MPC-Support channels

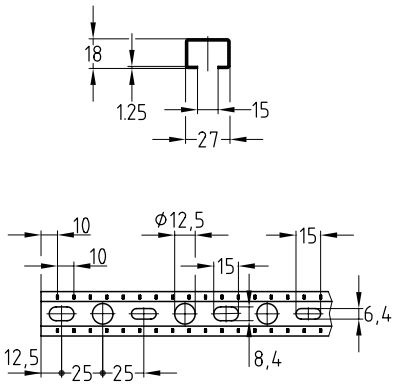
hot-dip galvanised

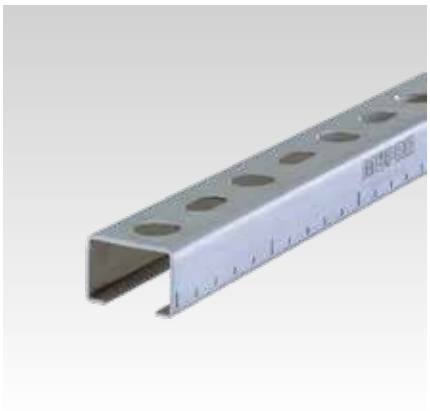
Application

- Ideal as support structure for air ducts
- Variety of mounting options for pre-wall installations and shelves in combination with extensive range of system components
- Suitable for outdoor use

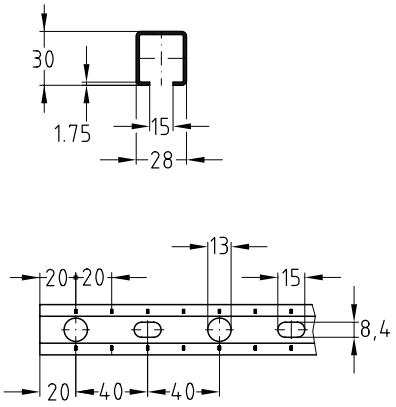
Your advantages

- Fast and efficient attachment of piping and pipe routes
- 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
- For secure fixing that is adjustable laterally and vertically
- High bending stiffness due to the cross-section design
- For setting up structures with correctly measured static loads by means of diverse connection components
- Suitable vibration control elements for all support channels available
- Clean-cut appearance by the use of MPC-protection caps

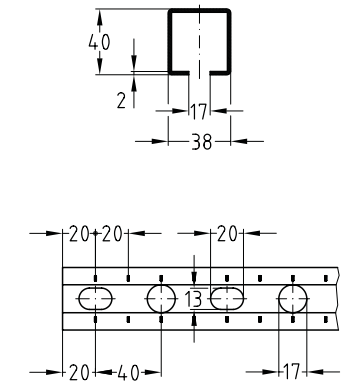




Profile 27/18



Profile 28/30



Profile 38/40

Features

Profile	Length [mm]	Part no.	Sales unit	Pack unit
27/18/1.25	2,000	**129909**	1	Pieces
	6,000	**130004**		
28/30/1.75		**118990**		
38/40/2.0	2,000	**129916**		
	6,000	**130008**		

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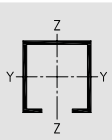
MPC-Support channels

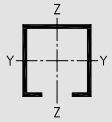
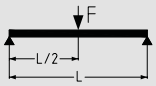
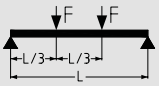
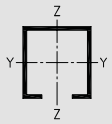
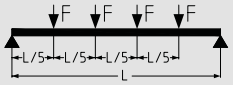
Technical data

Technical data of profile:

Features

Profile	Material	Surface	Admissible steel stress $\sigma_{adm.}$ [N/mm²]	Available MPC-Rail nuts	Profile weight [kg/m]	Profile cross-section [cm²]	Moment of inertia		Resistance moment	
							I_y [cm⁴]	I_z [cm⁴]	W_y [cm³]	W_z [cm³]
27/18/1.25	S235 DD11 DC01	hot-dip galvanised	153	M8, M10	0.6	0.69	0.2911	0.9554	0.31	0.707
28/30/1.75					1.15	1.36	1.3999	2.0551	0.911	1.467
38/40/2.0				M8, M10, M12, M16	1.82	2.21	4.3286	6.1	2.164	3.21
40/60/3.0					3.5	4.44	17.5426	13.3946	5.847	6.697
40/80/3.0					4.68	5.64	37.939	17.5106	9.484	8.755
40/120/3.0 H					7	8.88	115.0004	26.789	19.166	13.394

