

PRODUCT CATALOGUE

PROFESSIONAL EQUIPMENT FOR INDUSTRY



**OFFER IN THE FIELD OF MACHINE
AND EQUIPMENT PRODUCTION, STEEL
STRUCTURES, AND STEEL PRODUCTS
FOR MINING**



„MATIX” Sp. z o.o., ul. Żyzna 11 L, 42-202 Częstochowa

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MATIX Sp. z o.o. has been present in the market for over 20 years. We offer comprehensive systems for the industry. Our goal is to ensure high quality and customer satisfaction. We specialize in the production and trade of steel products for mining, underground mining equipment, machine repairs, and the implementation of new technical solutions.

In the future, we aim to continue developing our technical capabilities and production services. Thanks to many years of experience, MATIX has gained the trust of numerous customers by offering reliable solutions characterized by high durability and functionality. Our company not only focuses on production but also provides comprehensive consulting and design services for steel structures tailored to the specific needs of the industry. We collaborate with clients at every stage of project implementation, from planning to the execution of finished products.

Offer:

- Comprehensive systems for mining
- Scraper conveyors (wall and floor-mounted) – belt conveyors
- Crushers
- Hydraulic and friction stands
- Overhead monorail system components
- Hook slings
- Double and angle struts
- Mining supports
- Technical and industrial chains
- Other mining machines and equipment
- Machine and equipment repairs
- Trade in steel products
- Sandblasting and painting services

Quality: All products offered are certified by specialized institutions. We hold the ISO 9001:2015 quality management certification. The company's quality policy is implemented by employees at every stage of production.

WE INVITE YOU TO COLLABORATE WITH US!

ZERTIFIKAT ◆ CERTIFICATE ◆ 認 證 證 書 ◆ CERTIFICADO ◆ CERTIFICAT


 Management Service

CERTIFICATE

Certificate Registration No.: 12 100 68551 TMS / Order No.: 73479355

**The Certification Body
of TÜV SÜD Management Service GmbH**
certifies that the organization



"Matix" Sp. z o.o.
ul. Żyzna 11 L
42-202 Częstochowa
Poland

for the scope

**Design and production of steel structures.
Production and trade of steel products for mining**

including the sites see enclosure

has established and applies a Quality Management System.
An audit was performed and has furnished proof
that the requirements according to

DIN EN ISO 9001:2015

are fulfilled.

The certificate is valid from **2024-11-25** until **2027-11-24**.


 Fred Wenke
 Head of Certification Body
 Munich, 2024-12-02




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www.tuvsud.com/de/certificate-validity-check

CERTIFICAT

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CERTIFICADO

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СЕРТИФИКАТ

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認證證書

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CERTIFICATE

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ZERTIFIKAT



Management Service

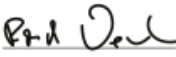
ENCLOSURE OF CERTIFICATE

Certificate Registration No.: 12 100 68551 TMS / Order No.: 73479355



certificate holder:

"Matix" Sp. z o.o.
 ul. Żyzna 11 L
 42-202 Częstochowa
 Poland

at the sites	scope
"Matix" Sp. z o.o. ul. Żyzna 11 L 42-202 Częstochowa Poland	Trade in steel products.
"Matix" Sp. z o.o. ul. Św. Elżbiety 11 41-905 Bytom Poland	Production and trade of steel products for mining.
"Matix" Sp. z o.o. ul. Kościuszki 12a 34-350 Węgierska Górka Poland	Design and construction of steel structures.



Fred Wenke
Head of Certification Body
Munich, 2024-12-02

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Dynamic impact crusher MP - 1300/1500 and MP-90 type

The MP-1300/1500 and MP-90 type crushers are designed to be installed on a scraper conveyor and consist of three main components: an inlet segment, a middle section and an outlet segment.

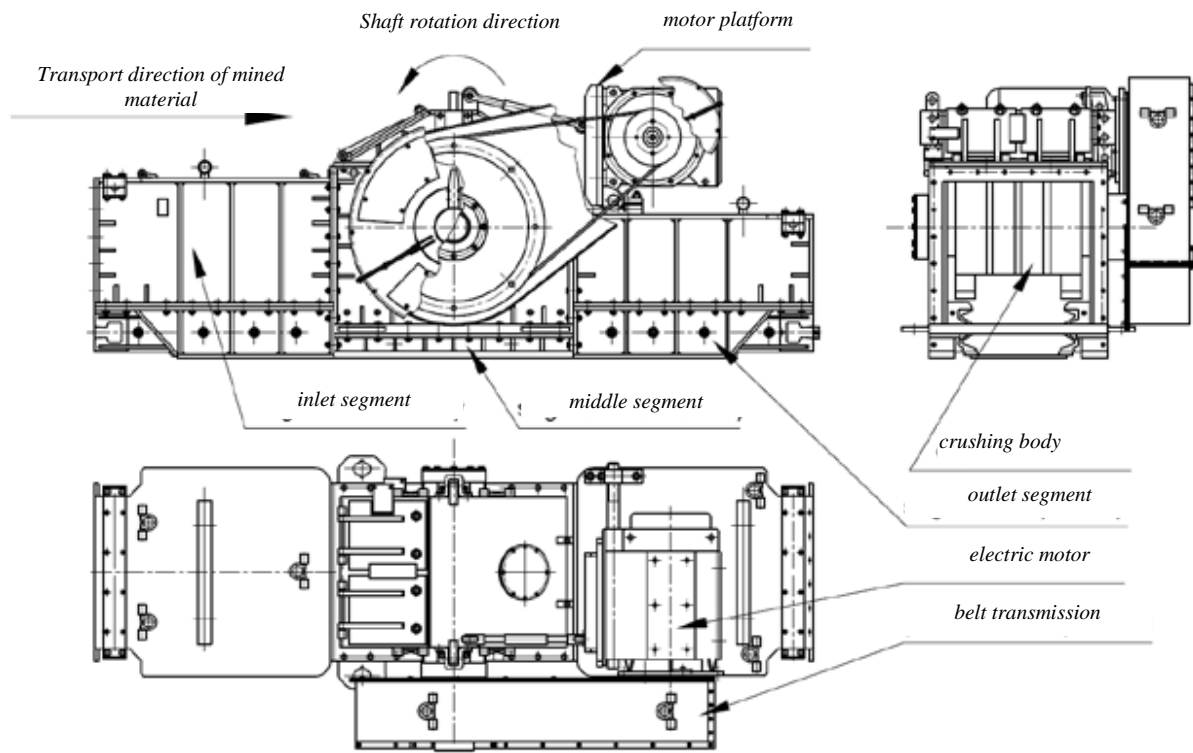
The crushers are equipped on the inlet and outlet sides with components compatible with a scraper conveyor - this makes it possible to build the crusher into the existing route of any scraper conveyor.

The MP-1300 and MP-90 versions use four crushing segments, two of which are located coaxially next to each other, while the outer segments are repositioned by 180°.

In the MP-1500 version, two additional segments are built in. They crush the feed material to dimensions suitable for further transportation.

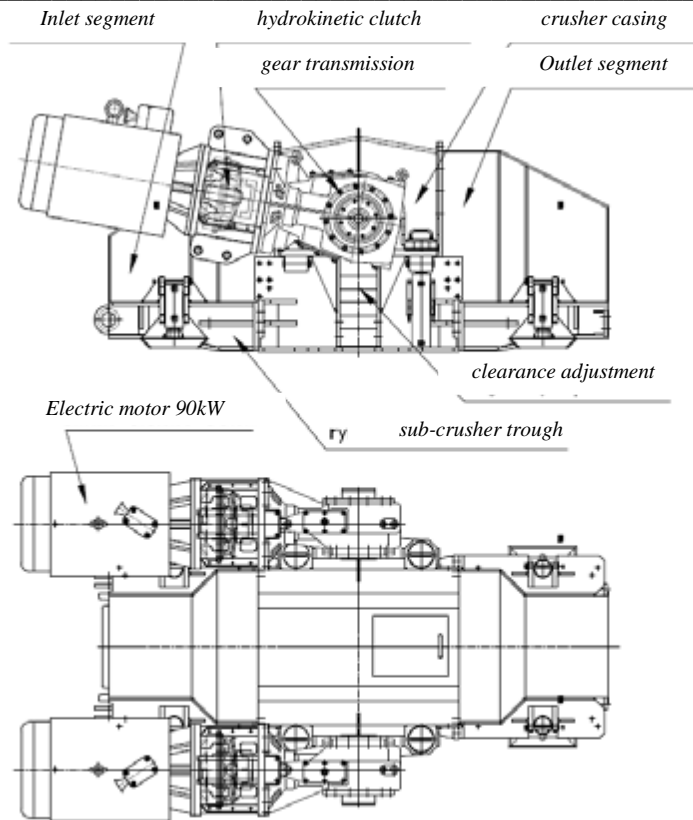
The crushers are equipped with a hydraulic system for raising and lowering the shaft - the crushing body in relation to the crushing plate, which allows to change the size of crushed billets by steps.

