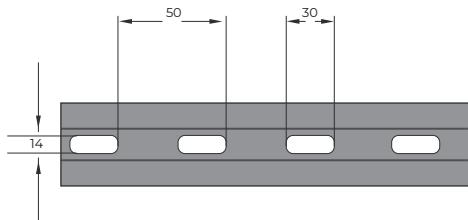
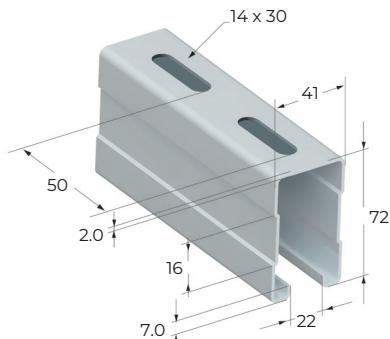


Unsupported Cantilever Load Case for GMD416225

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F/L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
0	0	-	-	-	-	-
250	10678	21356	10678	7119	21356	-
500	5339	10678	5339	3559	10678	-
750	3559	7119	3559	2373	7119	-
1000	2669	5339	2669	1780	5339	-
1250	2136	4271	2136	1424	4271	-
1500	1486	3559	1780	1186	3559	-
1750	1092	3051	1525	1017	2912	-
2000	836	2669	1335	890	2229	-

Strut Profile GM417220



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

Type GM 41 72 2.0

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM417220	3.14	00	390	32.5	124013	244391	6005	6144

Load Cases

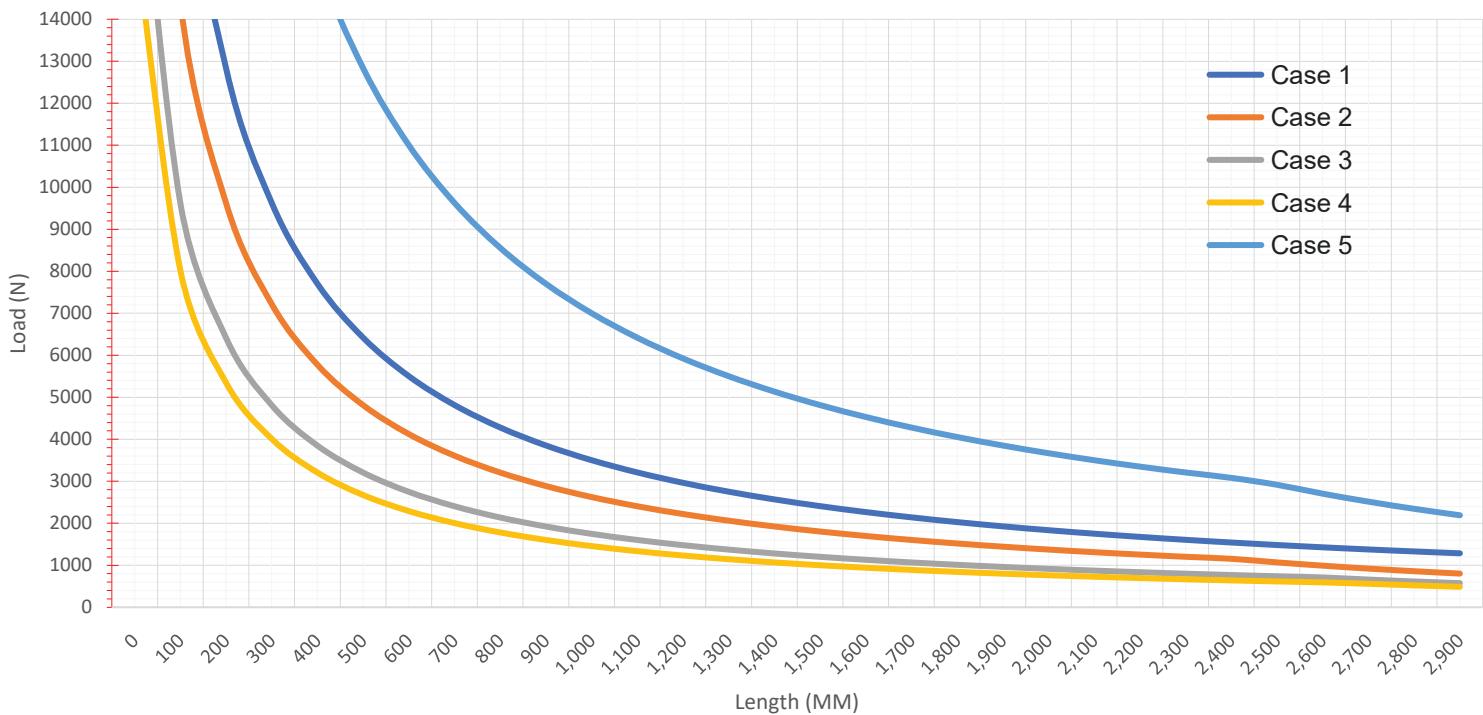
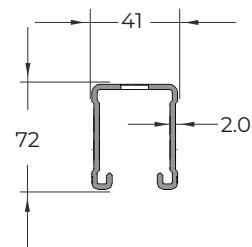
Max Recommended Load - N

