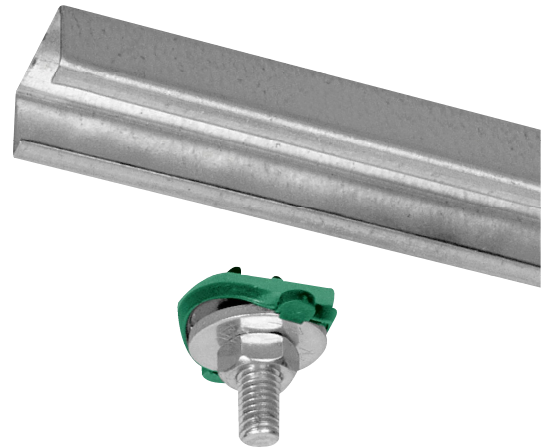
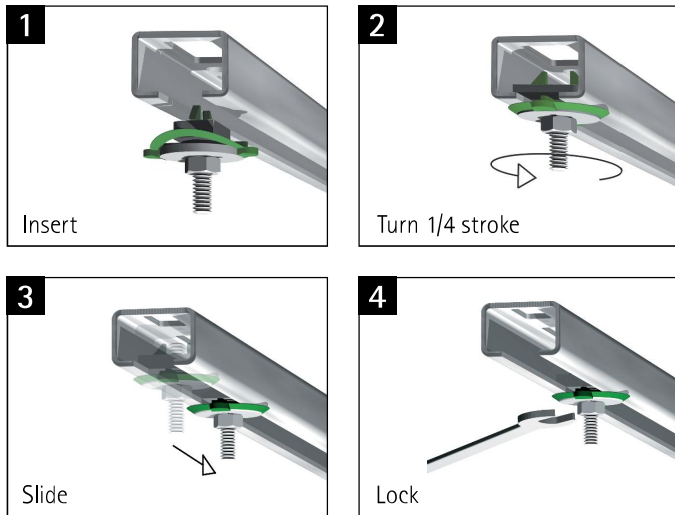


Data sheet

Technical details BIS RapidRail®

- Table of rail section properties
- Perforation pattern
- Use of rail load tables
- Rail load tables



The BIS RapidRail® system consists of various rail profiles and an extensive range of accessories.

Insert, lock, done!

The accessories are pre-assembled and delivered 'ready-to-use' to the building site. The plastic spring allows the slide nut to be fixed into the rail easily. BIS RapidRail® is so easy to use, that it is possible to save up to 40% in fixing time!

A fitting rail, for each application

BIS RapidRail® offers an unprecedented choice for rail profiles and cantilever arms. Rail WM1, WM15 and WM2 are also available in stainless steel.

- rails (various sizes)
- cantilever arms (various lengths)
- rail-wall plate



Easy fixing to both sides of rail

Fixing rail WM15, WM30 and WM35 have a unique hole pattern. The accessories can easily be used on both sides!



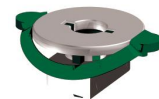
Your benefits:

- for all light and medium rail applications
- accessories pre-assembled 'ready-to-use'
- quick and easy fixing to the rail
- rail WM15, WM30 and WM35 easy to use on both sides
- saves up to 40% fixing time!

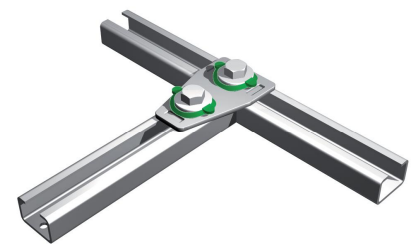
Extensive range of accessories

BIS RapidRail® offers various accessories for:

