

Steel Mine Supports, Rails and Special Mining Sections



LIBERTY Ostrava
www.libertysteelgroup.com



MEMBER OF



LIBERTY Ostrava is an integrated steel business with an annual production capacity of approximately 3.6 million tonnes serving construction, machinery and oil & gas industries.

The company is a domestic leader in the manufacture of road barriers and tubes. In addition to the Czech market, it supplies its products to more than 40 countries around the world. Together with its subsidiaries in Ostrava, the company has 6,000 employees.

The company manufactures its products with a minimum possible environmental footprint. It is part of LIBERTY Steel Group, which is part of GFG Alliance, a collection of global businesses and investments owned by Sanjeev Gupta and his family. The Alliance is structured into three core industrial pillars: LIBERTY Steel Group, ALVANCE Aluminium Group and SIMEC Energy Group. Headquartered in London, GFG Alliance employs 35,000 people, across 10 countries and has revenues of USD \$20bn.

Liberty Ostrava Facilities

- 3 coke oven batteries
- 5 sinter belts
- 3 blast furnaces (2 operational)
- 4 tandem furnaces
- 3 continuous casting machines
- 6 rolling mills (incl. hot-strip mill, big and small Stiefel pipe mills, wire rod mill, heavy section mill, fine & medium section mill)
- Mine support and road barrier lines

Main Products

Hot rolled coils, sheets and strips, road barriers, merchant bars and sections, wire rods, tubular steels, mine supports, engineering products, transformer cores, threaded bars, rebars

Key Markets

Construction, machinery and automotive

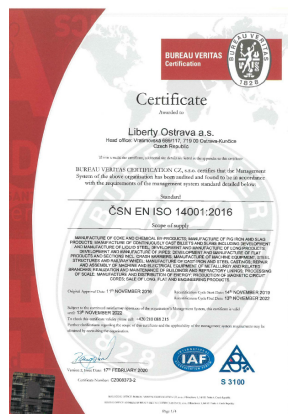
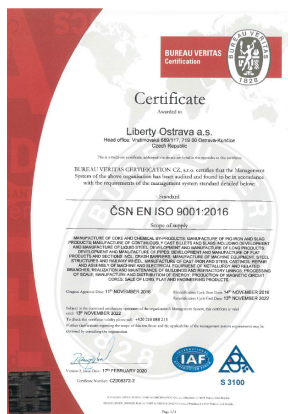
Certification

ISO 9001

ISO 14001

OHSAS 18001

ISO 50001



Steel Mine Supports

Steel Mine Support Production

Steel mine supports have a wide range of use in building of coal and ore shafts, in tunnelling or underground collectors. The supplemental products are connecting clamps, light rails and special beams for hanging systems.

Chemical Composition

Steel Mark	Standard	C [%]	Mn [%]	Si [%]	S max. [%]	P max. [%]	Al [%]	V [%]	Ti [%]	Nb [%]	N max. [%]
E295(11500)	EN 10025-2				0.045	0.0045					0.009
12130 *)	KN 412130	0.28-0.35	1.0-1.3	0.35-0.6	0.04	0.04					
31MN4	DIN 21530	0.28-0.36	0.8-1.1	0.2-0.5	0.035	0.035	0.020 min				
H500M **)	KN 412500	0.25 max	1.60 max	0.45 max	0.020	0.020	0.040 max	0.15 max	0.05 max	0.05 max	
H550M **)	KN 412550	0.28 max	1.70 max	0.50 max	0.035	0.035	0.040 max	0.15 max	0.04 max	0.05 max	