	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
F / L	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	38502	28877	19251	16043	77005
200	19251	14438	9626	8021	38502
300	12834	9626	6417	5348	25668
400	9626	7219	4813	4011	19251
500	7700	5775	3850	3209	15401
600	6417	4813	3209	2674	12834
700	5500	4125	2750	2292	11001
800	4813	3610	2406	2005	9626
900	4278	3209	2139	1783	8556
1000	3850	2888	1925	1604	7700
1100	3500	2625	1750	1458	7000
1200	3209	2406	1604	1337	6417
1300	2962	2221	1481	1234	5923
1400	2750	2063	1375	1146	5500
1500	2567	1925	1283	1070	5134
1600	2406	1805	1203	1003	4813
1700	2265	1699	1132	944	4530
1800	2139	1604	1070	891	4278
1900	2026	1520	1013	844	4053
2000	1925	1444	963	802	3850

Maximum Recommended loads Graph for GM417220

Calculation Criteria

Safety	X	= 1.5
Max. Bending	δ_{zul}	= L/200
Module of elasticity	E	= 210000 N/mm ²

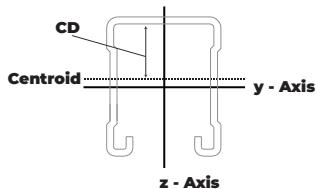
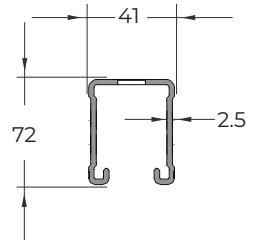
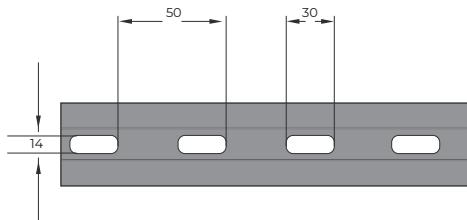
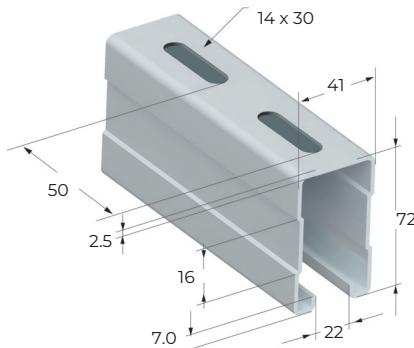


Unsupported Cantilever Load Case for GM417220

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5
F L	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
Span [mm]					
0	-	-	-	-	-
250	3850	7700	3850	2567	7700
500	1925	3850	1925	1283	3850
750	1283	2567	1283	856	2567
1000	770	1925	963	642	1925
1250	493	1540	770	513	1314
1500	342	1283	642	428	912
1750	251	1100	550	346	670
2000	192	963	481	265	513

Strut Profile GM417225



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD
Material type: pre-galvanized (Z-275)