Technical characteristic			
Properties	Version 1300	Version 1500	Version 90
Motor power	90 – 132 kW	160 – 200 kW	2x90 kW
Drive	5 belts SPC	8 belts SPC	Gear transmissions
Working width of conveyor	642 – 864 mm	842 – 1150 mm	640 – 860 mm
Capacity	to 1300 Mg/h	to 1500 Mg/h	to 1000 Mg/h
Transmission Ratio	I=3.15		I=3
Max. grain size	600x600xL	700x700xL	500x500xL
Final grain size	150 do 400 mm		160 do 400 mm
Shaft position adjustment range	5 x 50 = 250 mm		6 x 40 = 240 mm
Through slot	150 do 400 mm		160 do 400 mm
Number of shaft rev. at 1475min-1 of motor	468 mm ⁻¹		490 mm ⁻¹
Peripheral speed of blow bars	V=22.6 m/s		V=23,5 m/s
Drive wheel diameter.	Φ 355 mm		-
flywheel diameter	Φ 1120 mm		-
Working radius of blow bar	Φ 440 mm		
Reinforcement of the crushing body	4 sets of blow bars	8 sets of blow bars	4 sets of blow bars
Dynamic energy	340318 Nm	380920 Nm	340318 Nm
Material of the blow bar tip	Hartplast welded electrically EN600B		
Thickness of the crusher plate.	60 mm		
Material	HARTPLAST		
Crusher height	1750 mm		1340 mm
Width	1700 mm	2100 mm	2000 mm
Length	4500 mm		3000 mm
Weight	~ 12 t	~ 15 t	~ 9 t

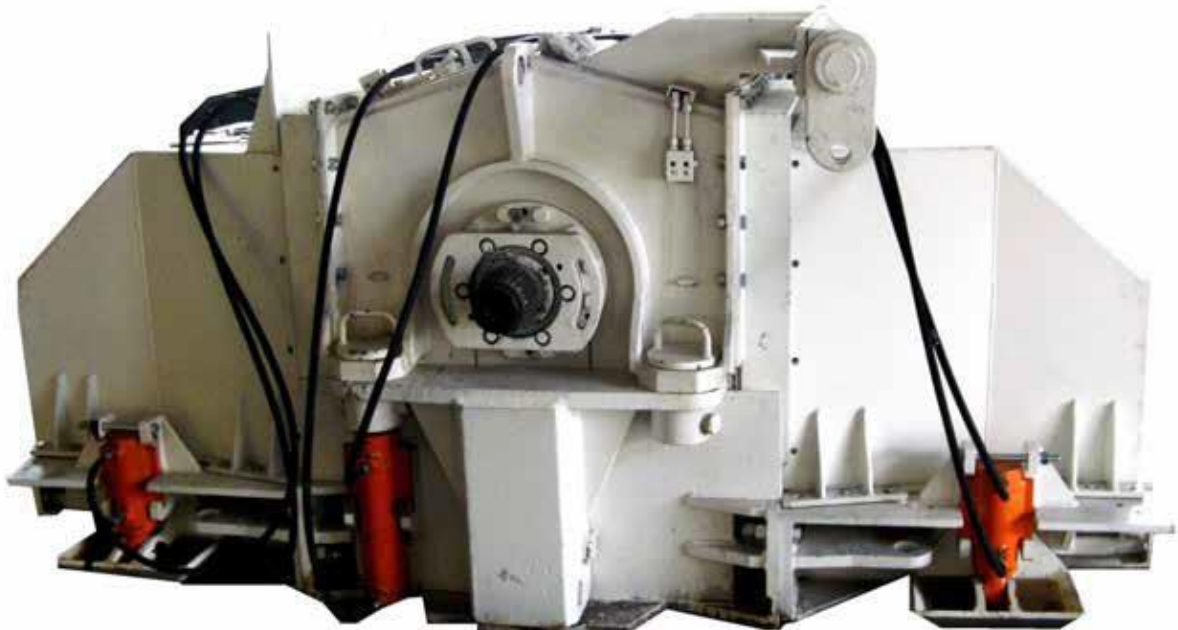


Dynamic impact crusher MP – 1300/1500





Dynamic impact crusher MP - 1300/1500



Transport Platform MP – 26 type for an inclination of up to 25°

The MP - 26 platform can be used to transport equipment weighing up to 26 tons on the Surface and in underground mines. The appropriate dimensions of the cages of the hoisting shafts and the corresponding load capacity of the shaft attachments adapted to low platforms allow their vertical transport through the shaft.

The applied rotary mounted RBK5 handles allow the use of transport rods to stabilize the load. The RZKR type rods are recommended. The platform can be used as a pallet for transporting loads by overhead rail.

The platform on the surface can be moved by cranes, forklifts and other means of transport (e.g. cars). The platform can be operated in underground mine workings in rooms with a degree of "a", "b", "c" methane explosion hazard and class A and B coal dust explosion hazard.



Transport Platform MP – 18 type for an inclination of up to 25°

The platform can be used to transport equipment weighing up to 18 tons on the surface and in underground mines. The appropriate dimensions of the cages of the hoisting shafts and the corresponding load capacity of the shaft attachments adapted to low platforms allow their vertical transportation through the shaft. The platform pallet can be disassembled from the ground and used to transport loads by overhead rail.

The chassis is mobile, it can be transported independently. It is also fully interchangeable and can be mounted to a pallet from another platform.

The posts assemblies are equipped with adjustment systems that allow the load to be secured in convenient position without the need for additional components. The platform on the surface can be moved by cranes, forklifts and other means of transport (such as cars).

The platform can be operated in underground workings of mining plants in areas with a degree “a”, „b”, “c” of danger of methane explosion and class A and B of danger of coal dust explosion.



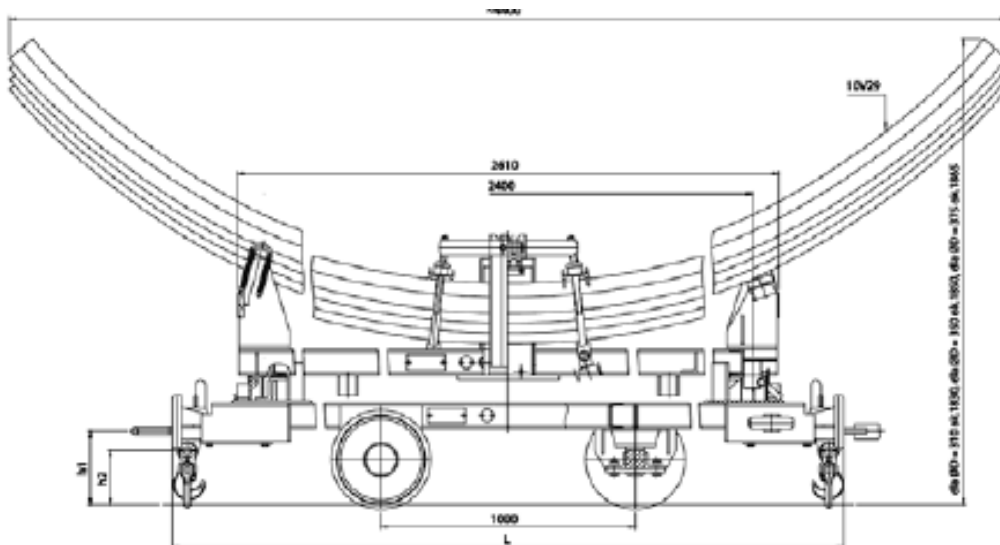
Transport Vehicle MP-10 type

The vehicle is designed for rail transport of support arches of 3 or 4 elements, size 8, 9, 10 / V25 and V29 on horizontal and inclined transport routes, while complying with the conditions specified in the DTR and safety regulations for transport in underground mines.

The body of the vehicle can be transported on overhead rail routes.

All elements transported by means of the vehicle in question should be securely fastened to it using the fastening points provided by the manufacturer or others made in-house (by prior agreement with the manufacturer), which do not weaken the structure of the platform or adversely affect its functional qualities.

The vehicle can be operated in workings with grades "a", "b", "c" of methane explosion hazard in underground mines of all categories of methane hazard and class A and B of coal dust explosion hazard



Working Platform MP – POM-1 type

From the platform can be carried out all works related to the excavation as well as the construction or disassembly of the support of the mine workings at such a height at which they are not possible to perform from the bottom level. These works include:

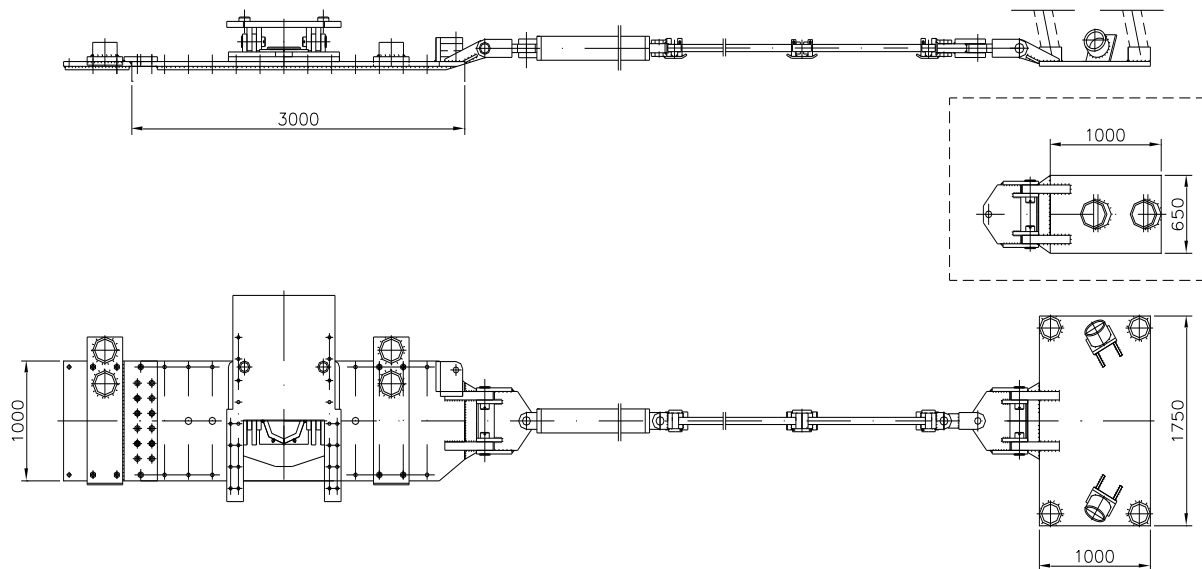
- - Installation of struts between support arches
- Execution of support and opining of the roof and ribs of the excavation
- Lifting, twisting or unscrewing of joints of ribs and roof arches of multi-element roadway support
- Assembly, disassembly of pipelines and solder pipelines
- Suspension of electric power and telecommunication cables and overhead rail
- Execution of technological, exploratory and sounding drillings in the roof and ribs of the excavation
- Loading of blastholes



Equipment shifting device UP-1

The MP-1 type universal mining machinery and equipment shifting device is designed for use in horizontal and longitudinally inclined corridor mine workings up to 14°.

When there is a transverse inclination of the excavation up to 12°, it is permissible to transport with the use of additional 2 side struts - (stub) to special holders in the strut beam.



