



BEAR RESPONSIBILITIES FOREVER

SHANDONG MINING MACHINERY
HUANENG EQUIPMENT MANUFACTURING CO., LTD



SHANDONG MINING MACHINERY GROUP CO., LTD

SHANDONG MINING MACHINERY HUANENG EQUIPMENT MANUFACTURING CO., LTD
(Coal Mining Machinery Business)

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Brilliant Achievement

First-class management, first-class quality, first-class reputation, and first-class service exemplify Shandong Mining Machinery Group's path to success. Through hard work, innovation, and striving to become an industry pioneer, Shandong Mining Machinery Group remains committed as always.

NO.1



SHANDONG MINING MACHINERY GROUP

INTRODUCTION

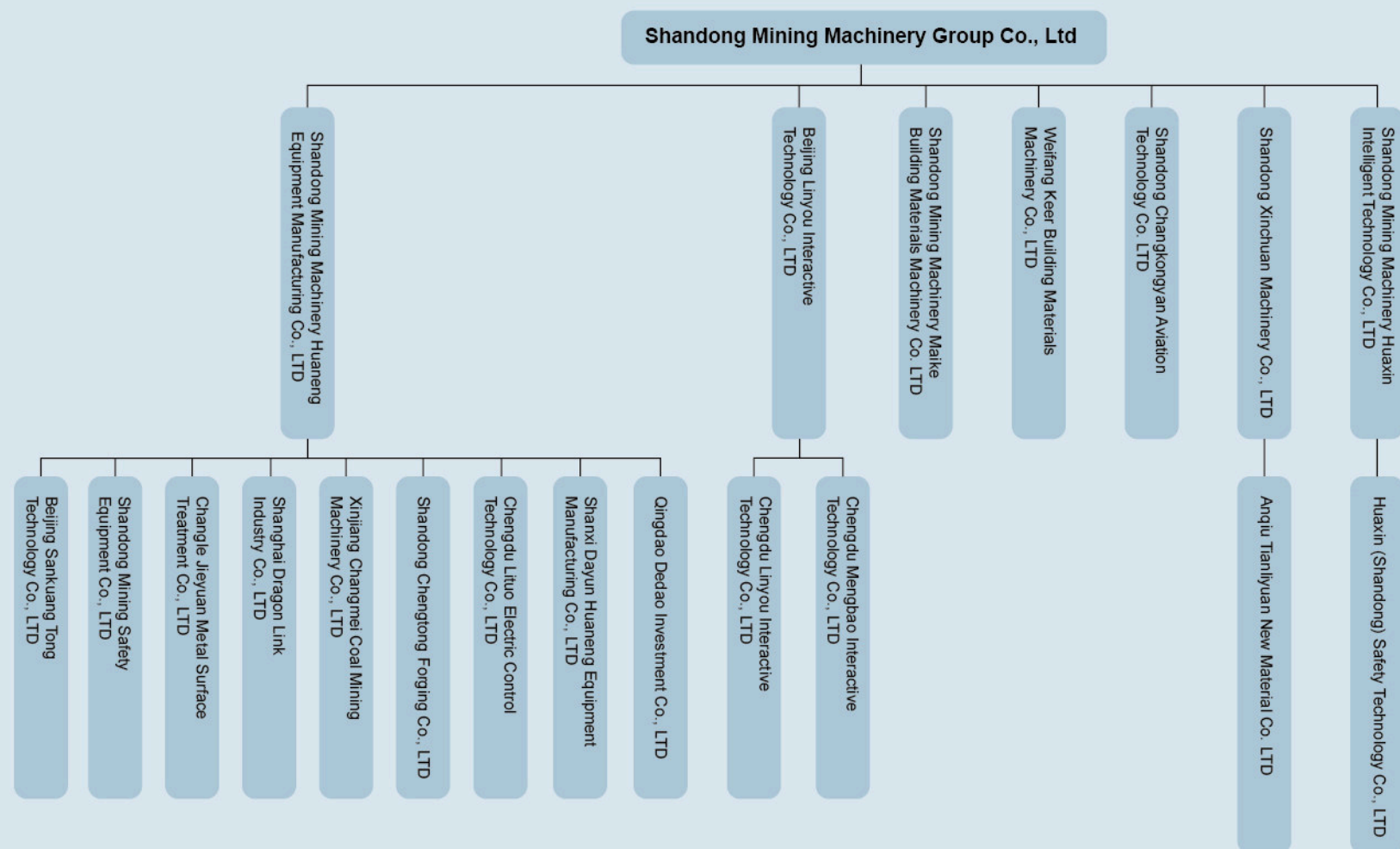
Shandong Mining Machinery Group Co., Ltd. was founded in 1955 and operates over 20 subsidiaries, including Shandong Mining Machinery Huaneng Equipment Manufacturing Co., Ltd. It was listed on the Shenzhen Stock Exchange on December 17, 2010 (stock code: SZ 002526), covering an area of over 2,000 mu (~133.33 hectares) and employing more than 2,000 employees. The company focuses on coal mining machinery production and marketing, as well as building materials machinery, packaging machinery, UAV manufacturing, online games, and internet services, developing a diversified industrial layout.

It adheres to the business philosophy of “being of integrity, customers first, keep innovating, quality first”, and is committed to cooperating with domestic and international partners to create a bright future.





SHANDONG MINING MACHINERY GROUP



Main Business

Coal Mining Machinery Manufacturing

It is mainly consisted of Shandong Mining Machinery Huaneng Equipment Manufacturing Co., LTD and its holding subsidiaries. The main production coal mining machinery fully mechanized mining complete sets of equipment and spare parts, industrial robot intelligent manufacturing, complete sets of coal washing and preparation equipment, mine emergency refuge system, etc.



Intelligent Manufacturing

SMMG takes advantage of mining machinery manufacturing fields, traditional drivers being replaced by new ones, and makes great progress in the field of intelligent manufacturing, such as UAV and building materials machinery, intelligent coal mine roof wireless pressure detection system, and automatic upgrade in packaging machinery step by step.



Online Game Operation

Specializing in research and development of global online games platform, operation and release, meanwhile, to expand the global mobile platform market, committed to providing high-quality mobile games and entertainment services for global clients.



EPC

Breakthrough the traditional product manufacturing thinking restrictions of coal mining machinery industry, based on the advantages of enterprise technology, capital and management, to carry out the general contracting of engineering contract, coal mining service with equipment and other business, so that the enterprise gradually transforms from the traditional machinery manufacturing industry to the modern machinery manufacturing and service.





SHANDONG MINING MACHINERY GROUP

One Ideology: New Collectivism

This ideology has gradually emerged over more than a decade of corporate restructuring and represents the cultural essence suited to the company's current situation. It emphasizes the critical role of talent in enterprise development, granting employees sufficient equity to ensure stability in their status and reflecting a humanistic approach. It strengthens employees' sense of community belonging and ensures they fully perceive the company's acceptance and inclusiveness. It embodies principles of equality, harmony, and healthy competition—a new ideological framework. Unlike the egalitarian “common pot” collectivism of traditional state-owned enterprises or the narrow familial collectivism of family businesses, this approach is termed New Collectivism.

One Cradle: Cradle of the Professional Managers

Our company operates under an internal management structure, authorizing responsible individuals to manage their departments or branch factories. Employees are empowered with ample autonomy to fulfill their roles. Both staff and administrators cultivate decision-making awareness, and key personnel are granted full authority over management and decision-making. This system systematically trains qualified professional managers at every level. Shandong Mining Machinery Group thus becomes the cradle for nurturing professional managerial talent.