Material: S235JR
Material type: hot-dip galvanized epoxy coated

Type GM 41 72 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM417225	3.87	00	481	32.5	149358	295647	7233	7429

Load Cases

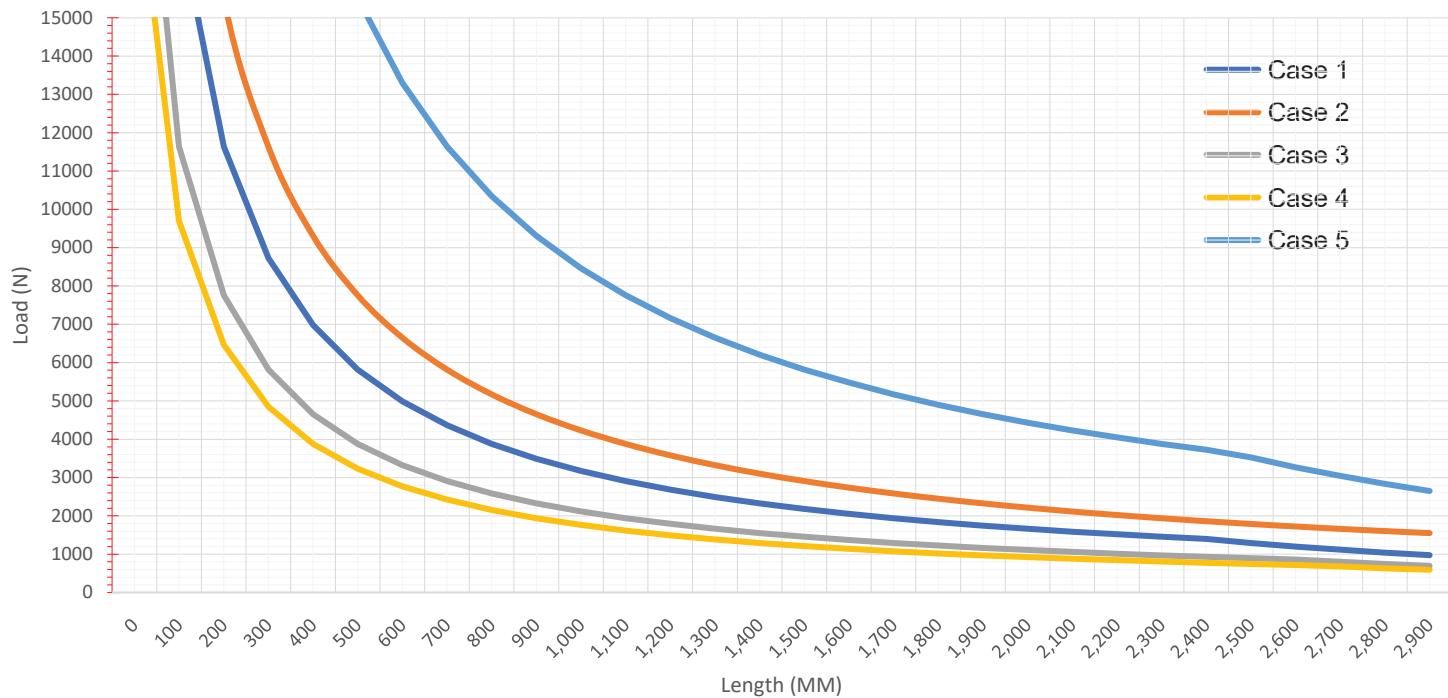
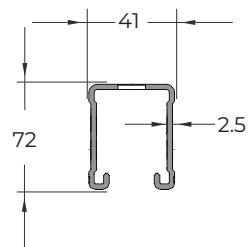
Max Recommended Load - N