TECHNICAL CHARACTERISTICS

Max. pulling length	80 m
Working stroke	1160 mm
Max. pulling force (at supply pressure 30 MPa)	365 kN
Working pulling force (at working pressure 25 MPa)	305 kN
supply pressure	25 MPa
working fluid	3 ÷ 5% oil-water emulsion
Max. pushing force (at supply pressure 30 MPa)	603 kN
Working pushing force (at working pressure 25 MPa)	502 kN
Cylinder working stroke	1250 mm

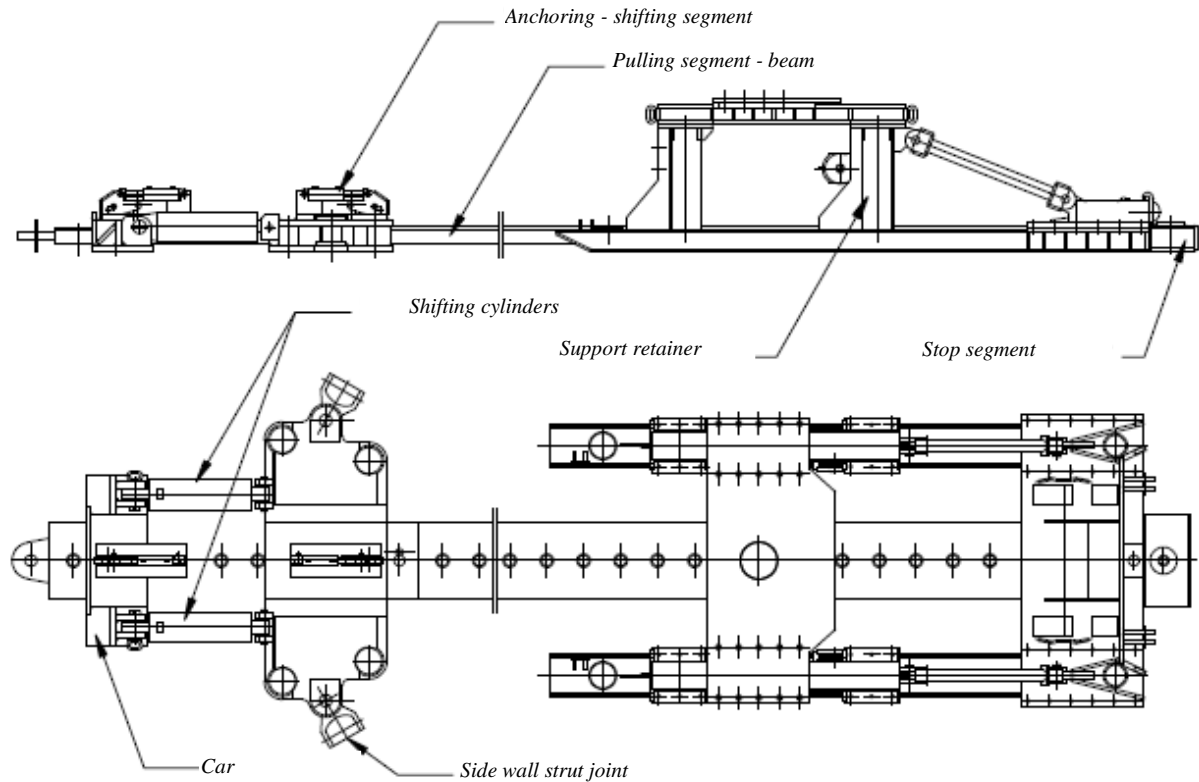
MP – UKP Anchoring and Shifting Device

The MP-UKP anchoring and shifting device is used to move, following the progress of the longwall, the longwall scraper conveyor in its entirety. It is also possible to move the discharge drive of a longwall scraper conveyor when these conveyors are connected to each other.

The MP-UKP anchoring and shifting device consists of the following components:

- anchoring and shifting segment,
- shifting carriage,
- pulling segments - beams,
- supporting trestle,
- resistance segment,
- power hydraulics elements (hydraulic cylinders, distributors, pressure hoses, connectors),
- connecting elements.





TECHNICAL CHARACTERISTICS

Shift:

- total stroke - to 21 m
- piston-side force - 864 kN
- piston-side rod force- 306 kN
- supply pressure - 25 MPa

Spreading:

- piston-side force - 783 kN
- piston-side rod force- 77 kN
- supply pressure - 25 MPa

Power supply:

- from a hydraulic unit or pressure main

Control:

- manual with distributor lever

Medium:

- water-oil emulsion 0.5%

The PWH-UKP anchoring and shifting device can be manufactured in a different version with increased technical parameters according to the customer's requirements.

MP - UPM Shifting Device

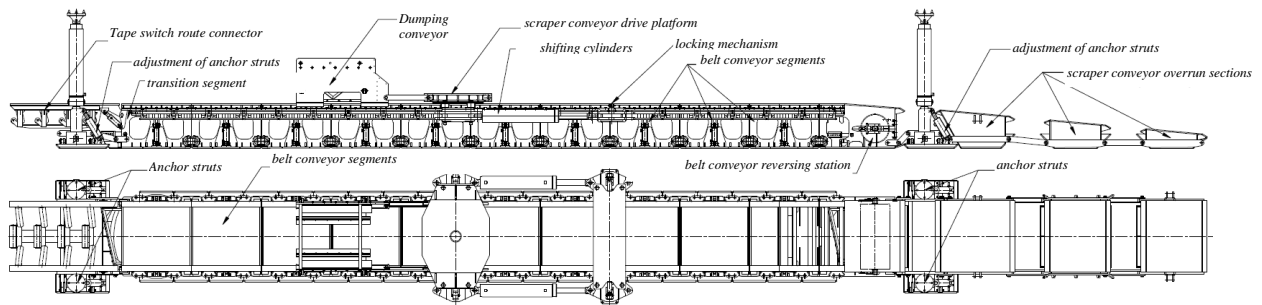
The MP-UPM shifting device is made as the end part of a belt conveyor operating with a longwall scraper conveyor. It makes it possible to move, following the progress of the longwall, the longwall scraper conveyor in its entirety. It is also possible to move the discharge drive of a longwall scraper conveyor when these conveyors are connected to each other.

The described arrangement of conveyors allows to transport the excavated material from the exploited longwall without the need to directly interfere with the configuration of the belt conveyor after each movement of the longwall conveyor towards the longwall.

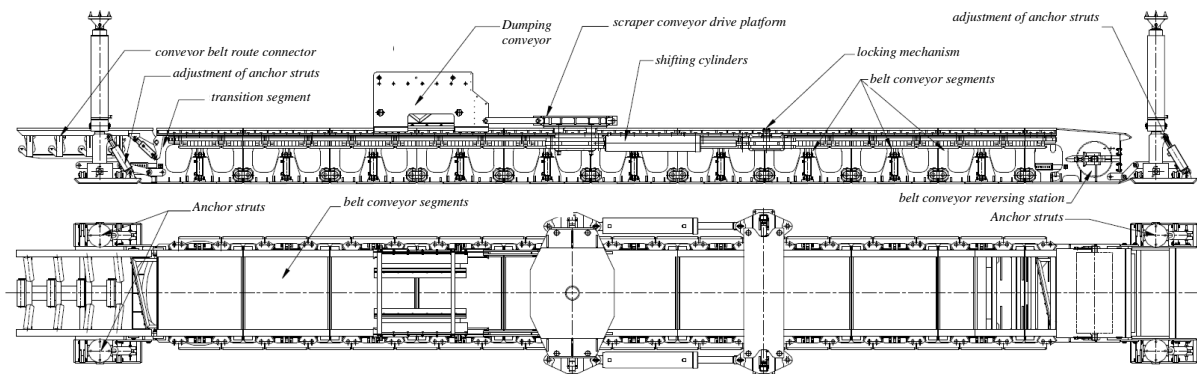
The MP-UPM type device consists of the following basic units:

- Scraper conveyor drive platform
- Sliding device line segment
- Guide
- Shifting device return
- Hydraulic system
- Dumping conveyor
- Transition segment
- Locking mechanism assembly
- Shifting device first segment
- Shifting device attachment segment
- Spreading system





Bottom conveyor shifting device with "flexible" bridge



Bottom conveyor shifting device with "rigid" bridge

TECHNICAL CHARACTERISTICS

Type	PHW-UPM
Width of belt	from 800 to 1200 mm
Width of scraper conveyor trough	to 1100 mm
Length of device	approx. 20510 mm – for 10 segments
Size of overrun	to 17 m
Number of segments	to 14 pieces
Permissible longitudinal inclination	$\pm 35^\circ$
Permissible transverse inclination	$\pm 10^\circ$
Feed pressure	25 - 30 MPa
Maximum travel force	do 3000 kN
Vertical spreading	2 telescopic struts before the first segment and 2 telescopic struts behind the reversing machine
Vertical and transverse route correction (special equipment)	alternate on every second segment

Longwall Scraper Conveyors PZS-MP-230, PZS-MP-260, PZS-MP-300 type

Longwall scraper conveyors of PZS-MP-230, PZS-MP-260, PZS-MP-300 type are used for unloading the excavated material from coal faces and transferring it to a bottom scraper conveyor. They are equipped with elements for operation with any commonly used type of mechanized support and longwall shearer. They can operate in coal faces with longitudinal inclination up to about 35 degrees, transverse inclination up to +/-15 degrees and daily output up to 12,000 tons.



Longwall scraper conveyor PZS-MP-230 type with face dumping

Technical Characteristics	
Properties	Units
Peak capacity	650 to 1100 [Mg/h]
Average capacity	550 to 950 [Mg/h]
Conveyor length	to 300 [m]
Scraper chain class C / class D	2x(26x92) or 2x(30x108) or 2x(34x126)
Reducer size	"15" or "25"
Scraper chain speed	0.81 to 1.35 [m/s]
Longitudinal wall inclination	to 35°
Transverse wall inclination	to +/- 15°
Strength of joints between the trough sections	2500 or 3000 [kN]
Length of the trough route	1500 [mm]
Section division	1.5 [m]
Permissible troughs bending angle:	
- in horizontal plane	+/- 1,5°
- in vertical plane	+/-3°

Scraper conveyors PZP-MP-230 and PZP-MP-260 type

Bottom scraper conveyors type PZP-MP-230 and PZP-MP-260 are used for unloading excavated material from longwalls exploiting hard coal and transfer it to a coaxially positioned belt conveyor. They are manufactured in a version with a route width of 750 or 864 mm.