One Theory: Gear-chain Drive Theory

- ◎ Initiative Chain (Strategy Level): The board of directors' strategy platform holds the majority shares. A key characteristic of this structure is that shareholders maintain close relationships with the enterprise by controlling the shares. This creates aligned interests and enables shared strategic decision-making. At this level, strategic decisions are made to guide the enterprise's development.
- ◎ Driven Chain(Executive Level): It exists in the branch factory and simulates a shareholding system to ensure that the backbone (key personnel) has ample shares, aligning their interests and risks with those of the strategic level. This structure fosters high efficiency and willingness by creating shared incentives.
- ◎ Auxiliary Chain(Operational Level): The auxiliary chain at the operational level exists among branch company machine operators. As the foundational tier, it is granted ample management authority to motivate operators to not only execute strategic decisions but also proactively refine them, ensuring efficient plan execution and goal achievement.



Enterprise

Culture

HONOURS



SHANDONG MINING MACHINERY GROUP

- "Quality Management system Certification unit" since 2002
- "Measurement Assurance Certificate" since 2002
- "China Potential Enterprises" list of Forbes Chinese Edition From 2005 to 2009
- "National Excellent Enterprise of Coal Machinery Industry"
- "Standard Good Behavior Certificate"
- "National Coal Industry Supporting Product"
- "National mechanical and electrical products for coal industry"
- Point production enterprise"
- "National Coal Industry (Mechanical and electrical) Distribution"
- Designated production enterprise of product"
- "Designated production of special equipment and spare parts for coal mines in China"
- "Shandong Provincial Coal Machinery Engineering Technology Research Center"
- "Top 20 Enterprises in National Coal Machinery Industry"
- "Top 50 Enterprises of China Coal Machinery Industry"
- "Top 100 Coal Enterprises in China"
- "Advanced Collective of Material Supply and Circulation"
- "China University of Mining and Technology Practice Teaching Base"
- "Top Ten Private Enterprises of Special Equipment Manufacturing Industry in Shandong Province"
- "Provincial-level enterprise adhering to contracts and respecting credit"
- "Shandong Provincial Postdoctoral Innovation and Practice Base"
- Awarded "Top 10 Leading Private Enterprises in Shandong High-end Equipment Manufacturing Industry"
- Awarded as "High-end Brand Cultivation Enterprise of Manufacturing Industry in Shandong Province"
- 2020 "Construction Enterprise Qualification Certificate"
- "Occupational Health and Safety Management System Certification" and "Environmental Management System Certification" in 2020
- "AAA Credit enterprise in enterprise Credit Evaluation" by China National Coal Industry Association in 2021
- "Coal Mine Equipment Maintenance Service Certification" in 2022
- 2023 "Weapon and Equipment Quality Management System Certification"

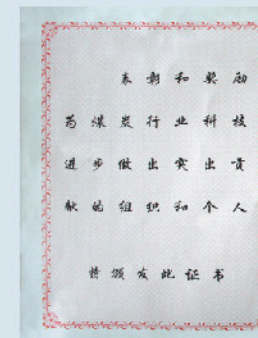
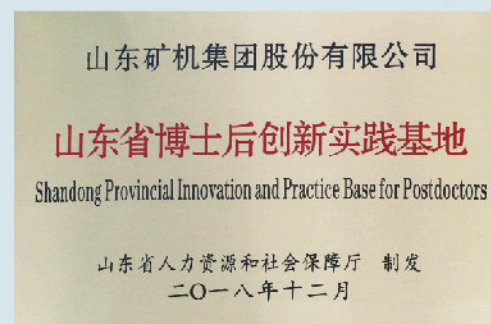
Product honor

- Lemel single hydraulic prop for mining was rated as Shandong Famous Brand product by Shandong Famous Brand Strategy Promotion Committee in 2005
- "Shandong Famous Trademark" issued by Provincial Industry and Commerce Bureau in 2006
- Since 2006, Lemel scraper conveyer, belt conveyer and gearbox have been rated as Shandong Famous brand products
- In 2006, Shandong Entry-Exit Inspection and Quarantine Bureau exported the Hydraulic support ZH, ZY and ZF

Product quality certificate

- Scraper conveyor got the "CE" product certification of European Union
- 2010 "AA Class Enterprise with Standardized Good Behavior", Shandong Quality Supervision Bureau
- SK powered roof support was rated as Shandong Famous brand products in 2010
- 2012 ZY3600/07/15 Thin Coal Seam blasting mixed powered roof support "National Torch Program Project"
- 2012 ZY2400/5.5/12 thinnest coal seam cover powered roof support "National Key New Product"
- 2014 China Mining Materials Network "The Most Influential Brand in Mining Materials Industry"
- In 2017, the project of "Research and Application of comprehensive mechanized Mining of Steep and Thin Coal Seam with low slope and False Slope" was awarded by China National Coal Association
- First Prize in Science and Technology of Coal Industry."
- The "Development and Application Demonstration Project of Steeply inclined Intelligent Hydraulic Support" won the "Chongqing Science and Technology Second Prize" in 2019.
- The project of "Development and Application of Intelligent Sharp Incline Prone False Incline powered roof support" won the "Third Prize of Science and Technology of Shandong Province" in 2020.
- In 2021, "Research and Application of Intelligent Steeped-sloping Fully mechanized Mining powered roof support" won the "13th Five-Year" Scientific and Technological Innovation Award of Coal machinery industry

Honours





Shandong Mining Machinery
Huaneng Equipment Manufacturing Co.,Ltd

Shandong Mining Machinery Group is committed to establishing a century-long enterprise, adhering to the philosophy of being of integrity, customers first, keep innovating, quality first. We pursue advanced technology, advocate business ethics, strive to manufacture top-tier products, operate with vigor and vitality, and seek innovation and sustainable development to reach the pinnacle of the manufacturing industry.

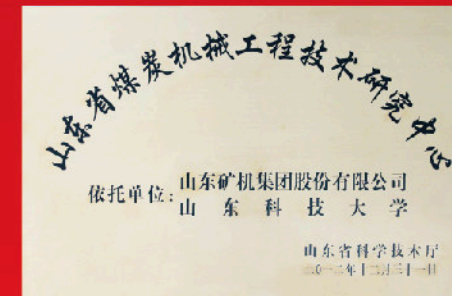


Brief Introduction of Huaneng Equipment

Shandong Mining Machinery Huaneng Equipment Manufacturing Co., Ltd. (hereafter called HUANENG), as a wholly-owned subsidiary of Shandong Mining Machinery Group Co., Ltd. (hereafter called SMMG), undertakes the group's coal mining machinery business, primarily covering coal machinery production and related equipment sales.

It has 9 holding subsidiaries (Shandong Chengtong Forging Co., Ltd., Xinjiang Chang Coal Mining Machinery Co., Ltd., Beijing Sankuang Tong Science and Technology Co., Ltd., Shandong Mine Safety Protection Equipment Co., Ltd., Chengdu LITUO Electric Control Technology Co., Ltd., Changle Jieyuan Metal Surface Treatment Co., Ltd., Shanghai Dragon Link Industry Co., Ltd., Shanxi Dayun Huaneng Equipment Manufacturing Co., Ltd., Qingdao Dedao Investment Co., Ltd.).

The main products of the company are powered roof support, AFC, BSL, crusher, belt conveyor, hydraulic prop, metal beam, Jack, and all kinds of engineering cylinders, industrial chains, movable refuge chambers, refuge station fully mechanized mining work face automatic control equipment, complete sets of coal washing and preparation equipment, EPC/BOT projects, industrial robot intelligent manufacturing, etc. Among them, "LM Brand" scraper conveyor, hydraulic prop, belt conveyor, gearbox, and "SK Brand" powered roof support won the title of "Shandong Famous Brand," and the "LM Brand" trademark was identified as a "China Well-known Trademark".