Mechanical Properties

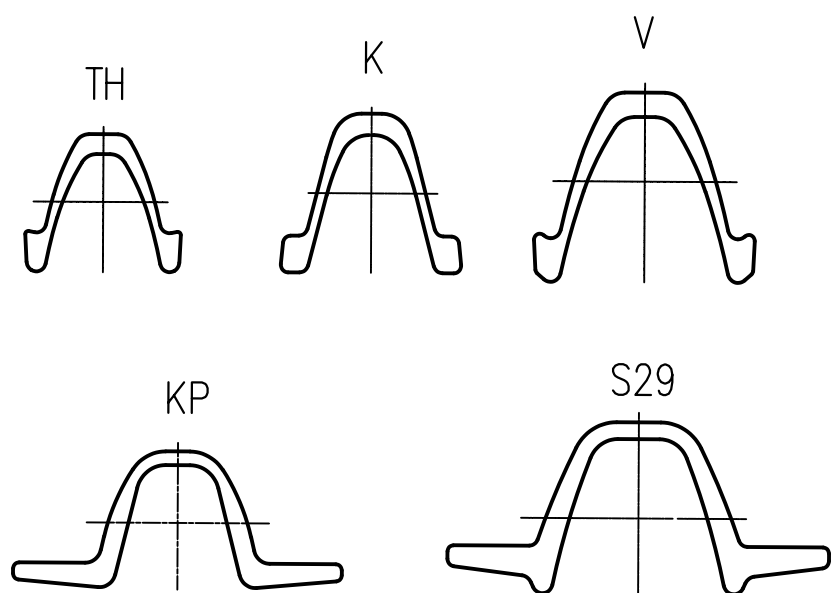
Steel Mark	Standard or/and customer specification	R _e (min) [MPa]	R _m (min) [MPa]	A ₅ (min) [%]	Sections made of relevant steel
E295(11500)	EN 10025-2	295	470	20	K21, K24, KP70
12130 *)	KN 412130	510	690	15	K24
31MN4	DIN 21530	350	550	18	TH16,5; TH21; TH29; TH34; TH36; S29
H500M **)	KN 412500	480	650	18	TH16,5; TH21; TH29; TH34; TH36; V29; V32; V36
H550M **)	KN 412550	550	730	18	V29; V32; V36

*) heat treated material

**) microalloyed steel

Profile	Weight [kg/m]
K 21	20.74
K 24	23.67
TH 16.5	16.70
TH 21	20.92
TH 29	29.00
TH 34	33.90
TH 36	35.90
KP 70*)	30.82
S 29 **)	42.90
V 29	28.50
V 32	32.10
V 36	35.90

Types of profiles (K, TH and V normally or conversely bended)



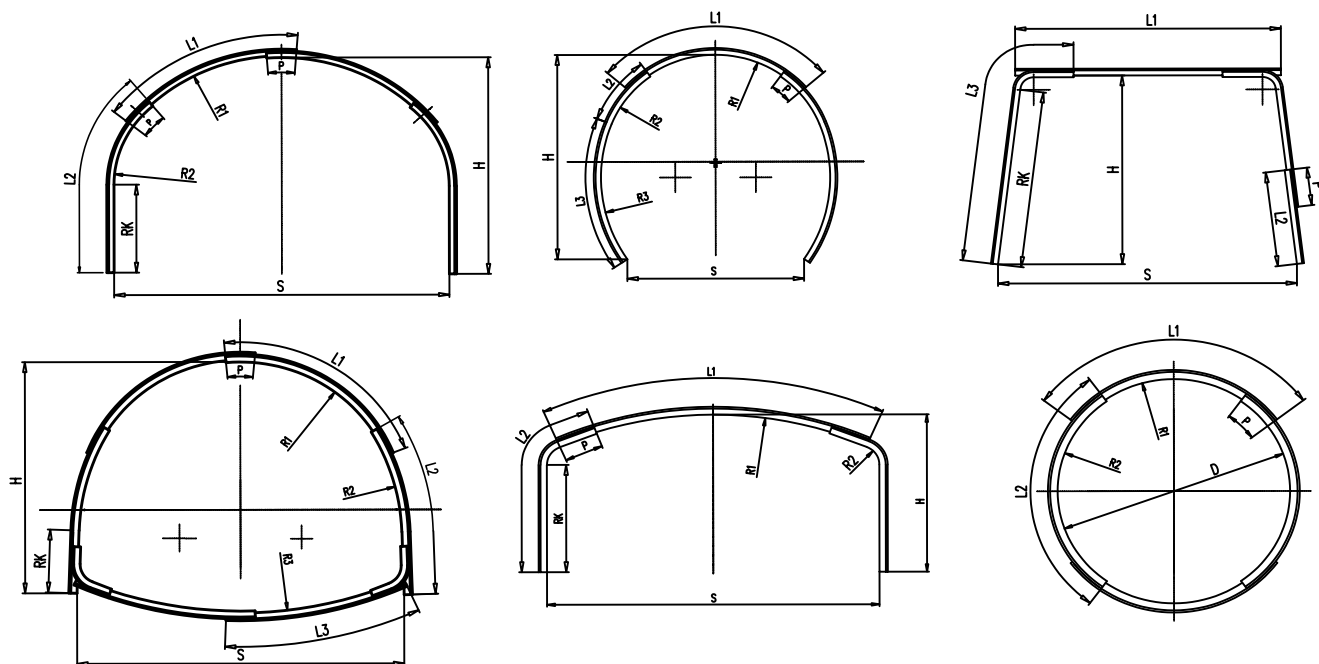
*) available length L = 9000 mm (profile for clamp set)