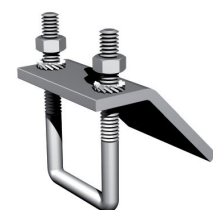
- pipe fixing



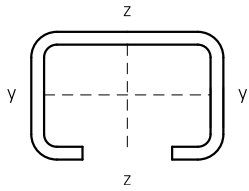
- rail connection



- rail connection



System BIS RapidRail® - Table of rail section properties



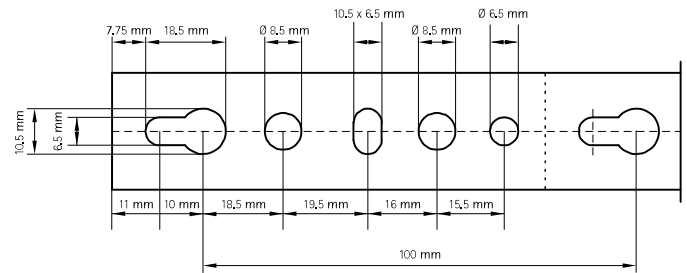
Type	Weight (kg / m)	Moment of inertia cm ⁴		Section modulus cm ³	
		ly	lz	Wy	Wz
WM0	0,57	0,28	0,91	0,30	0,67
WM1	0,87	0,28	1,47	0,35	0,98
WM15	0,86	0,49	1,66	0,49	1,10
WM2	1,34	1,71	2,65	1,08	1,76
WM30	1,74	4,57	3,79	2,03	2,53
WM35	1,75	3,62	5,03	1,81	2,65

The values of fixing rail in stainless steel are higher than those mentioned above. See Rail load tables for safe working loads.

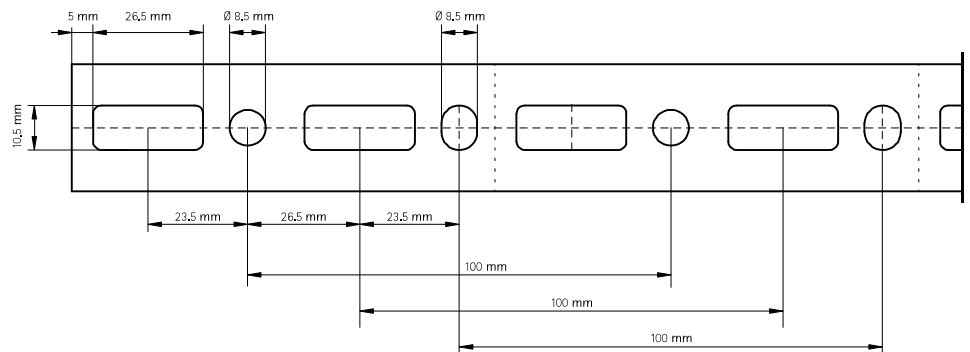
Perforation pattern for fixing to ceiling or wall.

Distance between rail end and first hole is always equal.

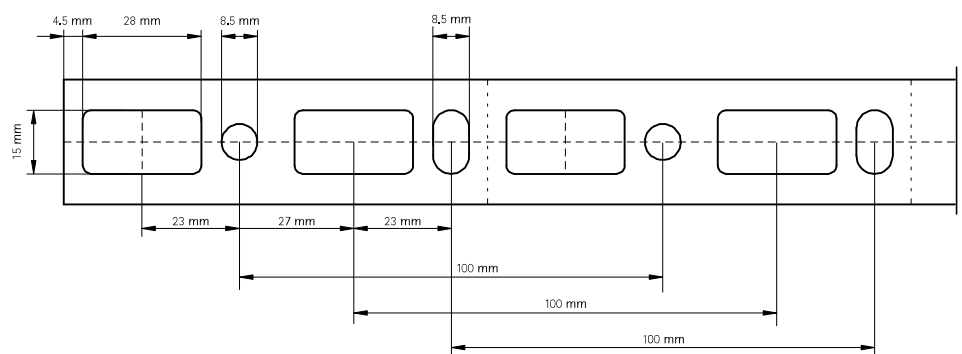
WM0 (27 x 18 mm)



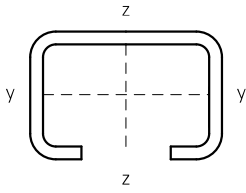
WM1 (30 x 15 mm)
WM2 (30 x 30 mm)