The above conveyors can operate with the Anchoring and Shifting Device type MP - UKP or the Shifting Device type MP-UPM, which ensure the spreading of the drive and the reversing station of the bottom scraper conveyor and the reversing station of the belt conveyor mounted in the support substructure of the dumping drive.

The design also allows for cyclic rebuilding of the bottom conveyor combined with shortening of the belt conveyor. The design solutions allow simultaneous rebuilding of the bottom conveyor and the belt conveyor return machine.

The above designs also reduce the number of workers assigned directly to rebuilding, and significantly improve work safety by eliminating chain rods.

Bottom conveyors of PZP-MP-230 and PZP-MP-260 type are also adapted to build in their line of dynamic crusher and can operate with different types of belt conveyors with belt width of 1000 or 1200 mm.



Universal Scraper Conveyor PZU-440/E180WM type

Universal scraper conveyor type PZU-440/E180WM is designed for unloading excavated material from headings of stone and stone-carbon workings - horizontal or inclined up to +/- 18 degrees. It can be operated in underground workings of mining plants in areas with degree "a", "b", "c" of methane explosion hazard and class A and B coal dust explosion hazard.

Depending on the needs, the PZU-440/E180 WM conveyor can be completely positioned directly on the bottom or partially positioned on the bottom with the drive embedded on the substructure or suspended, or completely suspended over the receiving conveyor or cars.

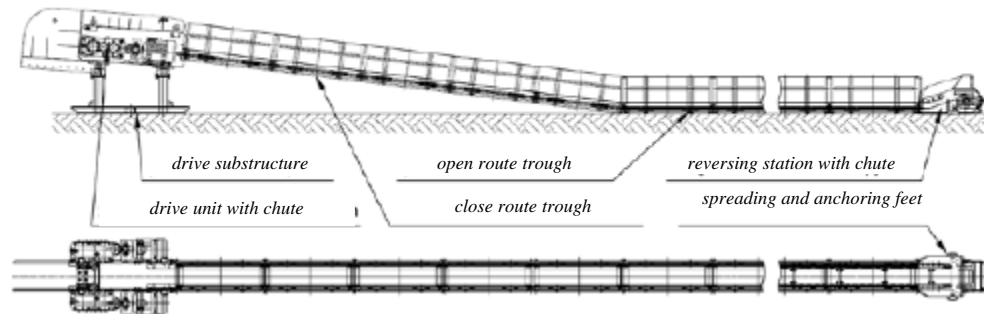
The configuration of the conveyor with the drive on the substructure or suspended is as follows: the reversing machine and several troughs are laid on the bottom, and the rest of the trough with the drive is suspended or supported above the receiving conveyor or cars.

The method of moving the conveyor along the bottom is at the user's discretion.

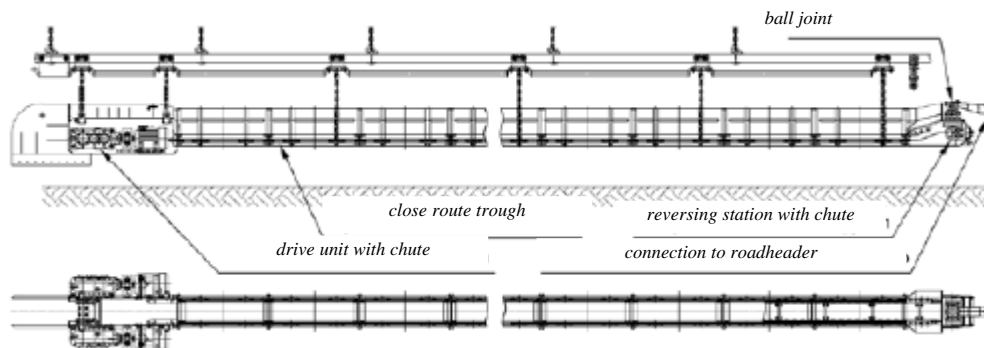
The PZU-440/E180WM conveyor consists of the following elements:

- drive unit equipped with two 22 kW or 30 kW motors, two PPL-14/22 or AP-400-22/30 gearboxes and two flexible couplings,
- a reversing machine with backfill,
- a substructure or drive suspension,
- a conveyor trough made of troughs with an E 180 profile, with a width of 440 mm and a length of 1500 mm, wear-resistant sliding plate with a thickness of 10 mm,
- a conveyor route made of 18 x 64 scraper chain connected to the scrapers with clamps, bolts and nuts,
- conveyor suspension elements.



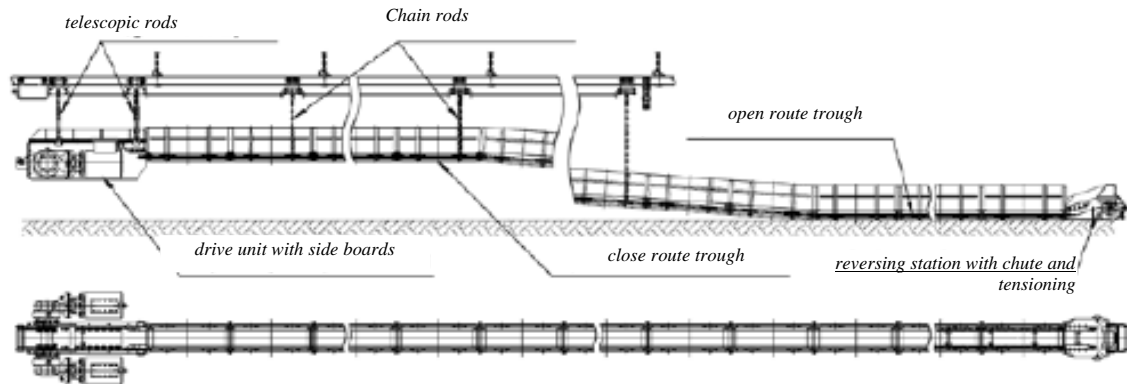


Universal scraper conveyor PZU 440/E180WM type seated on the bottom in the version with 2x22 kW drive and PPL-14/22 gears on the foundation



Universal scraper conveyor PZU 440/E180WM type fully suspended with PPL-14/22 gears adapted for operation with roadheader

Technical characteristics of PZU-440/E180WM-2x22kW conveyor	
Properties	Units/values
Peak capacity	to 120 [Mg/h]
Size of reducer	2 x PPL-14/22. $i = 29.65$
Number and power of electric motors	2 x 22 [kW]
Conveyor length	to 100 [m]
Scraper chain speed	0.86 [m/s]
Scraper chain	2 x 18 x 64 class C
Trough profile	E180 [mm]
Trough width	440 [mm]
Trough length	1500 [mm]
Longitudinal inclination	+/-18 °
Permissible trough bending angle:	
- in horizontal plane	+/- 1.5°
- in vertical plane	+/-3°



Universal scraper conveyor PZU 440/E180WM type partially suspended version with 2 x 30 kW drive and AP-400-22/30 gears

Technical characteristics of PZU-440/E180WM-30kW conveyor	
Properties	Units
Peak capacity	to 150 [Mg/h]
Size of reducer	2 x AP-400-22/30, $i=31.66$
Number and power of electric motors	2 x 30 [kW]
Conveyor length	to 120 [m]
Scraper chain speed	0.80 [m/s]
Scraper chain	2 x 18 x 64 class C
Trough profile	E180 [mm]
Trough width	440 [mm]
Trough length	1500 [mm]
Longitudinal inclination	+/- 18 °
Permissible trough bending angle:	
- in horizontal plane	+/- 1.5°
- in vertical plane	+/- 3°

Unloading Scraper Conveyor PZO-620/742/E

The PZO-620/742/E unloading scraper conveyor is designed for unloading excavated material from workings of stone and stone-coal horizontal or inclined longitudinally up to +/- 18 degrees and transversely min. +/- 8 degrees. It can be operated in underground workings of mining plants in areas with degree "a", "b", "c" of methane explosion hazard and class A and B coal dust explosion hazard.

Depending on the needs, the PZO-620/742/E conveyor can be positioned directly on the bottom with the drive embedded on the substructure or partially suspended with the drive suspended over the receiving conveyor or cars.

The configuration of the conveyor with the drive on the substructure or suspended is as follows: reversing machine and several troughs are laid on the bottom, and the rest of the trough with the drive is suspended or supported over the device receiving the excavated material.

The method of moving the conveyor along the bottom is at the user's discretion.

The PZO-620/742/E conveyor consists of the following elements:

- a drive unit equipped with two 55 kW motors, two MP-40/55 type bevel gears and two flexible couplings,
- a reversing machine with its own charge or a separate charge hopper,
- a substructure or drive suspension,
 - a conveyor trough made of troughs with an E 190 profile, width of 620 to 742 mm and a length of 1500 mm, with wear-resistant sliding plate up to 20 mm thick,
- a conveyor route made of two or three strands of 18 x 64 scraper chain connected to the scrapers with clamps, bolts and nuts,
- conveyor suspension elements.



Belt Conveyor Unit PTU 800/1000

Belt conveyor unit PTU 800/1000 is used to unload excavated material from the place where the mining machine works, transferring it to another belt conveyor or scraper conveyor or to mine cars.

Route of the unit is suspended to carrying cars running on the rails of the overhead rail, and its design allows it to be continuously moved with the progress of the face and cyclically extend the next means of unloading center.

It is also possible to suspend the device in question to the roof of the excavation through the hooks of the approved type as well as to place it on the bottom.

The route of the unit is adapted for suspending additional equipment, such as a dust collector above the route or components of the set for suspending electrical apparatus behind the route of the conveyor unit.

The permissible inclination of the workings in which the unit can operate is ascending and descending up to +/- 18 degrees and corresponds to the working range of roadheaders.

Belt conveyor unit PTU 800/1000 can be used in underground workings of non-methane and methane mines, classified as grade "a", "b" and "c" of methane explosion hazard and grade "A" and "B" of coal dust explosion hazard. The PTU 800/1000 belt conveyor unit consists of two main components: the conveyor and the feeder.