$\frac{F}{L}$	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load					
SPAN mm										
0	—	—	—	—	—					
100	46555	34916	23278	19398	93110					
200	23278	17458	11639	9699	46555					
300	15518	11639	7759	6466	31037					
400	11639	8729	5819	4849	23278					
500	9311	6983	4656	3880	18622					
600	7759	5819	3880	3233	15518					
700	6651	4988	3325	2771	13301					
800	5819	4365	2910	2425	11639					
900	5173	3880	2586	2155	10346					
1000	4656	3492	2328	1940	9311					
1100	4232	3174	2116	1763	8465					
1200	3880	2910	1940	1616	7759					
1300	3581	2686	1791	1492	7162					
1400	3325	2494	1663	1386	6651					
1500	3104	2328	1552	1293	6207					
1600	2910	2182	1455	1212	5819					
1700	2739	2054	1369	1141	5477					
1800	2586	1940	1293	1078	5173					
1900	2450	1838	1225	1021	4901					
2000	2328	1746	1164	970	4656					

Maximum Recommended loads Graph for GM417225

Calculation Criteria

Safety	X	= 1.5
Max. Bending	δ_{zul}	= $L/200$
Module of elasticity	E	= 210000 N/mm ²

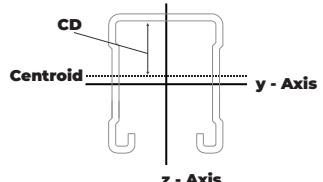
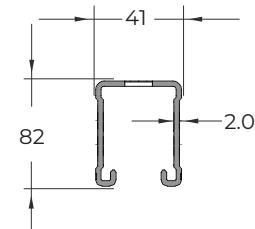
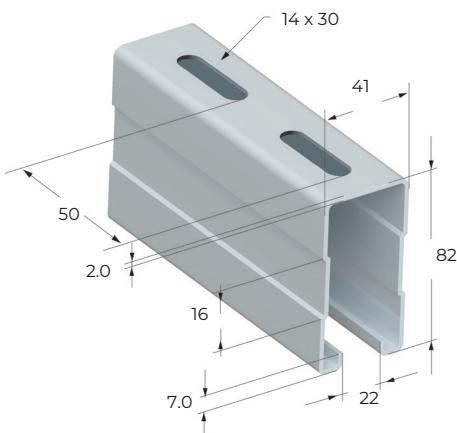
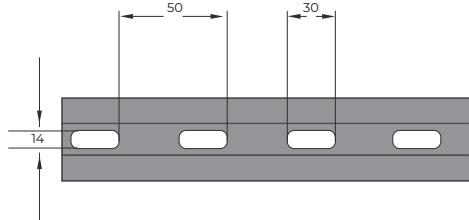


Unsupported Cantilever Load Case for GM417225

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5
F L	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
Span [mm]					
0	-	-	-	-	-
250	4656	9311	4656	3104	9311
500	2328	4656	2328	1552	4656
750	1552	3104	1552	1035	3104
1000	931	2328	1164	776	2328
1250	596	1862	931	621	1589
1500	414	1552	776	517	1104
1750	304	1330	665	419	811
2000	233	1164	582	320	621

Strut Profile GM418220



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated

Type GM 41 82 2.0

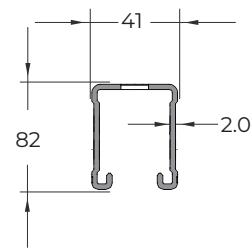
Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM418220	3.45	00	430	37.4	139458	341020	6753	7594