NO.2



Manufacturing Inspection Capability

SHANDONG MINING MACHINERY GROUP



Gear Grinding Machine



Studer precision universal grinder imported from Switzerland



CNC horizontal boring and milling machine



CNC planing table horizontal boring and milling machine



TK6580A CNC horizontal milling machine



Germany Ipsen controlled atmosphere furnace
heat treatment production line



Hardinge precision turning center imported
from the United States



Hermle five-axis machining center imported
from Germany



Coordinate measuring instrument



Sprocket quenching



CNC horizontal milling machine



SHANDONG MINING MACHINERY GROUP



Production line of hydraulic cylinder copper melted



Production line of electroplating



Automatic idler production line



CNC fine plasma cutting machine



Automatic heat treatment production line



Fully automated welding workshop



1600 tons friction press



Mitutoyo cylindricity meter



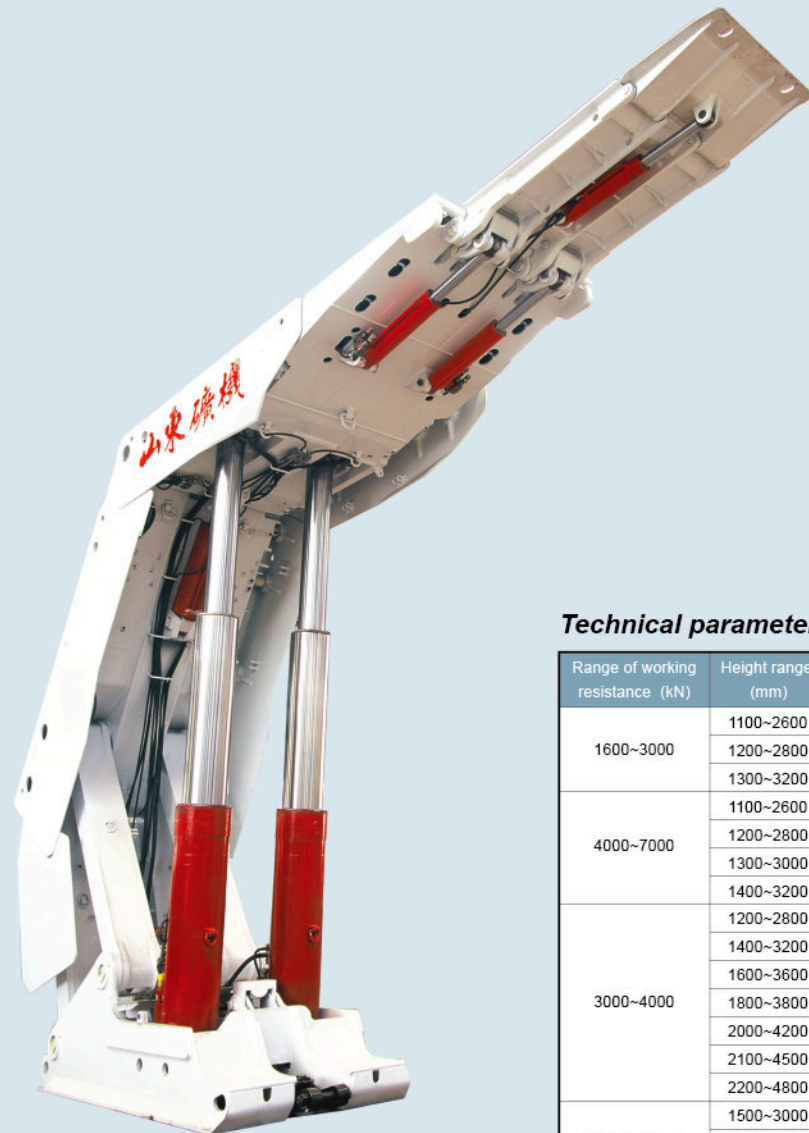
German imported Zeiss three coordinate measuring instrument



Lm302015 coordinate measuring instrument



Klingberg gear detector



Support systems adopted for roof support in underground coal mine work faces aim to ensure operational space safety and facilitate the advancement of mining and transportation equipment.

SMMG support is classified into the following types: shield support, top coal caving support, netting support, and lightweight support. These systems are serialized to meet diverse surrounding rock conditions and coal mining technology requirements, such as (extra) thin seams, large inclination angles, and steeply inclined seams.

1. Two-leg Shield

Features: Compact overall structure, wide range of adjustable height, user-friendly operation, strong adaptability to surrounding rock conditions. It is suitable for full-height mechanized long wall coal mining faces.

Technical parameter

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method
1600~3000	1100~2600	1250/1500	Manual, pilot, electrohydraulic control
	1200~2800		
	1300~3200		
4000~7000	1100~2600	1500	Manual, pilot, electrohydraulic control
	1200~2800		
	1300~3000		
	1400~3200		
3000~4000	1200~2800		
	1400~3200		
	1600~3600		
	1800~3800		
	2000~4200		
7000~13000	2100~4500		
	2200~4800		
	1500~3000		
	1600~3200		
	1700~3500		

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method
7000~13000	1800~3800	1750	Manual, pilot, electrohydraulic control
	2000~4200		
	2200~4500		
	2300~4800		
	2400~5200		
	2500~5500		
	2800~6200		
14000~18000	3000~6500	2050	Manual, pilot, electrohydraulic control
	3100~6800		
	3200~7000		
	3300~7200		
	3500~7500		
20000~26000	3350~7000	2250/2400	electrohydraulic control
	3450~7400		
	3650~8000		
	3800~8200		
	4000~8800		

2. Four-leg Support Shield

Features: Good stability, strong support force at the rear of the canopy, strong cutting performance against the roof, good adaptability to challenging geological conditions, such as hard roofs, obvious or strong periodic roof pressurization. It is suitable for stable roof conditions in full-height mining working faces.

Technical parameter

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method
3000~5000	1400~2800	1500	Manual, pilot, electrohydraulic control
	1500~3000		
	1600~3200		
	1700~3500		
5000~8000	1500~3400	1500	Manual, pilot, electrohydraulic control
	1700~3500		
	1800~3800		
	1900~3900		
	2000~4000		
	2200~4500		
8400~12000	2400~4800	1500/1750	Manual, pilot, electrohydraulic control
	1700~3500		
	1800~3700		
	1900~3900		
	2000~4000		
	2200~4500		
	2400~4800		
	2600~5500		
	2700~5500		
	2800~5800		
12000~20000	2900~6200	1500/1750	Manual, pilot, electrohydraulic control
	2200~4500		
	2400~4800		
	2600~5200		
	2800~5600		
	2900~6000		
	3000~6200		
	3200~6500		



Technical parameter

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method
2200~3200 Single-swing or four-link lightweight	1400~2200	1250/1500	Manual, pilot, electrohydraulic control
	1600~2400		
	1650~2500		
2800~18000	1500~2450	1500	Manual, pilot, electrohydraulic control
	1600~2600		
	1700~3200		
	1800~3500		
	2000~3200		
	2400~4500		
12000~18000	2500~4600	1500	Manual, pilot, electrohydraulic control
	2700~4300		
	1800~3200		
	2000~3800		
18000~24000	2200~4000	1500/1750	Manual, pilot, electrohydraulic control
	2700~4300		
	2800~4500		
	2500~4200		
2800~6800	2500~4500	1750	Manual, pilot, electrohydraulic control
	2800~4500		
	2900~4500		
	2900~5500		
7600~10000	1400~2800	1500	Manual, pilot, electrohydraulic control
	1800~3800		
	2200~4500		
	2500~5000		
10000~15000	2200~4500	1750	Manual, pilot, electrohydraulic control
	2300~3700		
	2500~4800		
	2500~5500		
15000~21000	2200~3800	1750	Manual, pilot, electrohydraulic control
	2400~4200		
	2500~4500		
	2700~4800		
	2800~5000	1750/2050	electrohydraulic control
	2400~4200		
	2700~4200		
	2800~5300		
	2900~5500		
	3000~5700		

3. Fully Mechanized Top Coal Caving Powered Roof Support

SMMG has developed and produced various types of top coal caving powered roof supports, forming a standardized series. Support forms include: four-leg top coal caving, two-leg top coal caving, and lightweight top coal caving. Stabilizing mechanisms include: pendulum bar, regular four-bar linkage, and reverse four-bar linkage.