Load bearing capacities of profiles for bending around the y-axis [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
												
27/18/1.25	376	143	60	29	-	-	280	84	35	17	-	-
28/30/1.75	1,099	549	303	162			814	410	178	95		
38/40/2.0	2,609	1,308	867	523	92		1,927	979	559	307	54	
40/60/3.0	7,019	3,537	2,349	1,748	467	117	5,157	2,643	1,758	1,272	274	69
40/80/3.0	11,311	5,733	3,815	2,844	1,080	359	8,246	4,274	2,852	2,128	634	211
40/120/3.0 H	22,447	11,542	7,711	5,765	2,785	1,353	16,040	8,554	5,749	4,307	2,026	794
												
27/18/1.25	187	60	25	12	-	-	156	47	20	-	-	-
28/30/1.75	544	274	128	68			451	228	100	54		
38/40/2.0	1,287	652	401	220	39		1,067	542	315	173	30	
40/60/3.0	3,444	1,760	1,172	873	197	49	2,848	1,464	976	717	154	39
40/80/3.0	5,508	2,847	1,901	1,420	455	151	4,541	2,365	1,582	1,182	357	119
40/120/3.0 H	10,711	5,697	3,833	2,873	1,391	570	8,763	4,723	3,186	2,391	1,141	447

The determined loads apply for static loads. Calculation based on Eurocode (EC3).
The safety coefficient γ = 1.54 takes into account the partial 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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MPC-Support channels

Technical data

Permissible buckling loads for profiles [N]:

Buckling length Lk [mm]	27/18/1.25	28/30/1.75	38/40/2.0	40/60/3.0	40/80/3.0	40/120/3.0 H
200	10,105	20,698	33,744	67,749	86,061	135,498
300	9,403	19,911	33,405	67,749	86,061	135,498
400	8,553	19,069	32,478	66,660	84,785	134,144
500	7,531	18,133	31,508	65,155	82,904	132,242
600	6,416	17,068	30,469	63,593	80,954	130,223
700	5,355	15,861	29,338	61,946	78,904	128,040
800	4,444	14,529	28,095	60,190	76,721	125,636
900	3,705	13,132	26,730	58,302	74,378	122,951
1,000	3,116	11,749	25,245	56,263	71,852	119,914
1,100	2,648	10,451	23,663	54,064	69,128	116,455
1,200	2,273	9,278	22,023	51,706	66,208	112,513
1,300	1,970	8,243	20,374	49,209	63,109	108,052
1,400	1,722	7,343	18,765	46,605	59,869	103,084
1,500	1,517	6,565	17,237	43,942	56,545	97,686
1,600	1,346	5,893	15,813	41,274	53,199	91,997
1,700	1,203	5,312	14,506	38,652	49,897	86,189
1,800	1,080	4,809	13,317	36,121	46,695	80,436
1,900	976	4,370	12,244	33,712	43,636	74,879
2,000	886	3,987	11,278	31,448	40,748	69,614
2,100	807	3,651	10,409	29,336	38,047	64,696
2,200	739	3,355	9,628	27,380	35,539	60,148
2,300	679	3,092	8,925	25,576	33,219	55,968
2,400	626	2,859	8,292	23,916	31,082	52,141
2,500	579	2,651	7,720	22,392	29,115	48,645
2,600	537	2,464	7,203	20,993	27,308	45,454
2,700	499	2,297	6,735	19,709	25,647	42,540
2,800	465	2,145	6,309	18,530	24,121	39,879
2,900	435	2,008	5,921	17,447	22,718	37,446
3,000	407	1,884	5,567	16,451	21,425	35,217
3,100	382	1,771	5,243	15,533	20,234	33,174
3,200	359	1,667	4,946	14,686	19,135	31,297
3,300	339	1,573	4,674	13,904	18,120	29,569
3,400	320	1,486	4,422	13,181	17,180	27,977
3,500	302	1,406	4,191	12,511	16,309	26,507
3,600	286	1,332	3,977	11,890	15,501	25,148
3,700	271	1,264	3,778	11,312	14,750	23,888
3,800	257	1,202	3,594	10,775	14,051	22,719
3,900	245	1,143	3,423	10,274	13,399	21,632
4,000	233	1,089	3,264	9,807	12,791	20,621
4,100	222	1,038	3,116	9,370	12,222	19,678
4,200	212	991	2,977	8,962	11,690	18,797
4,300	202	948	2,847	8,579	11,192	17,974
4,400	193	906	2,726	8,220	10,724	17,203
4,500	185	868	2,612	7,883	10,285	16,480
4,600	177	832	2,505	7,565	9,872	15,801
4,700	170	798	2,405	7,267	9,483	15,163
4,800	163	766	2,310	6,986	9,116	14,563
4,900	157	736	2,221	6,720	8,770	13,998
5,000	151	708	2,137	6,469	8,443	13,464
5,100	145	681	2,058	6,232	8,134	12,961
5,200	139	656	1,983	6,008	7,841	12,485
5,300	134	632	1,912	5,795	7,564	12,034
5,400	129	610	1,844	5,594	7,302	11,608
5,500	125	588	1,780	5,403	7,052	11,203
5,600	121	568	1,720	5,221	6,815	10,819
5,700	116	549	1,662	5,048	6,590	10,455
5,800	112	531	1,608	4,884	6,376	10,109
5,900	109	513	1,556	4,727	6,172	9,779
6,000	105	497	1,506	4,578	5,977	9,466

