

MPR-Support channels

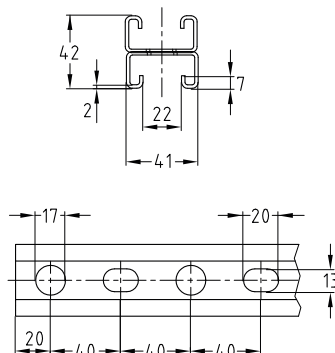
H-Profiles, hot-dip galvanised

Field of application

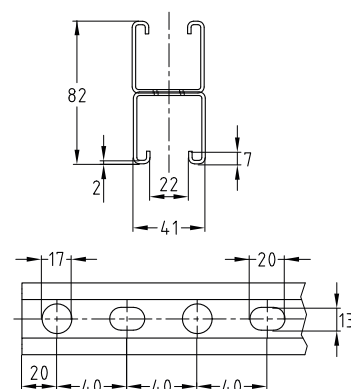
- Ideal for space-saving support of multisection pipeways between ceiling beams
- Ideal for pipe installation as support structure for air ducts in interiors and exteriors
- Variety of mounting options e.g. for shelves in combination with extensive range of system components

Advantages

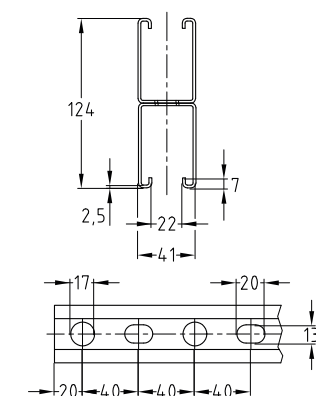
- Quick and efficient attachment of pipe sections and multiple pipe-ways
- Ideal combination of high bending stiffness and ease of installation
- Channel slots on both sides allow simple and quick alignment of all suspended and floor-mounted pipe supports
- Scale marks sideways and on the side with the slot simplify the alignment of the attachment elements during installation and facilitate the measuring and cutting to length of the section on site
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of MPR-Protection caps
- Interlocking rail slot for positive locking of attachment parts



Profile 41/42/2.0



Profile 41/82/2.0



Profile 41/124/2.5

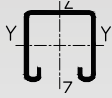
Features

Profile	Length [mm]	Part no.	Sales unit	Pack unit
41/42/2.0	6,640	154185	1	pieces
41/82/2.0		154186		
41/124/2.5		154187		

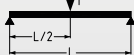
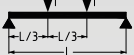


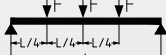
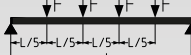
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hot-dip galvanised

Technical data of profiles:

 Profile	Material/ Surface	Tensile elastic limit $f_{y,k}$ [N/mm ²]	Admissible steel stress $\sigma_{adm.}$ [N/mm ²]	Available threaded plates*	Profile weight [kg/m]	Profile cross- section [cm ²]	Moment of inertia		Resistance moment	
							I_y [cm ⁴]	I_z [cm ⁴]	W_y [cm ³]	W_z [cm ³]
41/21/2.0	S235/ hot-dip galvanised	250	162	M8, M10, M12, M16	1.45	1.62	0.8894	4.5246	0.839	2.207
41/41/2.0					2.08	2.42	4.9736	7.5692	2.451	3.692
41/41/2.5					2.53	3.08	5.8103	9.0333	2.839	4.406
41/62/2.5					3.38	3.98	17.2090	12.9297	5.671	6.307
41/42/2.0 H-Profile					2.90	3.24	5.2844	9.0492	2.516	4.414
41/82/2.0 H-Profile					4.16	4.83	30.6876	15.1385	7.485	7.385
41/124/2.5 H-Profile					6.76	7.96	111.7528	25.8595	18.025	12.614

Max. load capacities [N]:

Profile	 L [m]						 L [m]					
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
41/21/2.0	1,086	439	186	94	–	–	813	258	109	55	–	–
41/41/2.0	3,178	1,581	1,046	601	106	–	2,379	1,187	643	353	62	–
41/41/2.5	3,681	1,831	1,210	701	121	–	2,755	1,375	750	411	71	–
41/62/2.5	7,357	3,666	2,430	1,808	459	117	5,506	2,752	1,823	1,248	270	68
41/42/2.0 H-Profile	3,066	1,620	1,068	630	95	–	1,533	1,216	679	370	56	–
41/82/2.0 H-Profile	6,562	4,840	3,210	2,389	865	277	3,271	3,261	2,407	1,791	508	162
41/124/2.5 H-Profile	13,613	11,671	7,753	5,786	2,794	1,316	6,806	6,790	5,815	4,337	1,969	772

Profile	 L [m]						 L [m]					
	0.5	1.0	1.5	2.0	4.0	6.0	0.5	1.0	1.5	2.0	4.0	6.0
41/21/2.0	543	185	78	40	–	–	453	145	61	31	–	–
41/41/2.0	1,589	791	461	253	44	–	1,324	659	362	199	35	–
41/41/2.5	1,840	916	538	295	51	–	1,534	763	423	232	40	–
41/62/2.5	3,678	1,833	1,215	896	193	49	3,065	1,527	1,013	703	152	39
41/42/2.0 H-Profile	1,022	810	487	265	40	–	766	675	383	208	32	–
41/82/2.0 H-Profile	2,181	2,174	1,605	1,175	364	116	1,635	1,630	1,337	995	286	91
41/124/2.5 H-Profile	4,538	4,527	3,877	2,893	1,397	554	3,403	3,395	3,231	2,411	1,109	435

* Please note additional information on the catalog pages of threaded plates/hammer head fasteners.



The determined loads apply for static loads. Calculation based on Eurocode (EC3).