Features: Stable support performance, continuous coal discharge opening, minimal roof coal loss, excellent coal discharge efficiency. These supports are cost-effective and highly productive for the exploitation of thick coal seams with medium hardness or lower, particularly where joint bedding is well developed.



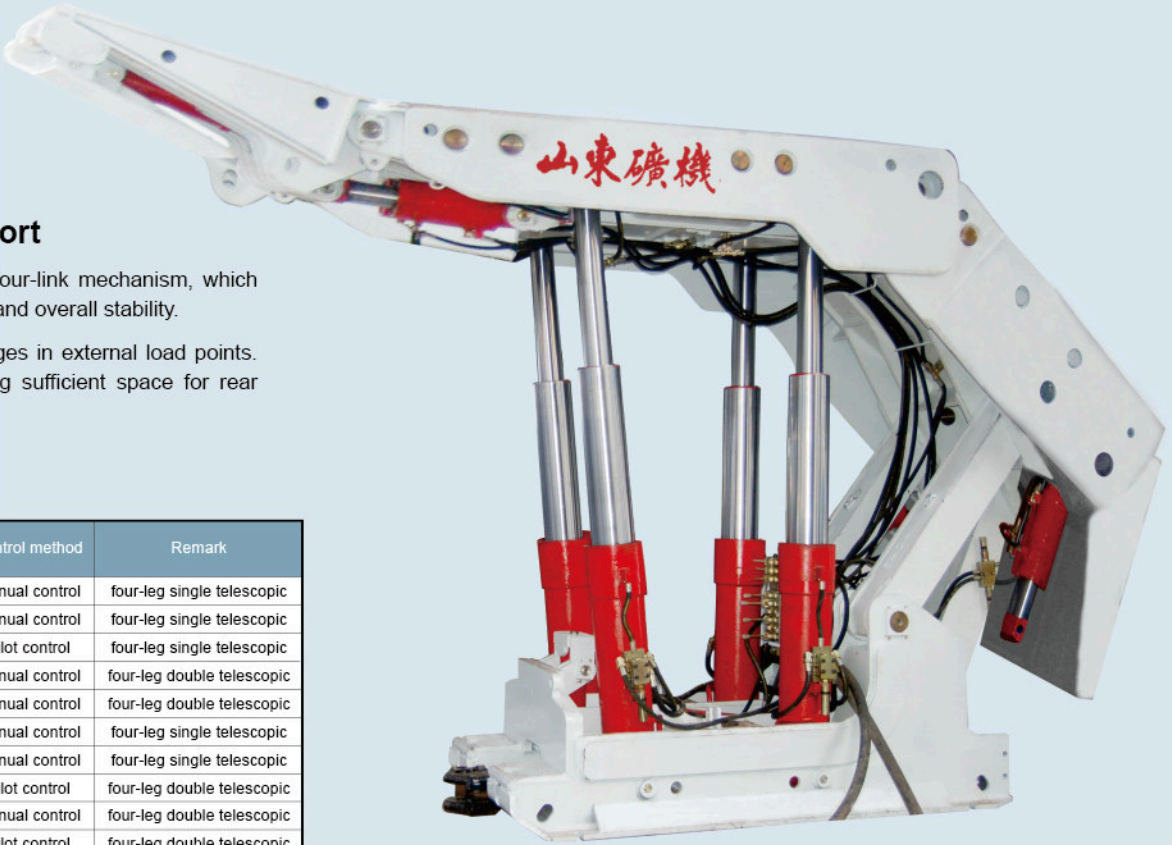
4. Netting Powered Roof Support

Features: The support adopts a standard four-link mechanism, which enhances its anti-unbalanced load capacity and overall stability.

It demonstrates strong adaptability to changes in external load points. The rear safety room is spacious, ensuring sufficient space for rear netting operations and maintenance.

Technical parameter

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method	Remark
ZP2800~4000	1600~2400	1500	Manual control	four-leg single telescopic
	1600~2600	1500	Manual control	four-leg single telescopic
	1700~2800	1500	Pilot control	four-leg single telescopic
	1700~3200	1500	Manual control	four-leg double telescopic
	1700~3500	1500	Manual control	four-leg double telescopic
ZP4200~6000	1600~2600	1500	Manual control	four-leg single telescopic
	1700~2800	1500	Manual control	four-leg single telescopic
	1700~3200	1500	Pilot control	four-leg double telescopic
	1800~3300	1500	Manual control	four-leg double telescopic
	1800~3500	1500	Pilot control	four-leg double telescopic
ZP6800~8600	1800~3800	1500	Pilot control	four-leg double telescopic
	1600~3200	1500	Manual control	four-leg double telescopic
	1700~3500	1500	Manual control	four-leg double telescopic
	1800~3800	1500	Manual control	four-leg double telescopic
	2000~3800	1500	Pilot control	four-leg double telescopic
ZPY3200~4600	2000~4000	1500	Pilot control	four-leg double telescopic
	2000~4200	1500	Manual control	four-leg double telescopic
	1600~2600	1500	Manual control	four-leg single telescopic
	1700~2800	1500	Manual control	four-leg single telescopic
	1600~3200	1500	Pilot control	four-leg double telescopic
ZPY4800~6000	1700~3200	1500	Manual control	four-leg double telescopic
	1700~3500	1500	Pilot control	four-leg double telescopic
	1400~2800	1500	Pilot control	four-leg double telescopic
	1400~3000	1500	Manual control	four-leg double telescopic
	1500~3200	1500	Pilot control	four-leg double telescopic
	1700~3500	1500	Manual control	four-leg double telescopic
	1800~3500	1500	Pilot control	four-leg double telescopic



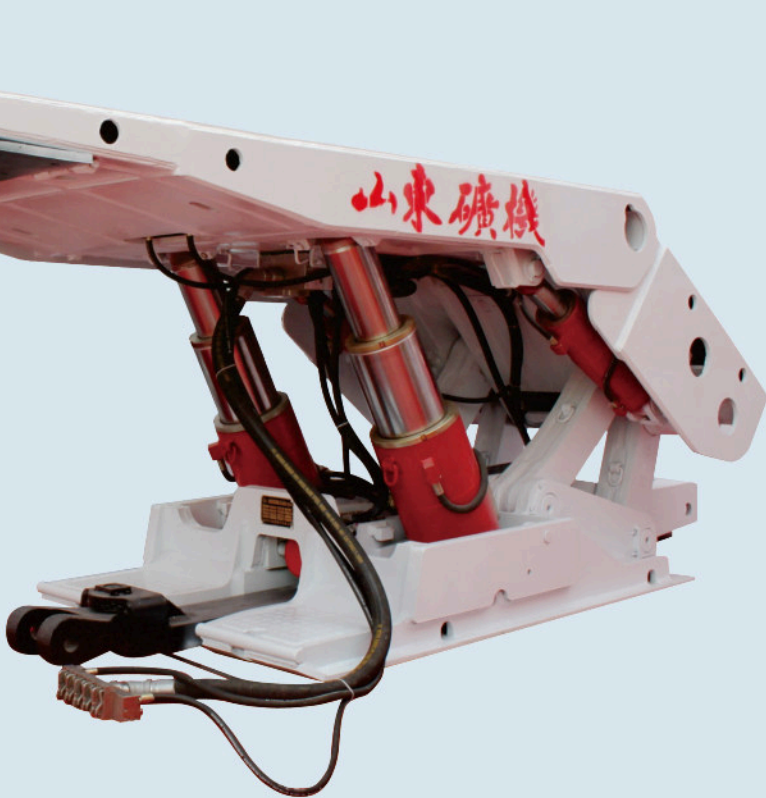


5. Thin Seam Hydraulic Support

Features: Compact overall structure, widely adjustable height, adoption of a regular four-link mechanism and balanced structure with cross-arrangement to optimize space, increased pedestrian and operational space, suitable for thin seam mechanized long wall mining working faces.