WM15 (30 x 20 mm)
WM30 (30 x 45 mm)
WM35 (38 x 40 mm)



System WM3 – Table of rail section properties

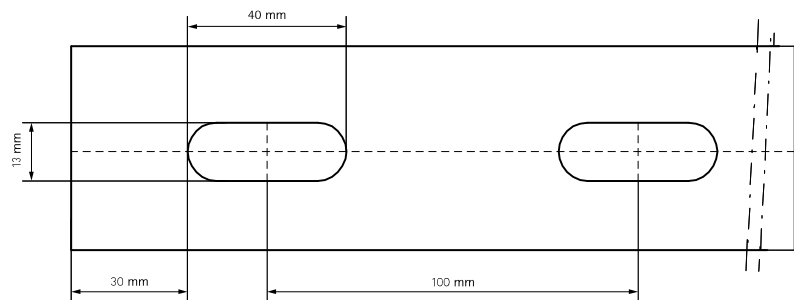


Type	Weight (kg / m)	Moment of inertia cm ⁴		Section modulus cm ³	
		ly	lz	Wy	Wz
WM3	3,22	8,17	15,95	3,95	6,38
See Rail load tables for safe working loads.					

Perforation pattern for fixing to ceiling or wall.

Distance between rail end and first hole is always equal.

WM3 (50 x 40 mm)



Calculation method

The published safe working loads are based on tests with perforated (slotted) rail. For non perforated rail the safe working loads can be taken as 20 % higher.

Loads are calculated taking into consideration a maximum deflection (f) of length $1/200 \times L$ and a maximum bending stress of 160 N/mm^2 .

1 N (Newton) = 0,102 kg

1 kg = 9,8 N (Newton)

Fixing of rails to walls or ceilings

The strength of the anchoring of the rail has not been taken into consideration. The installer must verify that the bolts and wall plugs used are suitable for the maximum permitted loading of the rail.

Methods of loading

Where loads are suspended beneath rails, the load must not exceed the relevant safe load of the slide nut. To increase rigidity of the installation we recommend the use of a U-formed washer.

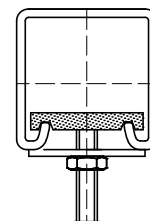
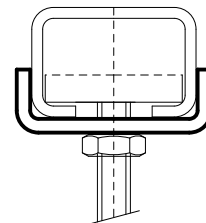
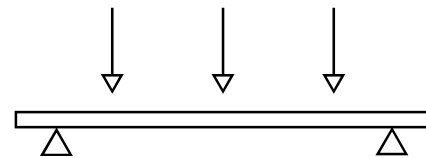
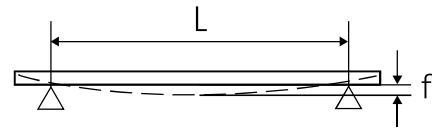
Reading the rail loading tables

The stated values are only valid for the fixing rail. The maximum safe load of all other construction parts have to be verified. The stated maximum safe load is calculated for a static load at free bending support.

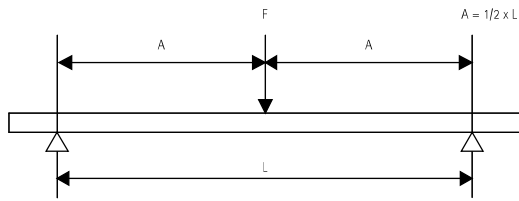
Where the segment is marked with a hyphen, the stated length cannot be safely loaded.









Special conditions

In case of doubt or for special conditions not stated in the loading tables, please do not hesitate to contact our technical department for their advice.