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MPC-Support channels

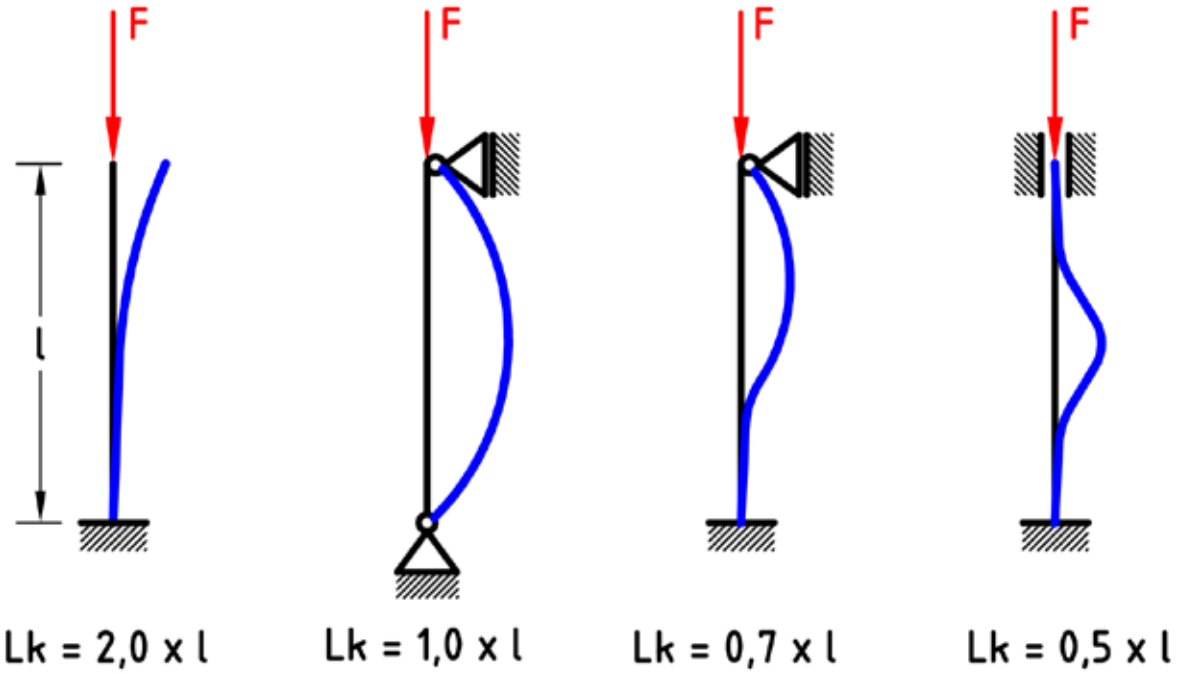
Technical data

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 γ = 1.54 takes into account the safety and combination coefficients as well as the safety factor of the material.

Determine the authoritative buckling length Lk depending on the storage conditions and the rod length l, as shown in the figure.
Read off the buckling load F as Lk from the table.



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