Technical parameter

Range of working resistance (kN)	Height range (mm)	Center distance (mm)	Control method
2000~2800	450~900	1500	Manual, pilot, electrohydraulic control
	550~1200		
	600~1300		
	650~1500		
	700~1700		
	800~1800		
3000~4200	900~2100	1500	Manual, pilot, electrohydraulic control
	700~1500		
	800~1600		
	850~1800		
4400~7200	900~2100	1500	Manual, pilot, electrohydraulic control
	750~1500		
	800~1600		
	900~1800		
7600~12000	1000~2000	1750	Manual, pilot, electrohydraulic control
	1050~2000		
	1100~2200		
	1100~2300		



6. Light Powered Roof Support

Features: It is suitable for supporting coal seams with medium roof stability. It can replace conventional blasting mining and high-grade conventional mining methods. It can also be used in the “blasting mining and shearer loading” mode to maintain coal size. When the coal seam inclination exceeds 25°, anti-topple and anti-sliding devices should be added.

Technical parameter

Type	Center distance (mm)	Height range (mm)	Suitable inclination	Shearer	AFC
ZY1800/07/18	1.25m	0.9-1.6m	≤25°	MG130/291	SGZ630/220
ZY2000/11/26	1.25m	1.3-2.4m	≤35°	MG160/380	SGZ630/264
ZY2200/13/32	1.25m	1.5-3m	≤35°	MG160/380	SGZ630/320
ZY2000/07/18	1.5m	0.9-1.6m	≤25°	MG130/291	SGZ630/220
ZY2200/11/26	1.5m	1.3-2.4m	≤35°	MG160/380	SGZ630/264
ZY2400/13/32	1.5m	1.5-3m	≤35°	MG160/380	SGZ630/320





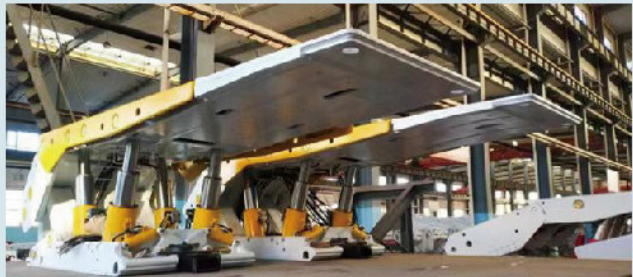
7. Powered Roof Support for Complex and Difficult Mining Coal Seam

Powered roof support for complex and difficult coal seam is SMMG's competitive products, with independent intellectual property rights. According to the specific geological conditions provide type selection design, matching, development, manufacturing and can carry out mining services or mining guidance services.

The powered roof support for extra thin coal seam can adapt to the mechanized or automated mining of coal seam with the height of 0.6~0.8m. On the basis of ensuring the reliability and stability of the powered roof support, it provides greater operating space and maintenance space. The anti-topple and anti-slide device can adapt to the mining of steep inclination coal seam.

Through unique structural design, equipped with perfect anti-topple and anti-slide device and "front, rear and side" protection device, can adapt to ≤ 85° coal seam dip; Large inclination powered roof support added anti-drift, anti-fallback and other "longitudinal" stability structure can adapt to strike angle ≤ 25° bidirectional dip coal seam. By optimizing the structural parameters and control mode of the support, the support can adapt to the seam with "soft roof, soft coal and soft floor".

Filling support can meet the exploitation of coal seam under water body, building and railway and can adapt to various filling processes such as coal gangue, paste and (super) high water solidified cemented fill.