Load Cases

Max Recommended Load - N

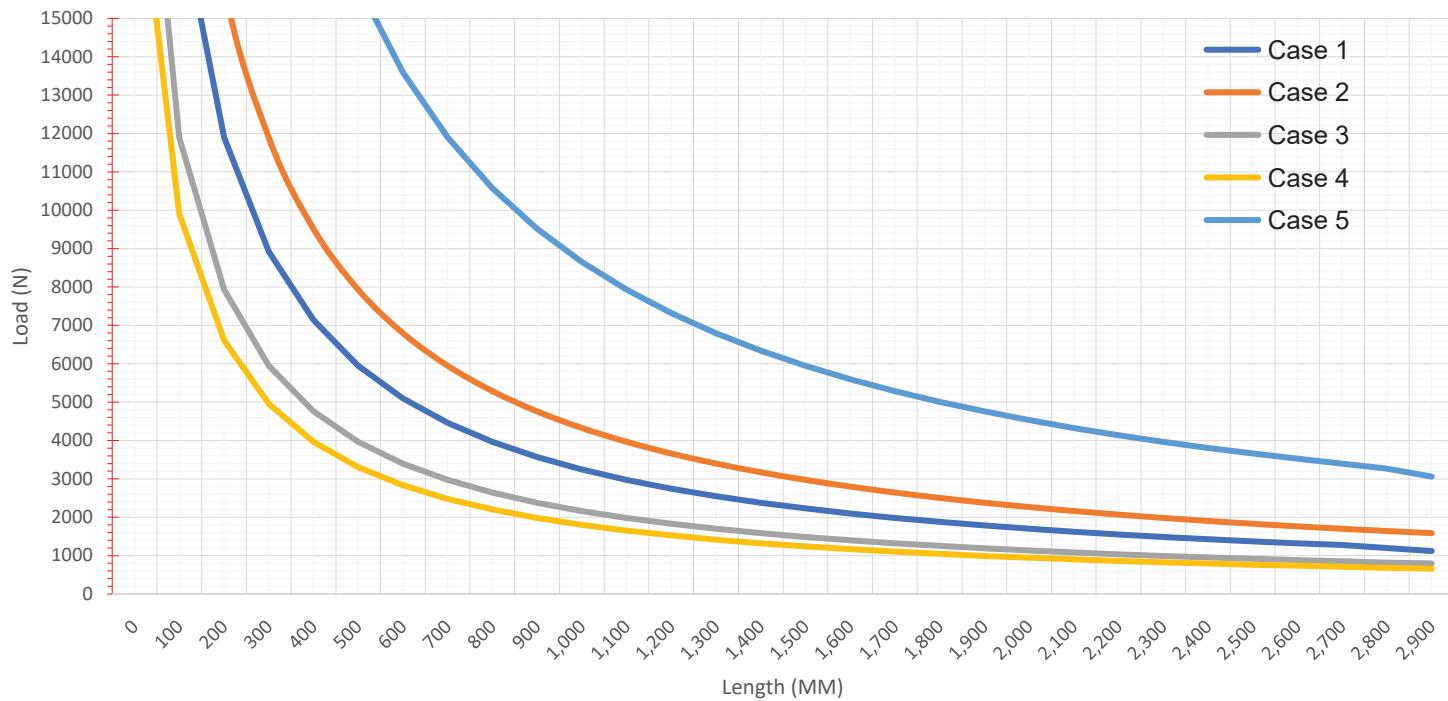
F L	CASE 1	CASE 2	CASE 3	CASE 4	CASE 5
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load
SPAN mm					
0	-	-	-	-	-
100	47589	35692	23795	19829	95178
200	23795	17846	11897	9914	47589
300	15863	11897	7932	6610	31726
400	11897	8923	5949	4957	23795
500	9518	7138	4759	3966	19036
600	7932	5949	3966	3305	15863
700	6798	5099	3399	2833	13597
800	5949	4461	2974	2479	11897
900	5288	3966	2644	2203	10575
1000	4759	3569	2379	1983	9518
1100	4326	3245	2163	1803	8653
1200	3966	2974	1983	1652	7932
1300	3661	2746	1830	1525	7321
1400	3399	2549	1700	1416	6798
1500	3173	2379	1586	1322	6345
1600	2974	2231	1487	1239	5949
1700	2799	2100	1400	1166	5599
1800	2644	1983	1322	1102	5288
1900	2505	1879	1252	1044	5009
2000	2379	1785	1190	991	4759

Maximum Recommended loads Graph for GM418220



Calculation Criteria

Safety Factor $X = 1.5$
 Max. Bending Deflection $\delta_{zul} = L/200$
 Module of elasticity $E = 210000 \text{ N/mm}^2$