BIS RapidRail® Fixing rail: suspension on 1 point

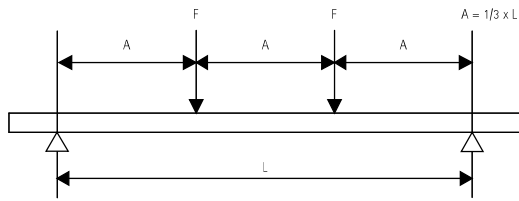










BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
250	758	899	1,249	1,951	3,238	5,199	4,821	10,099
300	631	749	1,041	1,626	2,698	4,333	4,018	8,416
350	541	642	892	1,393	2,313	3,714	3,444	7,214
400	474	562	781	1,219	2,023	3,250	3,013	6,312
450	421	499	694	1,084	1,799	2,889	2,679	5,611
500	379	449	625	975	1,619	2,600	2,411	5,050
600	316	358	521	813	1,349	2,166	2,009	4,208
700	266	263	446	697	1,156	1,857	1,722	3,607
800	204	202	348	571	1,012	1,625	1,507	3,156
900	161	159	275	451	899	1,444	1,339	2,805
1,000	130	129	223	366	780	1,300	1,205	2,525
1,200	91	90	155	254	542	1,083	1,004	2,104
1,400	67	66	114	187	398	928	841	1,803
1,600	51	50	87	143	305	812	644	1,456
1,800	40	40	69	113	241	643	509	1,150
2,000	33	32	56	91	195	521	412	932
2,250	26	25	44	72	154	412	326	736
2,500	21	21	36	58	125	333	264	596
2,750	17	17	29	48	103	275	218	493
3,000	14	14	25	41	87	231	183	414
3,250	12	12	21	35	74	197	156	353
3,500	11	11	18	30	64	170	135	304
3,750	-	-	16	26	55	148	117	265
4,000	-	-	14	23	49	130	103	233
4,250	-	-	12	20	43	115	91	206
4,500	-	-	11	18	39	103	81	184
4,750	-	-	-	16	35	92	73	165
5,000	-	-	-	15	31	83	66	149
5,250	-	-	-	13	28	76	60	135
5,500	-	-	-	12	26	69	55	123
5,750	-	-	-	11	24	63	50	113
6,000	-	-	-	10	22	58	46	104

Max. allowed load in N.

The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: 2 equal loads



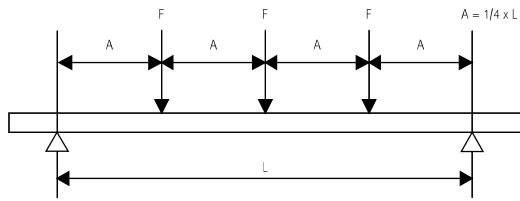
BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
250	568	674	937	1,463	2,428	3,900	3,616	7,574
300	474	562	781	1,219	2,023	3,250	3,013	6,312
350	406	481	669	1,045	1,734	2,785	2,583	5,410
400	355	421	586	914	1,518	2,437	2,260	4,734
450	316	374	521	813	1,349	2,166	2,009	4,208
500	284	303	468	732	1,214	1,950	1,808	3,787
600	213	210	363	596	1,012	1,625	1,507	3,156
700	156	155	267	438	867	1,393	1,291	2,705
800	120	118	204	335	715	1,219	1,130	2,367
900	95	94	161	265	565	1,083	1,004	2,104
1,000	77	76	131	215	458	975	904	1,894
1,200	53	53	91	149	318	812	672	1,519
1,400	39	39	67	109	234	624	494	1,116
1,600	30	30	51	84	179	478	378	854
1,800	24	23	40	66	141	377	299	675
2,000	19	19	33	54	114	306	242	547
2,250	15	15	26	42	90	242	191	432
2,500	12	12	21	34	73	196	155	350
2,750	10	10	17	28	61	162	128	289
3,000	-	-	15	24	51	136	108	243
3,250	-	-	12	20	43	116	92	207
3,500	-	-	11	18	37	100	79	179
3,750	-	-	-	15	33	87	69	156
4,000	-	-	-	13	29	76	60	137
4,250	-	-	-	12	25	68	54	121
4,500	-	-	-	11	23	60	48	108
4,750	-	-	-	-	20	54	43	97
5,000	-	-	-	-	18	49	39	87
5,250	-	-	-	-	17	44	35	79
5,500	-	-	-	-	15	40	32	72
5,750	-	-	-	-	14	37	29	66
6,000	-	-	-	-	13	34	27	61