The conveyor and feeder consist of the following repeatable parts:

- drive
- boom
- reversing machine
- dumping drive
- route segments
- conveyor and feeder suspension components



Belt conveyors PTM – 1000, PTM – 1200

Belt conveyors PTM-1000 and PTM-1200 are designed for transporting excavated material at the bottom and on the surface of mines. The conveyors in question have a compact design allowing them to be installed in bottom and collecting roads.

These conveyors, due to their high efficiency and operational reliability, can be used on the main collecting conveyor belts from the mining divisions to the shaft. PTM - 1000 and PTM - 1200 type conveyors can also be used in open pit mines, coal mines, ore mines, and mineral resource mines.

They can be used in underground mines in non-methane and methane workings, in excavations classified as degree "a", "b" or "c" of methane explosion hazard, and „A" and "B" of coal dust explosion hazard.



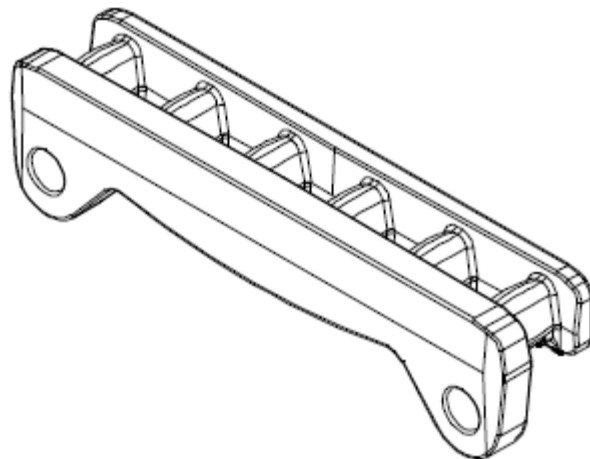
Accessories and trough components of longwall and bottom scraper conveyors

We have the relevant certificates of conformity allowing us to manufacture troughs and also components of scraper conveyors of the following types:

- Rybnik 750
- Rybnik 850
- GLINIK 298
- PSZ 750 Nowomag
- PSZ 850 Nowomag
- JOY AFC
- PZP Kobra
- GROT

Among the manufactured components are:

- Closed troughs/groyne-troughs
- Inspection troughs/groyne-troughs
- Half troughs
- Open troughs
- Drive drums
- Return drums
- Cable guides
- Trough connectors
- eicotrack ladders 125 and 126



Hydraulic unit of Car Shunting Machine and Rail Barrier

The hydraulic unit of car shunting machine is designed to move and block mine cars with a capacity of up to 2,800 dm³ in underground workings of mining plants as well as on the surface.

The unit can also be built in places where cars are moved to load any loose materials (loading). It can also be used to move and block cars in coordination with Hydraulic tipping of mine cars.

It can be used in underground mines in non-methane and methane workings, in excavations classified as grade "a", "b" or "c" methane explosion hazard, and „A" and "B" coal dust explosion hazard.



Hydraulic unit of car shunting machine and rail barrier consists of:

- hydraulic shunting machine, which is used to move the cars
- hydraulic rail barrier of the cars, which prevents backing of the cars moved by the shunting machine,
- mechanical rail barrier of the cars, which prevents backing of the already moved cars.

Hydraulic Mine Cars Dumping Unit

HYDRAULIC MINE CARS DUMPING UNIT is designed for emptying mine cars with a capacity of up to 2,800 dm³ in underground mine workings as well as on the surface and in processing departments.

Dumping can also be built in wherever any loose materials are transported, for example, sand, stone, cement, etc..

It can be used in underground mines in non-methane and methane fields, in excavations classified as grade “a”, “b” or “c” methane explosion hazard, and “A” and “B” coal dust explosion hazard.

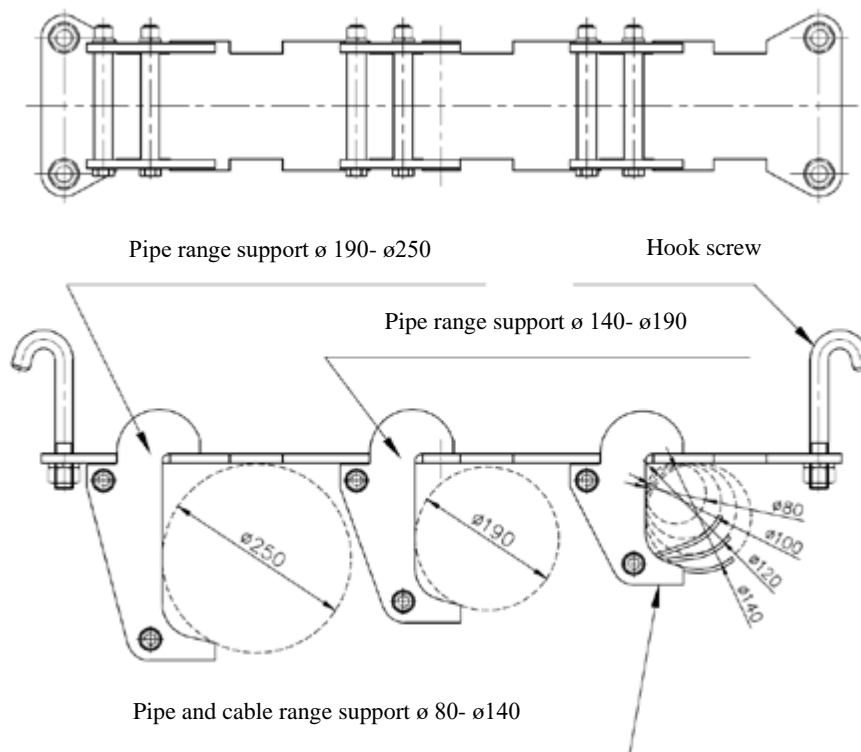


WPR 80/300 Pipe and Cable Holders - Version V25 - V36

WPR 80/300 holders are designed to suspend pipelines, electrical, hydraulic and other cables in underground mine workings.

The versatility of their design allows them to be used in excavations supported by flexible arches in the range from V25 to V36.

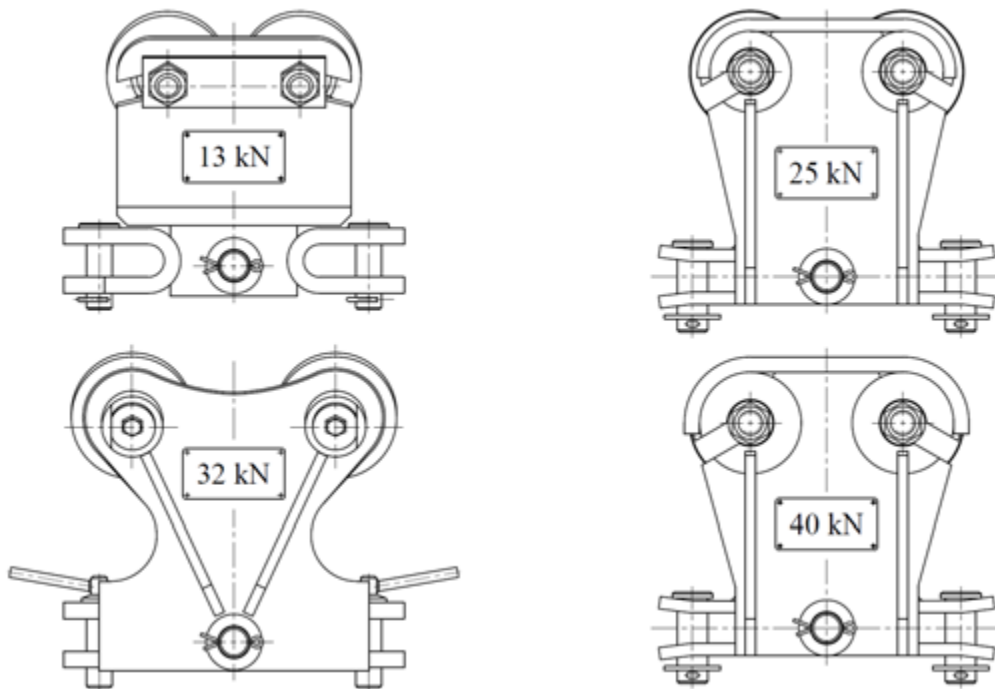
They can be used in underground workings of mining plants in rooms with degree "a", 'b', "c" of methane explosion hazard and class A and B of coal dust explosion hazard.



Lifting Trolleys 13 kN, 25 kN, 32 kN, 40 kN

Lifting trolleys are designed to work both on the surface and in underground workings of mining plants in non-methane and methane fields in workings classified as grade “a”, “b” or “c” methane explosion hazard and in workings classified as class A and B coal dust explosion hazard. Their task is to facilitate the movement of transported materials.

Lifting trolleys are elements used to suspend and move along the overhead rails suspended machinery and equipment such as belt conveyors, light scraper conveyors, containers and other types of equipment used both in underground workings of mining plants as well as on the surface of mining plants.



Container for transporting steel coils KT-MP-1 type

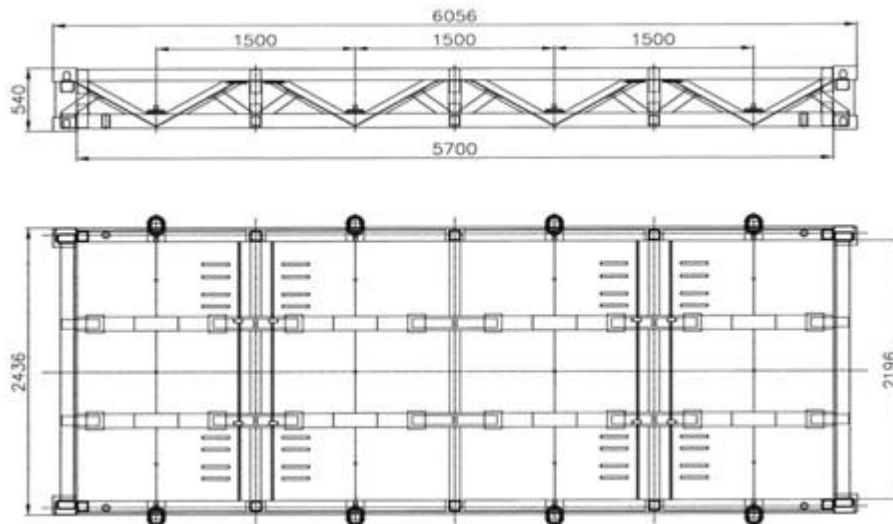
The KT-MP-1 containers are used to transport metallurgical products, mainly hot- and cold-rolled steel coils, galvanized, painted, aluminum coils and others. They are also adapted for transporting retail and palletized cargoes.