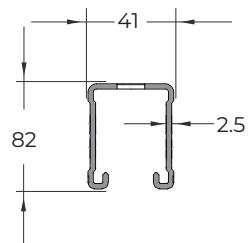
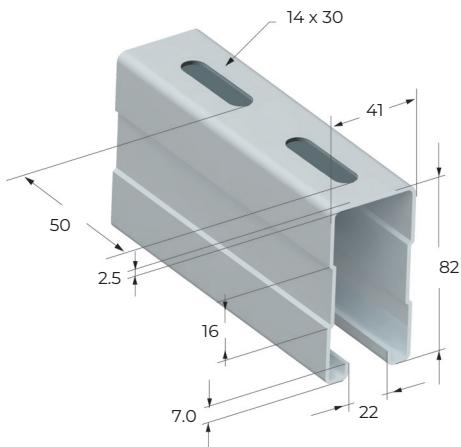
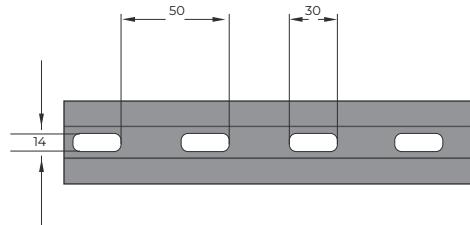


Unsupported Cantilever Load Case for GM418220

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F/L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length
0	0	-	-	-	-	-
250	4759	9518	4759	3173	9518	
500	2379	4759	2379	1586	4759	
750	1586	3173	1586	1058	3173	
1000	1074	2379	1190	793	2379	
1250	687	1904	952	635	1833	
1500	477	1586	793	529	1273	
1750	351	1360	680	453	935	
2000	269	1190	595	370	716	

Strut Profile GM418225



Specification

C-profile rail, perforated, toothed

Mounting method

Form-locking connections and shear hole haunch connections

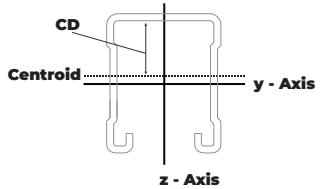
Technical data

Material: S250GD

Material type: pre-galvanized (Z-275)

Material: S235JR

Material type: hot-dip galvanized epoxy coated



Type GM 41 82 2.5

Identification	Weight [kg/m]	Length [m]	Area [mm²]	Centroid dist CD [mm]	Moment of Inertia mm⁴ Z-AXIS	Moment of Inertia mm⁴ Y-AXIS	Resistant Module mm³ Z-AXIS	Resistant Module mm³ Y-AXIS
GM418225	4.26	00	531	37.4	168176	413808	8144	9211

Load Cases

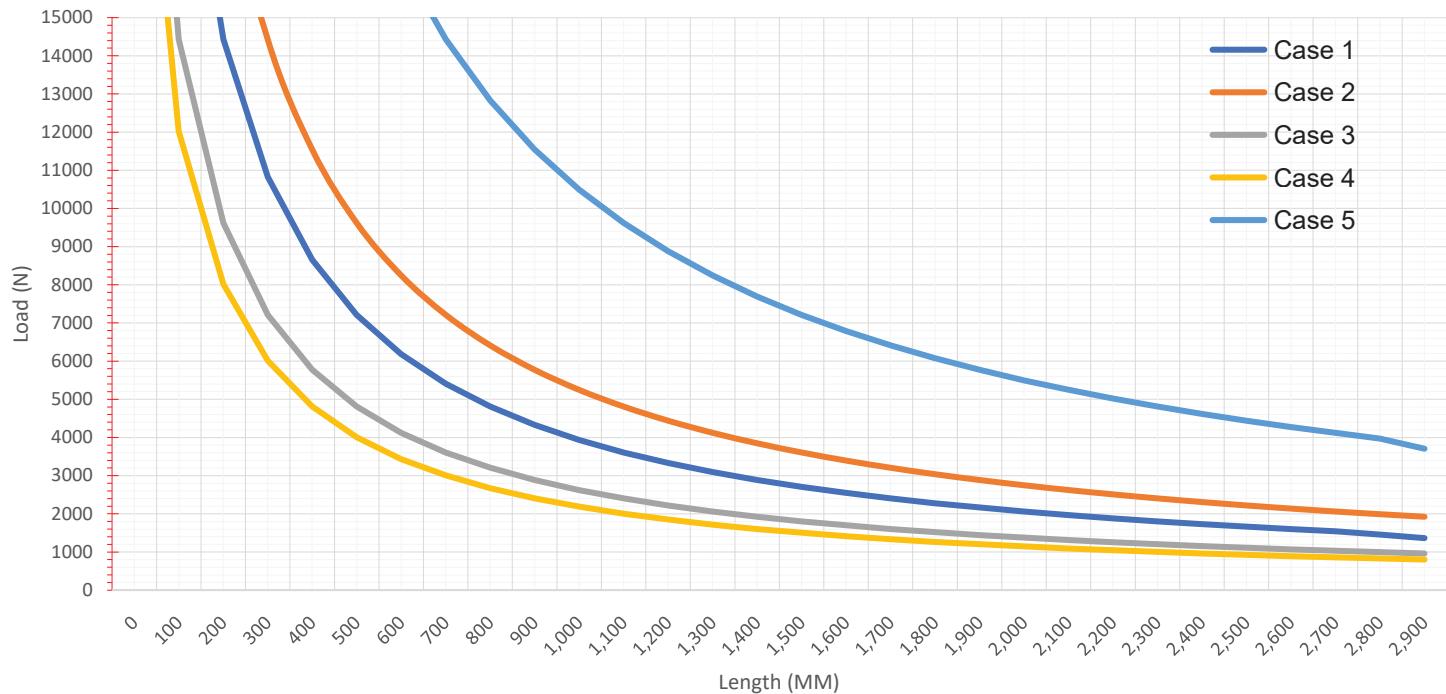
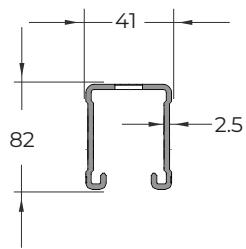
Max Recommended Load - N