Max. allowed load in N, per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: 3 equal loads



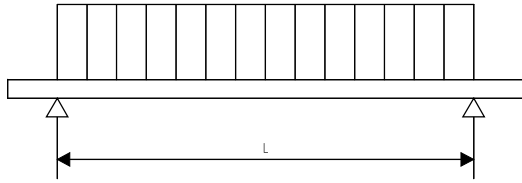
BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
250	379	449	625	975	1,619	2,600	2,411	5,050
300	316	374	521	813	1,349	2,166	2,009	4,208
350	271	321	446	697	1,156	1,857	1,722	3,607
400	237	281	390	610	1,012	1,625	1,507	3,156
450	210	250	347	542	899	1,444	1,339	2,805
500	189	217	312	488	809	1,300	1,205	2,525
600	153	151	260	406	674	1,083	1,004	2,104
700	112	111	191	314	578	928	861	1,803
800	86	85	147	241	506	812	753	1,578
900	68	67	116	190	406	722	670	1,403
1,000	55	54	94	154	328	650	603	1,262
1,200	38	38	65	107	228	542	482	1,052
1,400	28	28	48	79	168	448	354	801
1,600	21	21	37	60	128	343	271	613
1,800	17	17	29	48	101	271	214	484
2,000	14	14	23	38	82	219	174	392
2,250	11	11	19	30	65	173	137	310
2,500	-	-	15	25	53	140	111	251
2,750	-	-	12	20	43	116	92	207
3,000	-	-	10	17	36	97	77	174
3,250	-	-	-	15	31	83	66	149
3,500	-	-	-	13	27	72	57	128
3,750	-	-	-	11	23	62	49	112
4,000	-	-	-	-	21	55	43	98
4,250	-	-	-	-	18	49	38	87
4,500	-	-	-	-	16	43	34	77
4,750	-	-	-	-	15	39	31	70
5,000	-	-	-	-	13	35	28	63
5,250	-	-	-	-	12	32	25	57
5,500	-	-	-	-	11	29	23	52
5,750	-	-	-	-	-	27	21	47
6,000	-	-	-	-	-	24	19	44









Max. allowed load in N, per suspension point (F).

The stated values are only valid for the fixing rail.

The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Fixing rail: uniformly distributed load

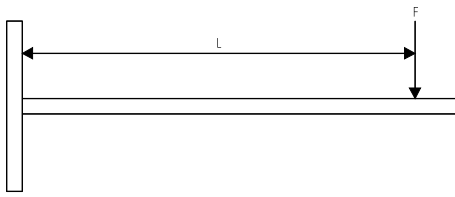










BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
250	1,516	1,797	2,499	3,901	6,475	10,399	9,643	20,198
300	1,263	1,498	2,082	3,251	5,396	8,666	8,036	16,832
350	1,083	1,284	1,785	2,787	4,625	7,428	6,888	14,427
400	947	1,123	1,562	2,438	4,047	6,499	6,027	12,624
450	842	998	1,388	2,167	3,597	5,777	5,357	11,221
500	758	826	1,249	1,951	3,238	5,199	4,821	10,099
600	580	574	990	1,625	2,698	4,333	4,018	8,416
700	426	421	727	1,194	2,313	3,714	3,444	7,214
800	326	323	557	914	1,950	3,250	3,013	6,312
900	258	255	440	722	1,541	2,889	2,679	5,611
1,000	209	206	356	585	1,248	2,600	2,411	5,050
1,200	145	143	248	406	867	2,166	1,832	4,140
1,400	106	105	182	298	637	1,701	1,346	3,042
1,600	82	81	139	228	488	1,302	1,031	2,329
1,800	64	64	110	181	385	1,029	814	1,840
2,000	52	52	89	146	312	833	660	1,491
2,250	41	41	70	116	247	658	521	1,178
2,500	33	33	57	94	200	533	422	954
2,750	28	27	47	77	165	441	349	788
3,000	23	23	40	65	139	370	293	662
3,250	20	20	34	55	118	316	250	564
3,500	17	17	29	48	102	272	215	487
3,750	15	15	25	42	89	237	188	424
4,000	13	13	22	37	78	208	165	373
4,250	12	11	20	32	69	185	146	330
4,500	10	10	18	29	62	165	130	294
4,750	-	-	16	26	55	148	117	264
5,000	-	-	14	23	50	133	106	238
5,250	-	-	13	21	45	121	96	216
5,500	-	-	12	19	41	110	87	197
5,750	-	-	11	18	38	101	80	180
6,000	-	-	-	16	35	93	73	166

