

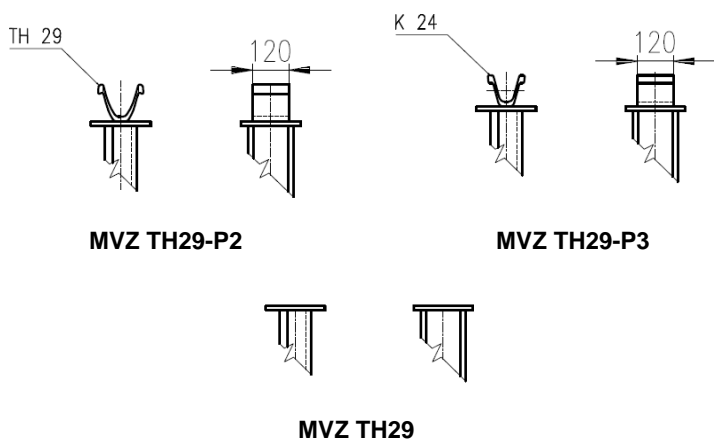
## MECHANICAL STRUT MVZ K 24, MVZ TH 29

### Use and description:

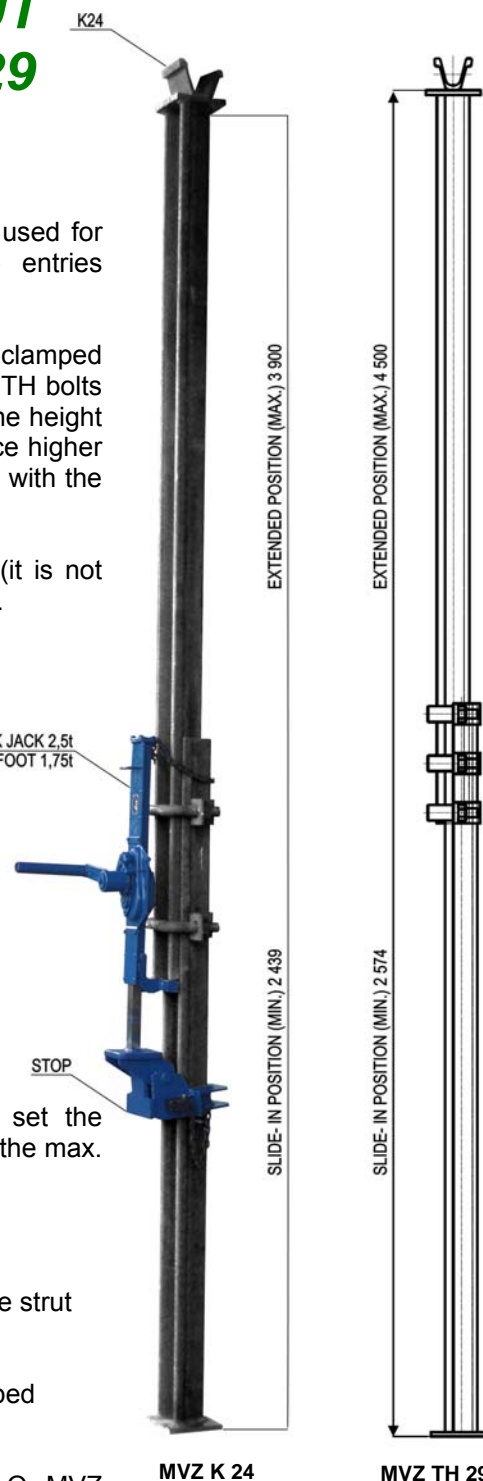
Mechanical strut **MVZ K24** a **MVZ TH 29** (hereinafter only strut) is used for supporting of the roof or for bracing/stabilisation of objects in mine entries underground.

The strut is composed of two straight steel profiles K 24 (TH 29) clamped using TH bolts (used for mine arch support system). The strut clamped with TH bolts on prescribed torque resists to nominal load 220 (290 kN) being braced on the height of 3.9 (4.5) m. The slide-in of the strut is to be expected due to the axial force higher than 220 (290) kN – working loading. The upper part of the strut is extended with the re- designed rack jack (delivery on request).

The strut MVZ TH29 can be delivered in the standard version P1 (it is not stated), further in versions P2, P3 or according to the employer's requirement.



RE- DESIGNED RACK JACK 2,5t  
LOADING CAPACITY ON FOOT 1,75t



The advantage of the mechanical strut is that it is possible to set the supporting force during the installation from the minimal value (110 kN) up to the max. loading capacity of the rack jack (17.5 kN).

### The redesign of the special rack jack ensures:

- Centring of the jack with the adjustable stop
- Transition of the pretension force to the upper draw-out part of the strut
- Safe clamping of the jack to the strut upper part

The stop is fastened to the strut bottom part with the with a key equipped with chain.

The product has been certified (MVZ K 24: certificate Nr. 624/09/TLO, MVZ TH 29: certificate Nr.) by the institute TECHNICKÉ LABORATOŘE OPAVA, akciová společnost.



Fig. 1 – Mechanical strut located in the fall stand before dynamical test



Certificate Nr. 1020/12/TLO issued by the TECHNICKÉ LABORATOŘE OPAVA, akciová společnost



Fig. 2 – Mechanical strut located in the fall stand after the dynamical test

### Characteristics:

Type		MVZ K 24	MVZ TH 29
Nominal load (loading capacity)	kN	220	290 ± 10%
Strut height after max. drawing-out	mm	3 900	4 500
Strut height when slid-in	mm	2 439	2 715
Arch support type		K 24	TH 29
Min. (max.) strut pre-tensioning	kN	10 (17.5)	10 (17.5)
TH bolts tightening torque	Nm	400	450
Dimensions (w x h x hl)	mm	570x3990x250	571x4500x250
Weight of the re-designed rack jack	kg	20	20
Weight – without rack jack	kg	ca 130.0	165.6
Total weight of the strut wit re-designed rack jack	kg	ca 150.0	185.6

The strut MVZ TH29 has been verified acc. to the standard PN-G-15533, art.4.3.7 through dynamical loading in the fall stand by the certified testing laboratory TLO OPAVA, akciová společnost.

Operating of and handling with the product following the operation instructions will be safe even in areas of the methane gassy mines with hazardous atmospheric conditions 2 acc. to the standard ČSN EN 1127-2+A1, with limitation according to the methane concentration in the atmosphere up to the value laid down in the relevant regulation in the employer's country.

(In the Czech Republic in areas endangered through the methane and coal dust explosion, which are listed according to the Public Notice (PN) ČBÚ 22/1989 Sb., - § 232, paragraph 1 b) and § 233, paragraph 1 b) (group I, category M2 acc. to the Amendment Nr. 1 of the Directive 94/9/EU) in the wording of later issued regulation **including mines endangered through the stone and gas outburst listed in the group of mine endangered through the mine bumps** except of areas listed according to § 242, paragraph 3 of this PN.

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