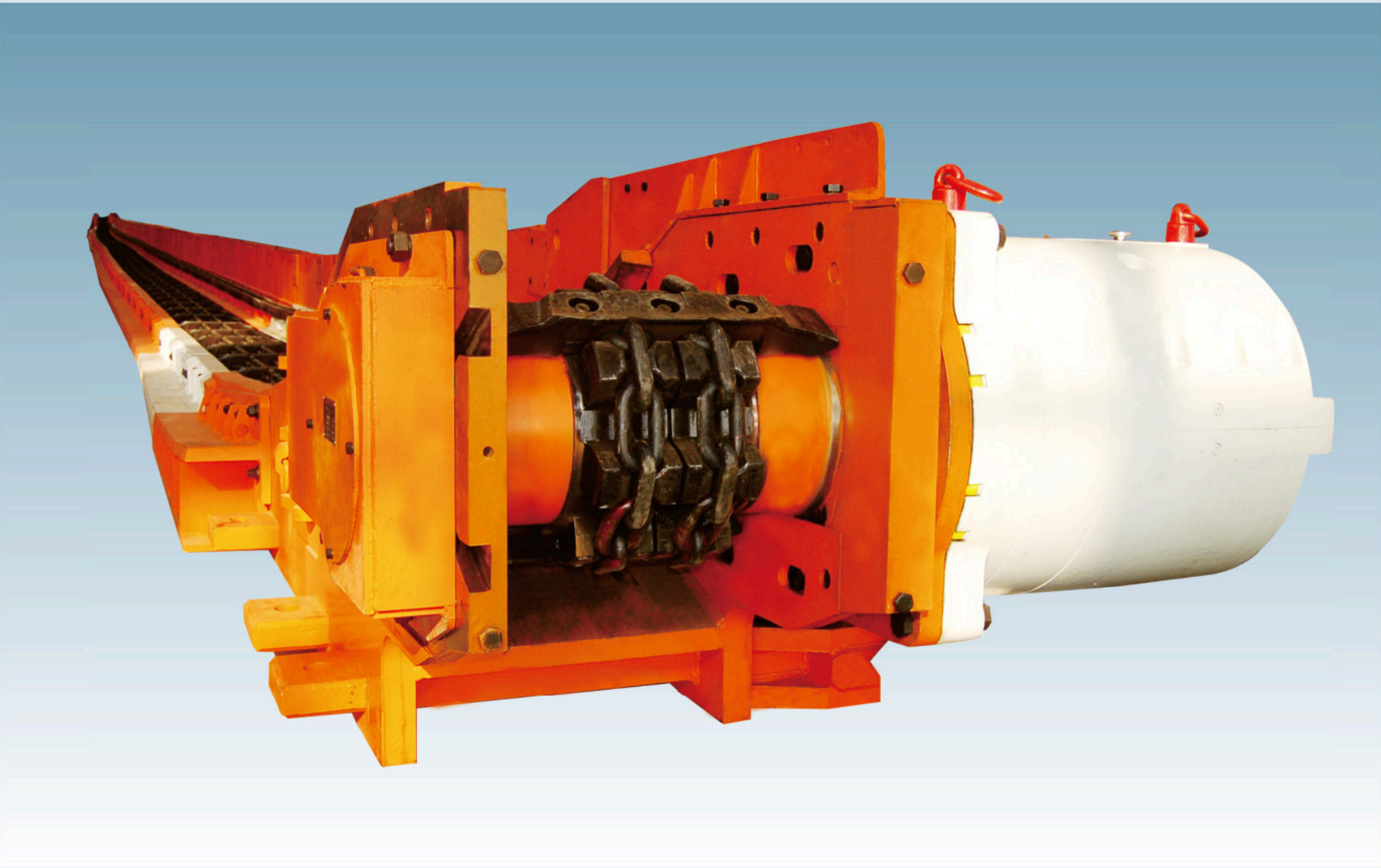
Technical parameter

Classified shield	Type	Application condition	Control method
Extra thin seam shield	ZY2400/4.5/09D	Inclination ≤15°	Electro-hydraulic control
	ZDL4000/06/09D	Inclination ≤15°	
	ZY2400/5.5/12	Inclination ≤35°	Manual, pilot, Electro-hydraulic control
	ZY3200/6.5/15	Inclination ≤35°	
	ZY4000/6.5/14	Inclination ≤45°	
Steep inclined shield	ZY2400/8.5/15.5JD	Inclination ≤85°	Electro-hydraulic control
	ZY2400/09/19JD		
	ZY3600/12/28JD		
	ZY5000/15.5/38JD		
Large inclination shield	ZY2800/12/26Q	Work face inclination ≤45° Panel angle ≤25°	Manual, pilot, Electro-hydraulic control
	ZY3600/12/28Q		
	ZY2400/11/28Q		
	ZY4000/15/34Q		
	ZY4800/14/32Q		
	ZT5000/20/40		
	ZY3000/14/32QS		
	ZY4800/14/28QS		
	ZY5600/15/36QS		
	ZY6600/22/45Q		
	ZY6800/18/38Q		
	ZY7000/22/45Q		
	ZQ14000/28/45		
	ZQ20000/17/27		
ZQ20000/21/37			
Top coal caving large inclination shield	ZY3800/16/26Q	Inclination ≤45°	Manual, pilot, Electro-hydraulic control
	ZF4800/16/32Q		
	ZF5200/17/35Q		
	ZF5600/17/28Q		
	ZF6800/18/35Q		
Filling shield	ZC3200/12/26	Gangue filling	Manual, pilot, Electro-hydraulic control
	ZC4400/16/32		
	ZC5600/20/38		
	ZC7000/20/40		
	ZC9500/18/38	Paste filling	
	ZC3000/09/20		
	ZC5000/18/35		
	ZC6400/16/30		
	High water consolidation filling		



NO.2 Armored Face Conveyor (AFC)

SHANDONG MINING MACHINERY GROUP



1. Heavy AFC

This series of products is mainly suitable for high-output and high-efficiency fully mechanized coal mining faces for conveying coal in medium and thick coal seams. The production mode of “one coal mine, one work face” or “one coal mine, two work faces” has been established in high-output and high-efficiency mines. This is characterized by advanced high-tech electromechanically integrated equipment, such as high-power electric traction shears, electro-hydraulic roof supports for fully mechanized mining faces, and long-distance, large-capacity conveyors. Consequently, the mine production system is greatly simplified, with highly concentrated production, reduced equipment usage, fewer personnel, high efficiency, enhanced safety and reliability, and improved economic benefits.

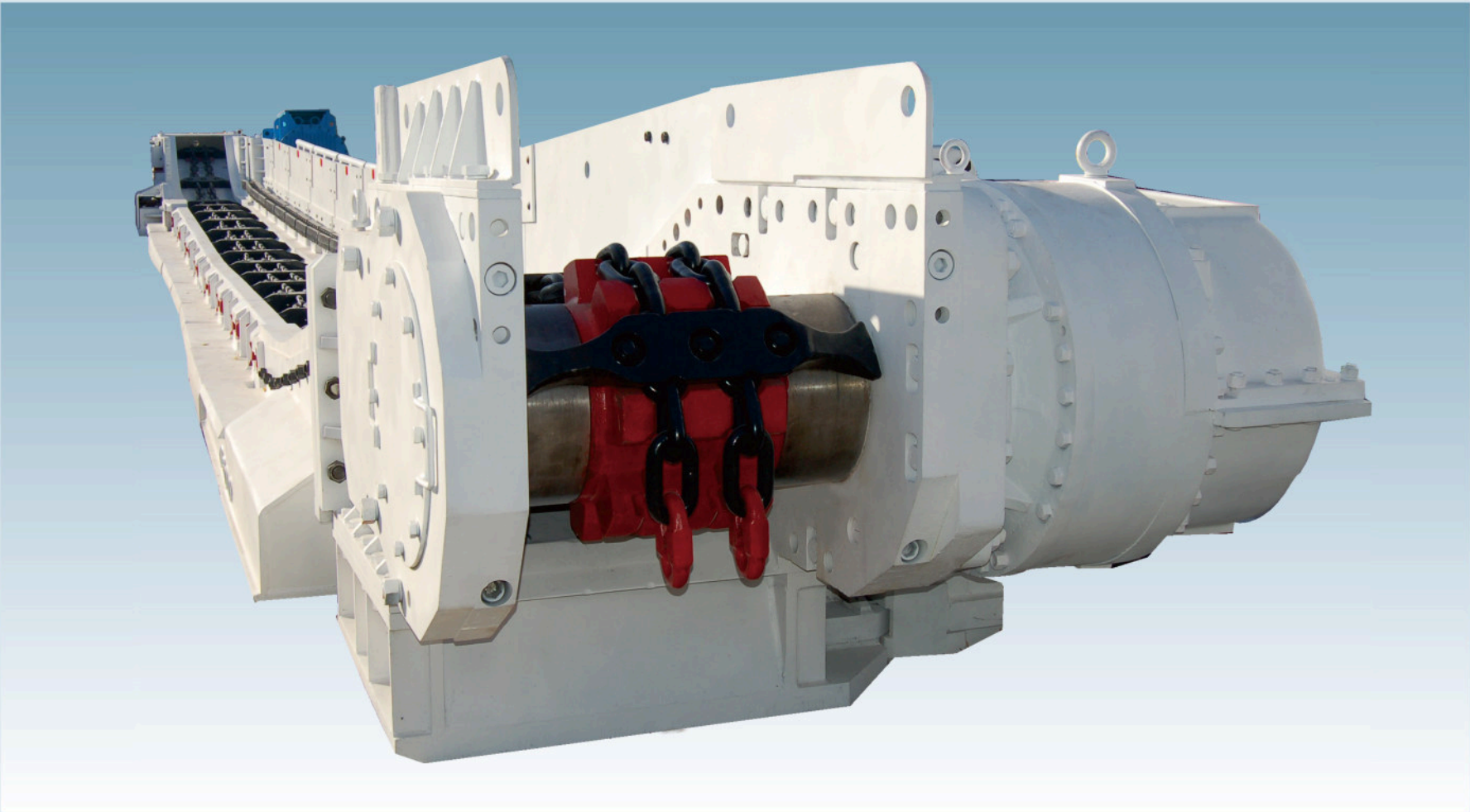
Technical parameter

Type	Output capacity (t/h)	Designed length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Line pan specifications (L×W×H)
SGZ800/1050 (casting)	1500	250	2×525	1.3	φ34×126 (strengthened chain)	1500×900×331
SGZ900/630 (casting)	1500	200	2×315	1.3	φ38×137-C	1750×900×320
SGZ900/750 (casting)	1500	200	2×375	1.4	φ38×137-0	1750×900×320
SGZ900/800 (casting)	1500	200	2×400	1.24	φ38×137-C	1750×900×320
SGZ900/1050 (casting)	2000	250	2×525	1.28	φ38×137-C	1750×900×320
SGZ900/1400 (casting)	2000	250	2×700	1.28	φ38×137-C	1750×900×320
SGZ1000/315 (casting)	2000	50	315/160	1.21	φ34×126-C	1753×1000×352
SGZ1000/700 (casting)	2000	250	700	1.3	φ34×137-C	1750×1000×320
SGZ1000/750 (casting)	2000	250	2×375	1.5	φ34×146-C	1750×1000×320
SGZ1000/1050 (casting)	2000	250	2×525	1.3	φ38×146-C	1750×1000×320
SGZ1000/1050 (casting)	2000	250	2×525	1.2	φ38×137-G	1500×1000×345
SGZ1000/1050 (casting)	2000	250	2×525	1.2	φ38×137-C	1750×1000×345
SGZ1000/1400 (casting)	2000	250	2×700	1.3	φ38×137-C	1750×1000×320
SGZ1000/1400 (casting)	2000	250	2×700	1.3	φ38×137-C	1500×1000×345
SGZ1000/1400 (casting)	2000	250	2×700	1.3	φ38×137-C	1750×1000×345
SGZ1000/1400 (casting)	2500	250	2×700	1.3	φ42×146-C	1500×1000×350
SGZ1000/1400 (casting)	2500	250	2×700	1.3	φ42×146-C	1750×1000×350
SGZ1000/2000 (casting)	2500	300	2×1000	1.4	φ48×152-C	1750×1000×370
SGZ1200/2100 (casting)	2500	300	3×700	1.3	φ48×152-C	1750×1200×370
SGZ1200/2100 (casting)	2500	300	3×700	1.3	φ48×152-C	2000×1200×370
SGZ1350/3×1000 (casting)	4000	400	3×1000	1.8	φ52×164/176	2050×1350×390
SGZ1350/3×1200 (casting)	5000	300	3 × 1200	1.8	φ52×164/176	2050×1350×390
SGZ800/1400	1500	270	2×700	1.22	φ38×137-C	1500×800×330