**) available length L = 7000 mm (profile for clamp set)

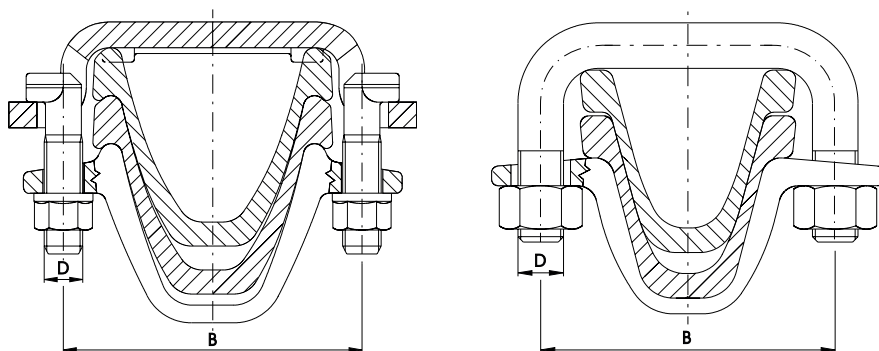
V shape according to PN-H-93441-3 available upon agreement

Steel Mine Supports continued...

Type of Galleries



Steel Support Accessories

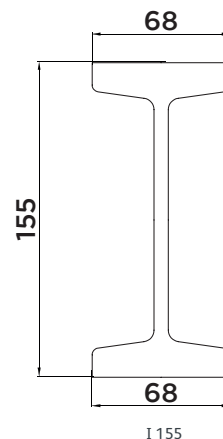
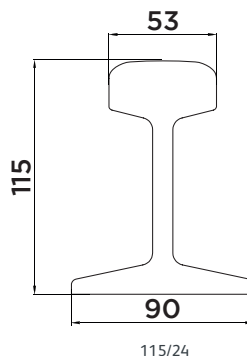
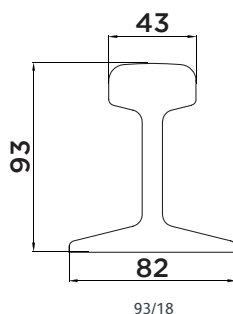
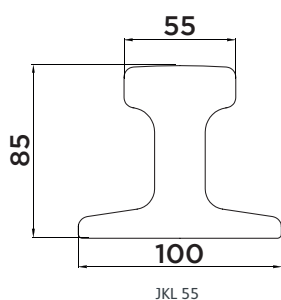


Steel Mine Support - according to weight degrees of sections

Section Type	Weight [kg/m]	Area of Section [cm ²]	I _x [cm ⁴]	W _x [cm ³]	I _y [cm ⁴]	W _y [cm ³]
TH 16,5	16,70	21,26	173,00	38,00	227,00	43,00
TH 21	20,92	26,65	324,00	60,00	410,00	64,00
TH 29	29,00	37,00	616,00	94,00	775,00	103,00
TH 34	33,90	43,10	892,00	128,00	1 205,00	141,00
TH 36	35,90	45,70	969,00	136,00	1 265,00	149,00
K 21	20,74	26,42	319,10	61,24	356,46	57,99
K 24	23,67	26,42	319,10	69,19	404,49	65,47
V 29	28,50	36,30	581	87,50	756,00	100,50
V 32	32,10	40,9	838	121,40	1 174,00	137,70
V 36	35,50	45,2	923	127,60	1 229,00	143,70

Special Beams and Rails for Mining Industry

Designation	Kg/m	Steel Grade
I 155	23.84	11523 (S355JR)
93/18	18.20	10500 (St 50-2)
115/24	24.43	10500 (St 50-2)
JKL 55	29.60	10650



Contact with the mill

Europe

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