Max. allowed load in N.

The stated values are only valid for the fixing rail.
The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Cantilever arms: suspension on 1 point

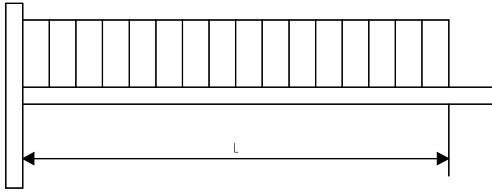










BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
100	474	562	781	1,219	2,023	3,250	3,013	6,312
150	316	358	521	813	1,349	2,166	2,009	4,208
200	204	202	348	571	1,012	1,625	1,507	3,156
250	130	129	223	366	780	1,300	1,205	2,525
300	91	90	155	254	542	1,083	1,004	2,104
350	67	66	114	187	398	928	841	1,803
400	51	50	87	143	305	812	644	1,456
450	40	40	69	113	241	643	509	1,150
500	33	32	56	91	195	521	412	932
550	27	27	46	76	161	430	341	770
600	23	22	39	63	135	362	286	647
700	17	16	28	47	100	266	210	475
800	13	13	22	36	76	203	161	364
900	10	-	17	28	60	161	127	288
1,000	-	-	14	23	49	130	103	233
1,100	-	-	12	19	40	108	85	192
1,200	-	-	-	16	34	90	72	162
1,300	-	-	-	14	29	77	61	138
1,400	-	-	-	12	25	66	53	119
1,500	-	-	-	10	22	58	46	104

Max. allowed load in N.

The stated values are only valid for the cantilever arms.
The maximum safe load of all other construction parts have to be verified.

BIS RapidRail® Cantilever arms: uniformly distributed load



BIS RapidRail®								
								
L (mm)	WM0 (27 x 18)	WM1 (30 x 15)	WM15 (30 x 20)	R2 (34 x 20)	WM2 (30 x 30)	WM30 (30 x 45)	WM35 (38 x 40)	WM3 (50 x 40)
100	947	1,123	1,562	2,438	4,047	6,499	6,027	12,624
150	631	749	1,041	1,626	2,698	4,333	4,018	8,416
200	474	538	781	1,219	2,023	3,250	3,013	6,312
250	348	344	594	975	1,619	2,600	2,411	5,050
300	242	239	413	677	1,349	2,166	2,009	4,208
350	177	176	303	497	1,061	1,857	1,722	3,607
400	136	134	232	381	813	1,625	1,507	3,156
450	107	106	183	301	642	1,444	1,339	2,805
500	87	86	149	244	520	1,300	1,099	2,484
550	72	71	123	201	430	1,148	909	2,053
600	60	60	103	169	361	965	763	1,725
700	44	44	76	124	265	709	561	1,267
800	34	34	58	95	203	543	429	970
900	27	27	46	75	161	429	339	767
1,000	22	22	37	61	130	347	275	621
1,100	18	18	31	50	107	287	227	513
1,200	15	15	26	42	90	241	191	431
1,300	13	13	22	36	77	205	163	367
1,400	11	11	19	31	66	177	140	317
1,500	-	-	17	27	58	154	122	276

Max. allowed load in N.

The stated values are only valid for the cantilever arms.
The maximum safe load of all other construction parts have to be verified.