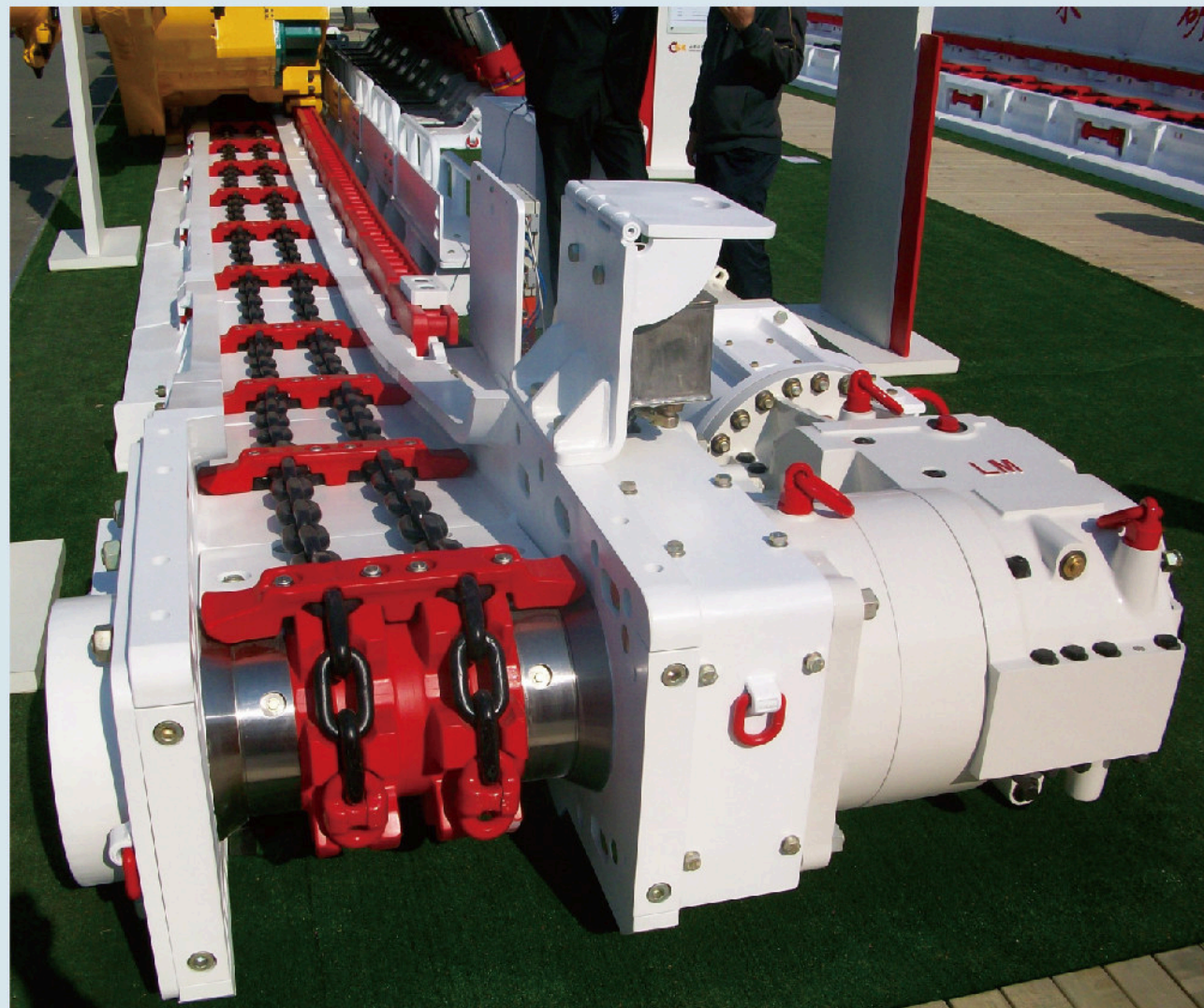
2. Medium & Heavy AFC

This series of products is mainly applicable to transporting coal in gently inclined thin coal seams, medium-thick coal seams, and longwall faces of thick coal seams. It can be used with the shearer and the powered roof support to complete fully mechanized coal mining (e.g., fully mechanized top coal caving), including coal loading, conveying, pushing the AFC, and moving the powered roof support. It has the characteristics of reliable performance, a compact structure, and strong applicability.



Technical parameter

Type	Output capacity (t/h)	Designed length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Line pan specifications (L×W×H)
SGB630/180	400	150	2×90	1.07	φ22×86-C	1500×630×222
SGZ630/264	500	150	2×132	1.07	φ26×92-C	1500×630×222
SGZ630/400 (casting)	700	150	2×200	1.1	φ26×92-C	1500×590×264
SGZ730/90	400	75	90	1	φ26×92-C	1500×730×222
SGZ730/264	500	150	2×132	1.12	φ26×92-C	1500×730×222
SGB764/132	600	75	132	1.12	φ22×86-C	1500×764×222
SGZ764/264	600	150	2×132	1.12	φ26×92-C	1500×764×222
SGZ730/160 (casting)	700	75	160	1.1	φ26×92-C	1500×680×300
SGZ730/400 (casting)	800	75	2×200	1.1	φ26×92-C	1500×680×300
SGZ764/160 (casting)	700	75	160	1.1	φ26×92-C	1500×724×300
SGZ764/320 (casting)	700	150	2×160	1.1	φ26×92-C	1500×724×300
SGZ730/315 (casting)	900	80	315	1.02	φ30×108-C	1500×680×300
SGB764/315 (casting)	500	150	315/160	1.12	30×108-C	1500×724×300
SGZ730/500 (casting)	900	200	2×250	1.02	φ30×108-C	1500×680×300
SGZ764/500 (casting)	900	200	2×250	1.02	φ30×108-C	1500×724×300
SGZ730/630 (casting)	900	200	2×315	1.02	φ30×108-C	1500×680×300
SGZ764/630 (casting)	1000	200	2×315	1.02	φ30×108-C	1500×724×300
SGZ800/160 (casting)	1000	60	160/80	1.32	30×108-D	1750×780×308
SGZ800/750 (casting)	1500	200	2×375	1.1	φ34×126-C	1503×800×310
SGZ800/400 (casting)	1500	100	400	1.1	φ34×126-C	1503×800×310
SGZ800/800 (casting)	1500	200	2×400	1.1	φ34×126-C	1503×800×310
SGZ830/250 (casting)	1000	75	250	1.02	φ30×108-C	1500×780×300
SGZ830/500 (casting)	1000	200	2×250	1.02	φ30×108-C	1500×780×300
SGZ830/315 (casting)	1200	75	315	1.02	φ30×108-C	1500×780×300
SGZ830/630 (casting)	1200	200	2×315	1.02	φ30×108-C	1500×780×300
SGZ830/375 (casting)	1500	100	375	1.1	φ34×126-C	1503×780×331
SGZ830/750 (casting)	1500	200	2×375	1.1	φ34×126-C	1503×780×331
SGZ830/400 (casting)	1500	100	400	1.1	φ34×126-C	1503×780×331
SGZ830/800 (casting)	1500	200	2×400	1.1	φ34×126-C	1503×780×331
SGZ880/375 (casting)	1500	100	375	1.1	φ34×126-C	1503×800×331
SGZ880/750 (casting)	1500	200	2×375	1.1	φ34×126-C	1503×800×331
SGZ880/400 (casting)	1500	80	400	1.1	φ34×126-C	1503×800×331
SGZ880/800 (casting)	1500	200	2×400	1.1	φ34×126-C	1503×800×331
SGZ730/800	600	300	2×400	1.125	φ30×108-C	1500×730×300