Technical characteristics of the KT-MP-1 container

- Carrying capacity of up to 30 tons of goods
- suitable construction in the floor allowing transport of steel coils
- no need for special frames, wooden sleepers and other elements used in the transport of coal cars or tarpaulins
- speed of loading (reloading) and unloading thanks to the possibility of lifting the loaded container from one means of transport to another, for example, from a wagon to a car or vice versa
- option of transporting long cargoes not exceeding 6 meters in length
- option of transporting under a tarpaulin
- option of transporting on a car trailer.

Container wagons of the KT-MP-1 type have the ability to load other flat goods such as sheet metal, billets, etc. In addition, by stacking empty containers one on top of the other, space is obtained on the platform wagon for other types of containers.

Combining the KT-MP-1 container with a truck container trailer turns it into a mulda semi-trailer, which gives you additional options for transporting from the train station to the warehouse while maintaining maximum transportation safety.

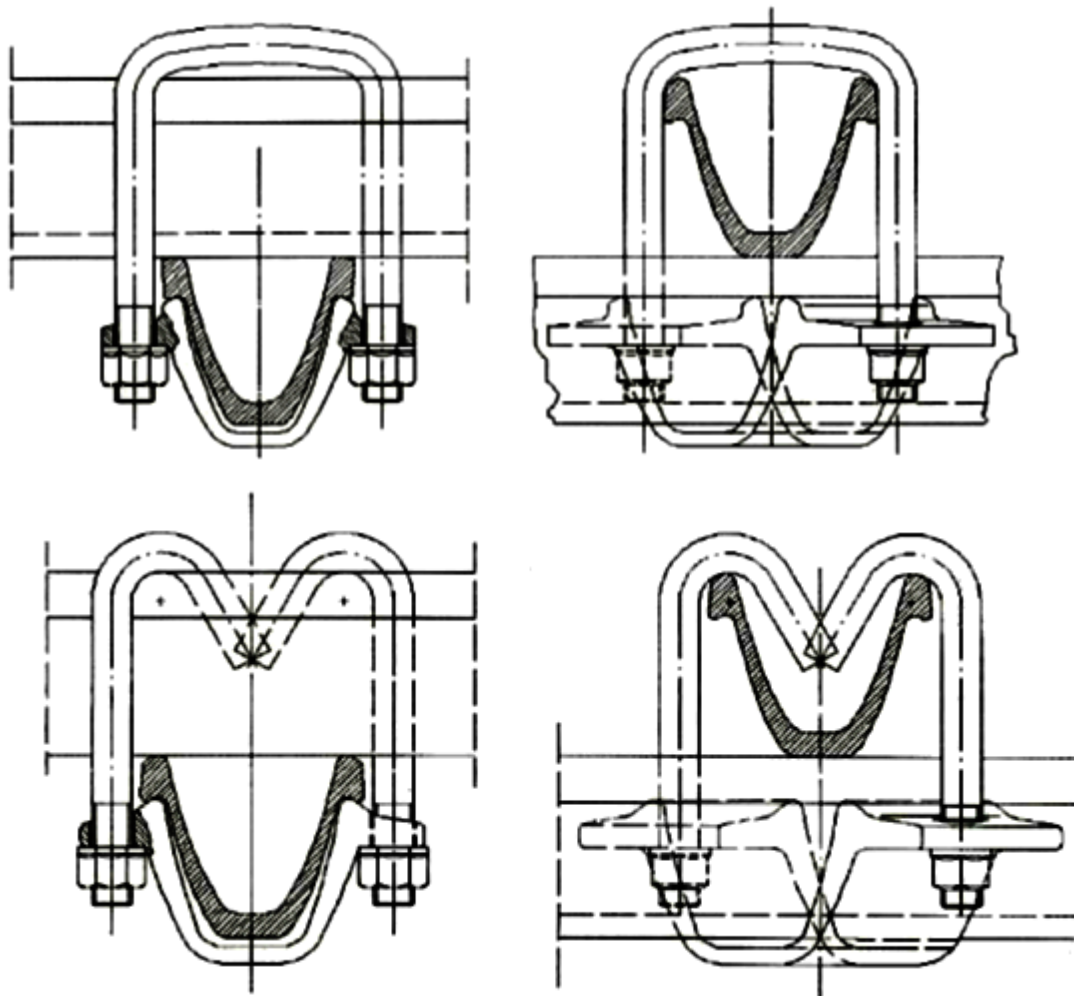


Angle connectors ŁKW type

Angle connectors with hook bolts (LKWh) and angle connectors with U-bolts (ŁKW) are designed for attaching to the timber frame support of the support made of trough section V25, V29, V32, V34, V36 sub-beams made of trough sections V25, V29, V32, V34, V36, USG universal miners' roof support, S18, S24, S30, S42 rail and SCG sectional roof supports with one fastening clamp and two hook bolts or one fastening clamp and a U-bolt.

The fastening clamps of the LKWh and LKW angle connectors, together with a special anchor washer or in a suitable design of holes can be used to bolt the ceiling arches to the rock mass with two anchors ending in M20, M22 or M24 threads.

They consist of fastening clamps, two hook bolts or one U-bolt and two nuts. Angle connectors can be used in underground mines, in non-methane and methane fields, in excavations classified as grade "a", "b" or "c" methane explosion hazard and class A or B coal dust explosion hazard.

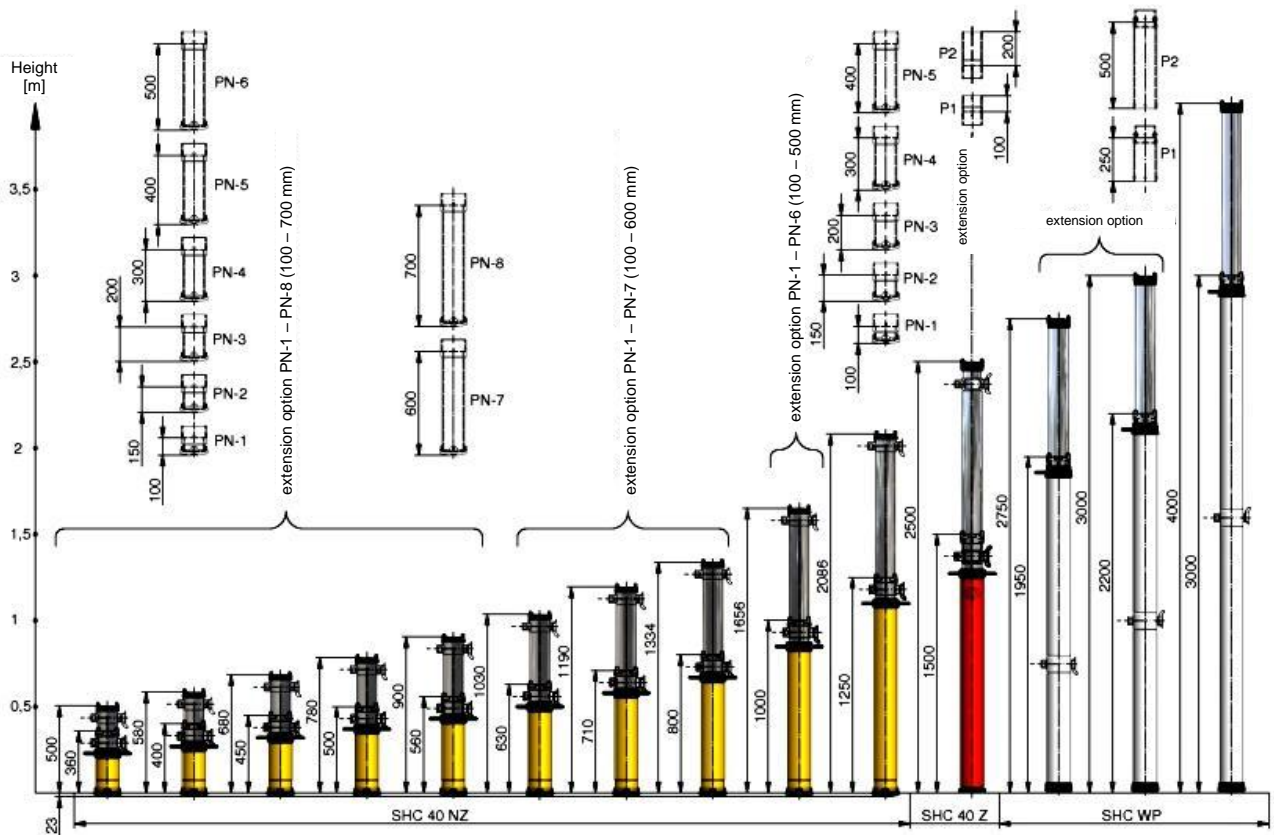


Hydraulic stands SHC

The SHC hydraulic stands are used in underground mine workings and are used to support the roof in longwalls operated for falling, in cross-cuts and as additional reinforcement of the support of roadway workings.

They can be used in non-methane and methane fields in workings classified as grade “a”, “b” or “c” methane explosion hazard and class A or B coal dust explosion hazard. They can be an independent support or reinforce a support of another type.

The stands can be equipped with typical power sockets adapted to special power guns or Stecko-type socket and plug elbows allowing direct connection of the plug end of a hydraulic high-pressure hose. They operate in a central external power supply system using oil-water emulsion.



Dimensional ranges of application of SHC hydraulic stands

Hook slings VHS 40 and VHS 50 type

Hook slings of the VHS type are designed for suspension to the flexible arch support of the running track rails of monorails. Hook slings of the VHS type can also be used for lateral stabilization of the running track (lashings).