F L	CASE 1		CASE 2		CASE 3		CASE 4		CASE 5	
	Single point load at center	2 point loads, equidistant	3 point loads, equidistant	4 point loads, equidistant	Uniformly distributed load					
SPAN mm										
0	-	-	-	-	-					
100	57722	43292	28861	24051	115445					
200	28861	21646	14431	12025	57722					
300	19241	14431	9620	8017	38482					
400	14431	10823	7215	6013	28861					
500	11544	8658	5772	4810	23089					
600	9620	7215	4810	4008	19241					
700	8246	6185	4123	3436	16492					
800	7215	5411	3608	3006	14431					
900	6414	4810	3207	2672	12827					
1000	5772	4329	2886	2405	11544					
1100	5247	3936	2624	2186	10495					
1200	4810	3608	2405	2004	9620					
1300	4440	3330	2220	1850	8880					
1400	4123	3092	2062	1718	8246					
1500	3848	2886	1924	1603	7696					
1600	3608	2706	1804	1503	7215					
1700	3395	2547	1698	1415	6791					
1800	3207	2405	1603	1336	6414					
1900	3038	2279	1519	1266	6076					
2000	2886	2165	1443	1203	5772					

Maximum Recommended loads Graph for GM418225

Calculation Criteria

$$\begin{aligned} \text{Safety Factor} & X = 1.5 \\ \text{Max. Bending Deflection} & \delta_{zul} = L/200 \\ \text{Module of elasticity} & E = 210000 \text{ N/mm}^2 \end{aligned}$$



Unsupported Cantilever Load Case for GM418225

Max Recommended Load - N

CASE 1		CASE 2	CASE 3	CASE 4	CASE 5	
F/L	Span [mm]	Cantilever with single load at end of cantilever length L	Cantilever with single load in center of cantilever length L/2	Cantilever with 2 loads, each at L/3	Cantilever with 3 loads, each at L/4	Cantilever with uniform load, cantilever length L
0	—	—	—	—	—	—
250	5772	11544	5772	3848	11544	—
500	2886	5772	2886	1924	5772	—
750	1924	3848	1924	1283	3848	—
1000	1303	2886	1443	962	2886	—
1250	834	2309	1154	770	2225	—
1500	579	1924	962	641	1545	—
1750	426	1649	825	550	1135	—
2000	326	1443	722	449	869	—