The safety coefficient $\gamma = 1.54$ takes into account the safety and combination coefficients as well as the safety factor of the material.

For the given values, the permissible steel stress and the maximum permissible deflection $L/200$ are not exceeded, taking the deadweight into consideration.



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Permissible buckling loads for MPR channel profiles in [N]:

Buckling length Lk [mm]	MPR 41/21/2.0	MPR 41/41/2.0	MPR 41/41/2.5	MPR 41/62/2.5	MPR 41/42/2.0	MPR 41/82/2.0	MPR 41/124/2.5
200	25,378	39,273	49,092	64,658	52,573	78,466	129,317
300	23,868	38,858	48,434	64,658	51,488	78,466	129,317
400	22,098	37,772	47,023	63,651	49,827	77,628	128,065
500	19,980	36,633	45,537	62,224	48,054	76,510	126,262
600	17,564	35,413	43,935	60,743	46,113	75,321	124,350
700	15,076	34,083	42,179	59,184	43,958	74,032	122,285
800	12,776	32,620	40,241	57,523	41,561	72,610	120,014
900	10,803	31,013	38,108	55,738	38,929	71,016	117,480
1,000	9,173	29,266	35,797	53,811	36,114	69,209	114,618
1,100	7,846	27,407	33,354	51,733	33,212	67,146	111,362
1,200	6,766	25,482	30,854	49,505	30,336	64,793	107,652
1,300	5,884	23,553	28,379	47,143	27,586	62,131	103,454
1,400	5,157	21,675	26,005	44,678	25,032	59,172	98,774
1,500	4,553	19,895	23,781	42,154	22,706	55,971	93,681
1,600	4,048	18,241	21,736	39,620	20,617	52,615	88,300
1,700	3,620	16,724	19,878	37,127	18,755	49,209	82,792
1,800	3,256	15,348	18,205	34,714	17,102	45,855	77,321
1,900	2,944	14,106	16,703	32,416	15,636	42,632	72,022
2,000	2,674	12,989	15,359	30,251	14,336	39,593	66,992
2,100	2,439	11,986	14,156	28,230	13,181	36,764	62,286
2,200	2,234	11,084	13,078	26,356	12,153	34,155	57,927
2,300	2,054	10,273	12,112	24,626	11,236	31,763	53,916
2,400	1,894	9,543	11,243	23,033	10,415	29,577	50,241
2,500	1,752	8,884	10,460	21,569	9,678	27,583	46,881
2,600	1,626	8,289	9,754	20,225	9,014	25,765	43,812
2,700	1,512	7,749	9,114	18,991	8,415	24,107	41,010
2,800	1,411	7,258	8,534	17,857	7,872	22,594	38,448
2,900	1,319	6,812	8,006	16,815	7,380	21,211	36,106
3,000	1,235	6,404	7,525	15,856	6,931	19,946	33,960
3,100	1,160	6,031	7,084	14,973	6,522	18,785	31,992
3,200	1,091	5,689	6,681	14,158	6,148	17,720	30,183
3,300	1,028	5,375	6,311	13,405	5,804	16,740	28,519
3,400	970	5,086	5,970	12,709	5,488	15,837	26,985
3,500	917	4,820	5,656	12,063	5,197	15,004	25,568
3,600	869	4,573	5,366	11,465	4,929	14,233	24,257
3,700	824	4,345	5,097	10,908	4,680	13,519	23,043
3,800	782	4,133	4,848	10,391	4,450	12,857	21,916
3,900	744	3,936	4,617	9,908	4,237	12,241	20,869
4,000	708	3,753	4,401	9,458	4,038	11,668	19,893
4,100	675	3,582	4,201	9,037	3,853	11,134	18,984
4,200	644	3,423	4,013	8,643	3,680	10,635	18,135
4,300	615	3,274	3,838	8,274	3,518	10,169	17,341
4,400	588	3,134	3,674	7,928	3,367	9,732	16,597
4,500	563	3,003	3,520	7,603	3,226	9,323	15,900
4,600	539	2,880	3,376	7,297	3,093	8,939	15,246
4,700	517	2,765	3,240	7,010	2,968	8,577	14,630
4,800	496	2,656	3,113	6,738	2,851	8,238	14,051
4,900	476	2,554	2,992	6,482	2,740	7,918	13,506
5,000	458	2,457	2,879	6,241	2,636	7,616	12,991
5,100	441	2,366	2,772	6,012	2,537	7,331	12,506
5,200	424	2,279	2,670	5,796	2,444	7,061	12,046
5,300	409	2,198	2,574	5,591	2,356	6,806	11,612
5,400	394	2,120	2,484	5,396	2,273	6,565	11,200
5,500	380	2,047	2,397	5,212	2,193	6,336	10,810
5,600	367	1,977	2,316	5,037	2,118	6,119	10,440
5,700	354	1,911	2,238	4,870	2,047	5,913	10,089
5,800	342	1,848	2,164	4,712	1,980	5,717	9,755
5,900	331	1,788	2,094	4,561	1,915	5,530	9,437
6,000	320	1,731	2,027	4,417	1,854	5,353	9,134



MPR-Support channels

hot-dip galvanised

Buckling loads as per DIN EN 1993-1-1 sections 6.2 and 6.3.

The values in the table apply for fully bearing cross-sections and central load transmission!

The potentially lower slenderness parameter for buckling and lateral torsional buckling must be examined separately!

Buckling about the z-axis and the y-axis was considered.

The least favourable buckling load is documented in the table.

The safety coefficient $\gamma = 1.54$ takes into account the safety and combination coefficients as well as the safety factor of the material.

Determine the authoritative buckling length L_k depending on the storage conditions and the rod length l , as shown in the figure.

Read off the buckling load F as L_k from the table.