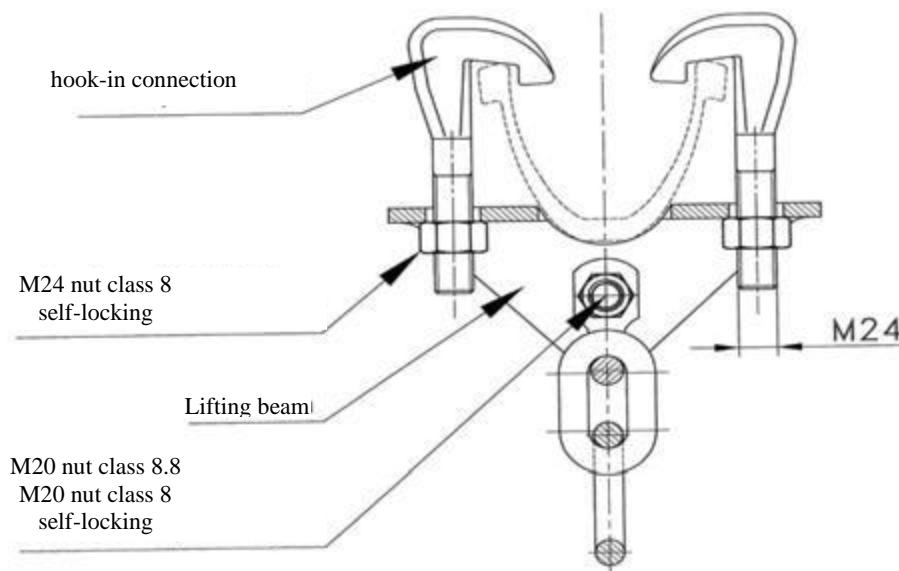
The hooks of these slings are adapted for attachment to sections of flexible support with profile V25, V29, V32, V34, V36 and V25D, V29D, V32D, V34D, V36D, V44D as well as V40, V42 and V40D and V42D, and KS/KO, where : D - means double V profile (overlapping).

The hook sling of VHS type consists of drop-forged hook hitches with M24 class 6.8 threads and M24 class 8 self-locking nuts and sheet bent crosshead with M20 class 8.8 bolt and M20 class 8 self-locking nut, and optionally at the request of the customer shackle (forging). Hook slings are adapted to operate with chains of dimensions: 18x64, 16x80, 18x90.

The hook slings of VHS type can be used in underground mines in non-methane and methane fields in excavations classified as grade "a", "b" or "c" methane explosion hazard and class A or B coal dust explosion hazard.

The maximum load of the hook sling (guaranteed safety factor $n=4$) is:

- for sling VHS 40 – 40 kN
- for sling VHS 50 – 50 Kn



We also have elements and accessories for KSP routes in our permanent sale.

Supporting friction stands VALENT-SN type

Supporting friction stands VALENT-SN type are designed for direct or indirect support of the roof as individual support or additional reinforcing support.

The above stands are used for:

- reinforcing the timber frame support of the support of roadway excavations, as stands of simple support of longwall cross-cuts as well as when reinforcing the arch support of corridor excavations with increased stresses and pressures of the rock mass,
- as independent support stands in excavations threatened by shocks of the rock mass,
- as a reinforcing element of the final support of another type,
- for use in longwalls with individual support

The VALENT-SN series of supporting friction stands consists of eighteen stands characterized by different maximum and minimum heights and having different values of minimum working support.

Supporting friction stands of the VALENT-SN type have two core variants: with a fixed and replaceable crown head.

Supporting friction stands can be used in non-methane and methane fields, in excavations classified as grade “a”, “b” or “c” of methane explosion hazard and class A or B of coal dust explosion hazard.

Technical parameters of supporting friction stands

Supporting friction stand Valent-sN	Height of the stand when fully extended H [mm]	Height of the folded stand h [mm] (fixed)	Height of the folded stand h [mm] (replaceable)	Nominal supporting capacity [kN]	Working supporting capacity [kN]	Peak support (overload capacity) [kN]	Resistance to dynamic loads 2,8 x 10 ⁴ j
Valent-SN-400/710	710	500	558	400	400+/-20%	600	Yes
Valent-SN-400/800	900	545	603				
Valent-SN-400/900	900	595	653				
Valent-SN-400/1000	1000	649	708				
Valent-SN-400/1120	1120	709	768				
Valent-SN-400/1250	1250	774	833				
Valent-SN-400/1400	1400	849	908				
Valent-SN-400/1600	1600	949	1008				
Valent-SN-400/1800	1800	1049	1108				
Valent-SN-400/2000	2000	1149	1208				
Valent-SN-400/2240	2240	1269	1328				
Valent-SN-400/2500	2500	1399	1458	315	315+/-20%	472.5	
Valent-SN-315/2800	2800	1549	1608				
Valent-SN-250/3150	3150	1724	1783				
Valent-SN-250/3550	3550	1924	1983	250	250+/-20%	375	
Valent-SN-250/4000	4000	2374	2378				
Valent-SN-250/4250	4250	2624	2628				
Valent-SN-200/4500	4500	2874	2878	200	200+/-25%	300	

FRICITION stands SV

Friction stands SV type are individual elements of mining support designed to support the roof in gallery mine workings. Made of V25, V29, V32/34/36 section,

The stands can form an independent support or be used as reinforcing elements of another type of support. Individual wall support in its basic equipment consists of:

- SV stands of a size appropriate to the height of the given wall in accordance with the Technical Documentation of Wall Operation and Construction,

- steal roof bar

PZ (toothed) or PHT - 50 (hydraulic) steel and pull-up racks that are on the wall's equipment necessary for the support of the stand.

The SV stand series includes 16 basic stand sizes from 1000 mm to 4500 mm in extended state. The stand structure includes lower stand, core stand, support foot, crown head, clamps depending on the type of stand (top, bottom, central).

Among the SV stands we distinguish SV stands - with two clamps, SVt - with three clamps, SVtw - with four clamps

Technical parameters of SV stands

No.	Version	Lmax [mm]	Lmin [mm]	Nominal load capacity [kN] by stand type			Stand weight [lg]*		
				SV25 SV29 SV32	SVt25 SVt29 SVt32	SVtw25 SVtw29 SVtw32	V25	V29	V32
1.	1000	1050	800	160** 180** 260**	250** 280** 410**	300** 350** 500**	38.8	45.0	49.6
2.	1120	1170	880				41.8	48.0	53.4
3.	1250	1300	925				45.00	52.2	57.6
4.	1400	1450	1000				48.8	56.6	62.4
5.	1600	1650	1100				53.8	62.4	68.8
6.	1800	1850	1250				61.3	71.1	78.4
7.	2000	2050	1350				66.3	76.9	84.8
8.	2240	2290	1470				72.3	83.8	92.5
9.	2500	2550	1600				78.8	91.4	100.8
10.	2800	2850	1800				88.8	103.0	113.6
11.	3150	3200	1975				97.5	113.1	124.8
12.	3500	3600	2175				107.5	124.7	137.6
13.	3550	3600	2175				107.5	124.7	137.6
14.	4000	4050	2450				121.3	140.7	155.2
15.	4250	4300	2585				127.5	147.9	163.2
16.	4500	4550	2700				133.8	155.2	171.2

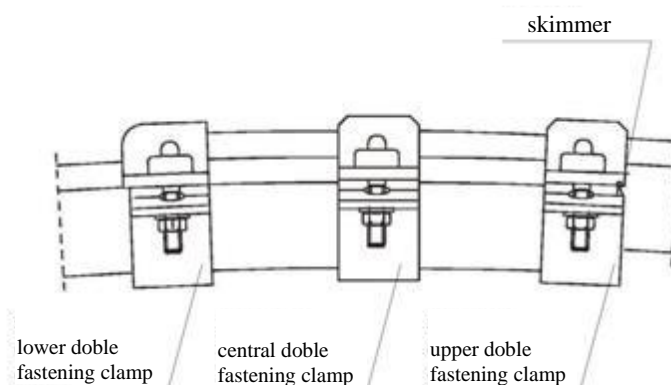
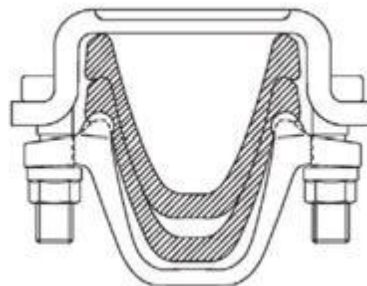
Double fastening clamps for reinforcement of road supports

Clamps are used to connect elements of roadway support made of V-shape. The clamp consists of an upper fastening, a lower fastening, two M20 or M24 special bolts and two M20 or M24 special nuts.

SD and SDO double fastening clamps can be used in underground mines in non-methane and methane fields in excavations classified as grade "a", "b" or "c" methane explosion hazard and class A or B coal dust explosion hazard. The clamps are made of steel grades S480W, S550W, 25G2A, S355 depending on customer requirements or requirements of safety standards.

Types of double fastening clamps:

- For support made of section V29: SDw-29, SDOw-29, SD-29, SDO-29
- For support made of section V32/34/36: SDw-36, SDOw-36, SD-36, SDO-36



Timber frame of roadway support

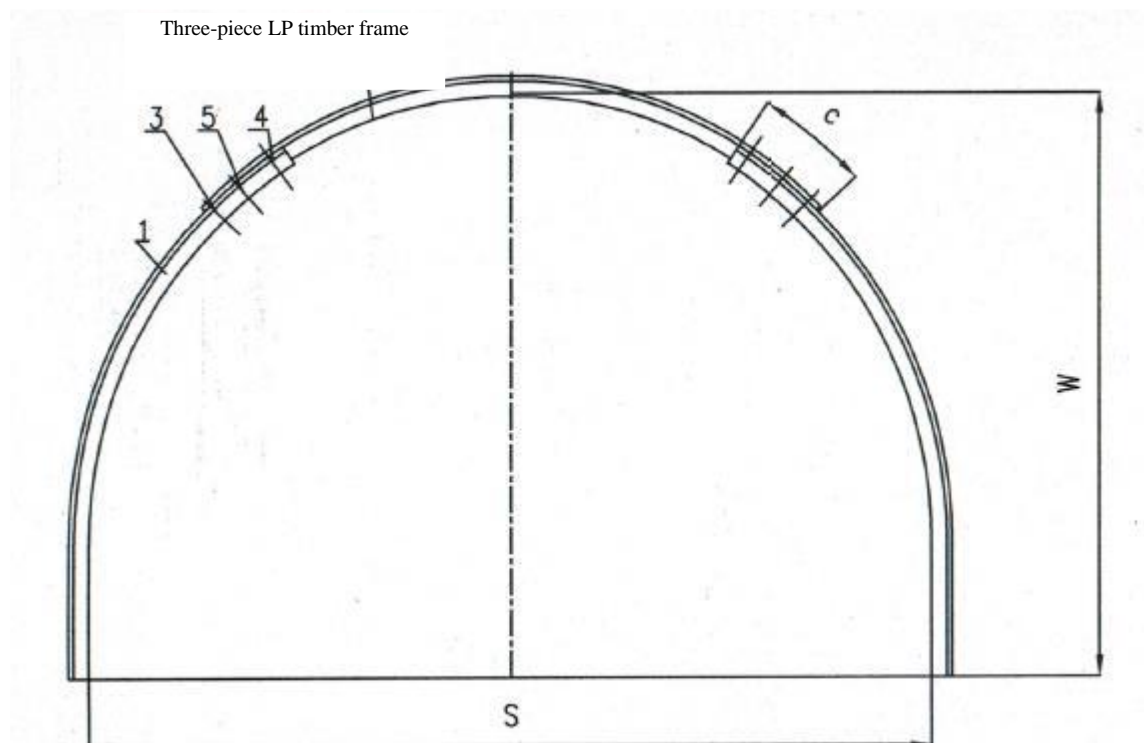
Tiber frame flexible roadway support ŁP, ŁPP, ŁPZ and also ŁPCB or made of V29, V32, V34, V36 sections. Used in underground mine workings to support the roof during tunnelling.

Roadway Arch support can be used in underground mines in non-methane and methane fields in excavations classified as grade “a”, “b” or “c” methane explosion hazard and class A or B coal dust explosion hazard. The support is made of steel in grades S480W, S550W/S560W

Types of roadway support:

- ŁP made of section V29, V32, V34 and V36 in grades S480W and S550W/S560W
- ŁPi made of section V32, V34 and V36 in grades S480W and S550W/S560W
- ŁPP made of section V29, V32, V34 and V36 in grades S480W and S550W/S560W
- ŁPZ made of section V29, V32, V34 and V36 sections in grades S480W and S550W/S560W
- ŁPCBor made of V32 and V36 sections in grades S480W and S550W/S560W
- Straight roadway support made of V29, V32, V34 and V36 sections in grades S480W and S550W/S560W

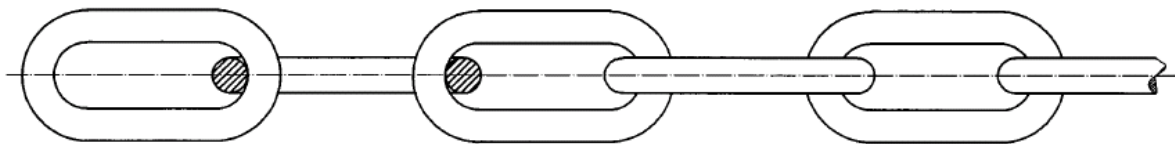
We have a full range of dimensions in accordance with PN-H-93441-3



Technical and farm chains

Welded chains are designed for use, among other things, in mining equipment for stabilizing transport loads, stabilizing rail suspended loads for suspending scraper conveyor roads. They can also be used as tie rods for fastening, stabilizing and securing all kinds of equipment such as pipelines, transport loads, platforms, etc.

Welded chain is made of round bar or wire of the appropriate diameter, which is bent into an oval shape by machining. The two ends of the bar are welded together to form a link. At the point of welding there may be: bends from the electrode holder which should not exceed the permissible deviations specified in the WT. Each subsequent link is connected to the previous one according to the figure below:



Welded chain of a given diameter may be used only in designated operating loads. The maximum operating loads at which a given technical chain may be used are specified in the following table.

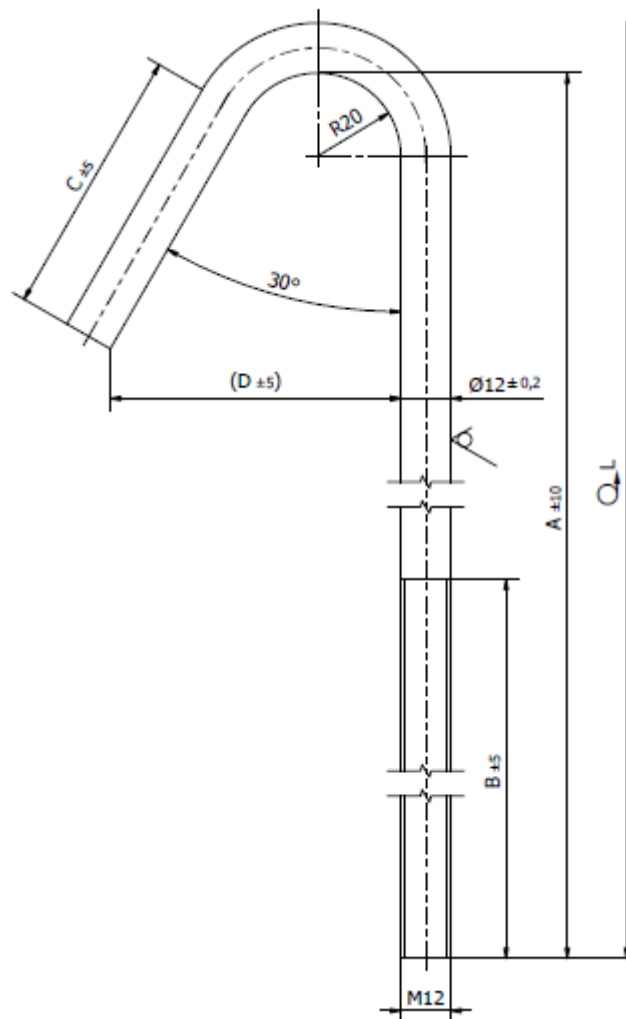
Chain sizes fi	Maximum operating load Kg
4	400
5	600
6	1000
7	1400
8	2000
10	3200
13	5200

Hook bolts

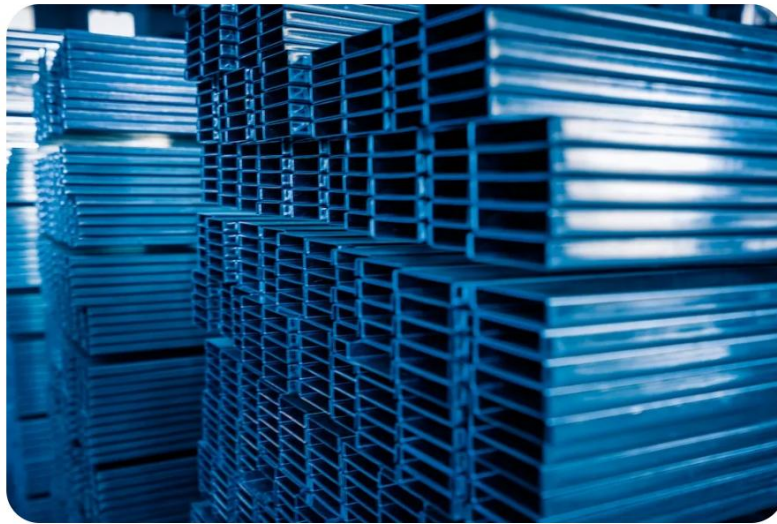
Hook bolts are designed for attaching to timber frames made of sections V25, V29, V32, V34, V36, USG universal mining roof bar, S18, S24, S30, S42, S49 rail and SCG roof bars by means of one fastening clamp and two hook bolts. Hook bolts and fastening clamps are used in underground mines in non-methane and methane fields in excavations classified as degree "a", "b" or "c" of methane explosion hazard and class A or B of coal dust explosion hazard. We offer the following hook bolts: M12, M24, M27

The hook bolts include M12, M24 M27 nuts. It is also possible to use a flange nut and a M27 high nut with a spring washer. The nut material should meet the requirements for mechanical property class min 5 according to PN-EN ISO 898-2:2012. Rough workmanship quality (C) in accordance with PN-EN ISO 4759-1:2004.

Thread type - in accordance with PN-ISO 965-2:2001, PN-ISO 965-3:2001. Upon agreement with the customer there is an option to use other nuts with resistance class min. 5.



Steel products



Matix Sp. z o.o. has been operating in the metallurgical products market since 2004, providing high-quality products to a wide range of customers. We specialize in the sale of steel, plates, rods, and other metallurgical materials, offering comprehensive service and consulting. Our company has gained the trust of many clients thanks to our experience, reliability, and personalized approach to each order. Through cooperation with reputable manufacturers, we guarantee competitive prices and quick order fulfillment.

Our main product range includes:

Plates – predominantly grades S235, S355, S690QL, 400HB

Smooth rods – predominantly grades S235, S355, C45, 42CrMo4

Flat bars – predominantly grades S235, S355, S480W

Mining profiles – J29, J36, V29, V32, V36

Ribbed profiles – E180, E230, E260

Castings of Mining Profiles – E260, E265, E295, E298

Castings and forgings for the mining industry

And also all profiles, sections, rods, ribbed rods, and rolled products.

Steel Structures



Matix Sp. z o.o. specializes in the production of steel structures dedicated to the mining industry as well as other sectors, fulfilling orders based on customer inquiries. With extensive experience and a wide range of machinery, we are capable of executing even the most complex projects. Our company has a modern shot blasting facility and a painting shop, enabling precise surface preparation and durable protection of structures against harsh weather conditions. Matix guarantees high quality, punctuality, and full flexibility in order fulfillment.

Matix invests in modern technologies and machines that allow for precise manufacturing of each component and enhance production efficiency. Thanks to our advanced machinery, including welding, cutting, and steel processing equipment, we are able to carry out orders at the highest level.

REFERENCES

MATIX Sp. z o.o. regularly receives references from its partners



A PART OF THE BECKER MINING SYSTEMS GROUP OF COMPANIES





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