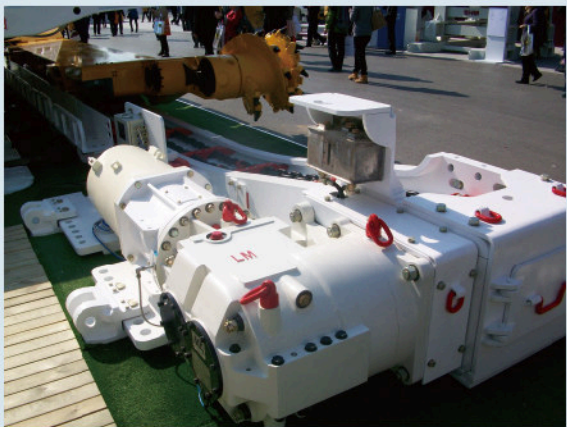


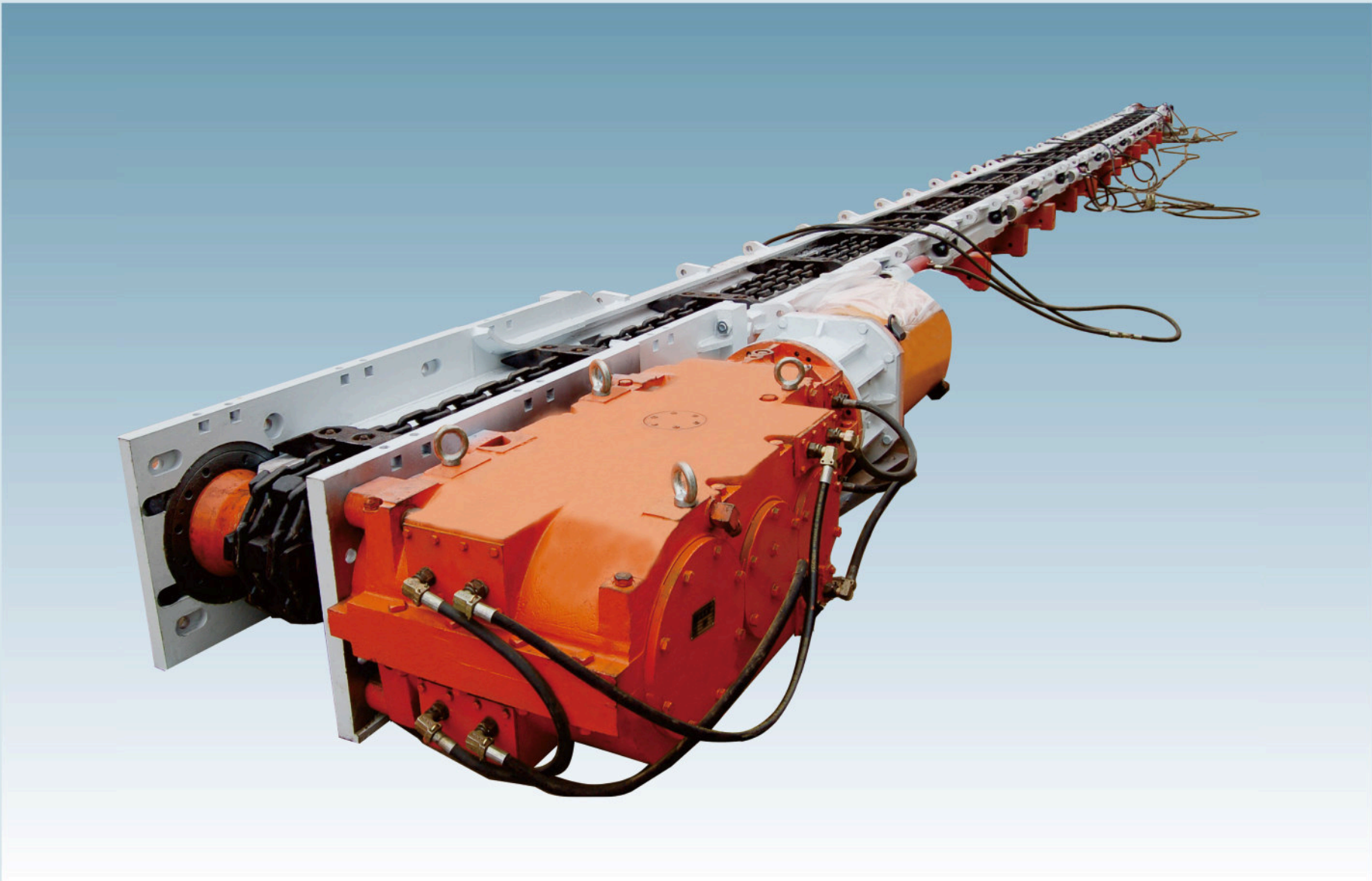
3. Thin Coal Seam AFC

Thin coal seam AFC is researched and developed to meet coal conveying needs in the working face, based on the characteristics of thin coal seams and mining technologies. Through several generations of upgrades, it has become one of the company's competitive products and evolved into a series of models with features such as compact structure, low operational resistance, and high reliability. The conveyor trough employs a compact, low-profile groove design and is assembled with the shearer, effectively reducing the shearer's body height. By improving the positioning accuracy between trough segments and matching them with compact chains and lightweight scrapers, the operational resistance of the scraper chain is significantly reduced. Additionally, motors and gearboxes specifically designed for thin coal seams allow the head and tail heights to be lowered by over 100 mm under the same power capacity, effectively addressing the issue of triangular coal accumulation at the head and tail. The AFC can be integrated with thin coal seam shearers. Currently, it is advancing toward higher reliability, longer transportation distances, and increased intelligence.

Technical parameter

Type	Capacity (t/h)	Designed length (m)	Motor power (kw)	Chain speed (m/s)	Chain specification (mm)	Line pan (L×W×H)	Connecting mode between line pans
SGZ630/150	250	150	2×75	0.868	18×64-c	1500×590×180	Dog bone
SGZ630/220	400	150	2×110	1.0	22×86-c Compact chain	1500×590×190	Dog bone
				1.1	26×92-c Compact chain	1500×590×220 (205, 210)	Dog bone
SGZ630/(132~200)	450	150-200	2×(132~200)	1.1	26×92-c Compact chain	1500×590×220 (210)	Dog bone
SGZ730/2×(132~315)	600	150-250	2×(132~315)	1.1~1.3	26×92-c Compact chain or 30×108-c Compact chain	1500×690×220 (240)	Dog bone
SGZ764/2×(132~315)	800	150-250	2×(132~315)	1.1~1.3	30×108	1500 (1750)×724×240	Dog bone
SGZ800/2×(315~525)	1000	150-300	2×(315~525)	1.1~1.3	34×126	1500 (1750)×800×280	Dog bone





4. Hanging Filling AFC

Hanging filling AFC is particularly important for coal mining operations under buildings, railways, and water bodies. By replacing the traditional safety coal pillar left at the working face with solid filling, it maximizes coal resource recovery, extends mine service life, reduces gangue-induced environmental pollution, and avoids ground subsidence or collapse.

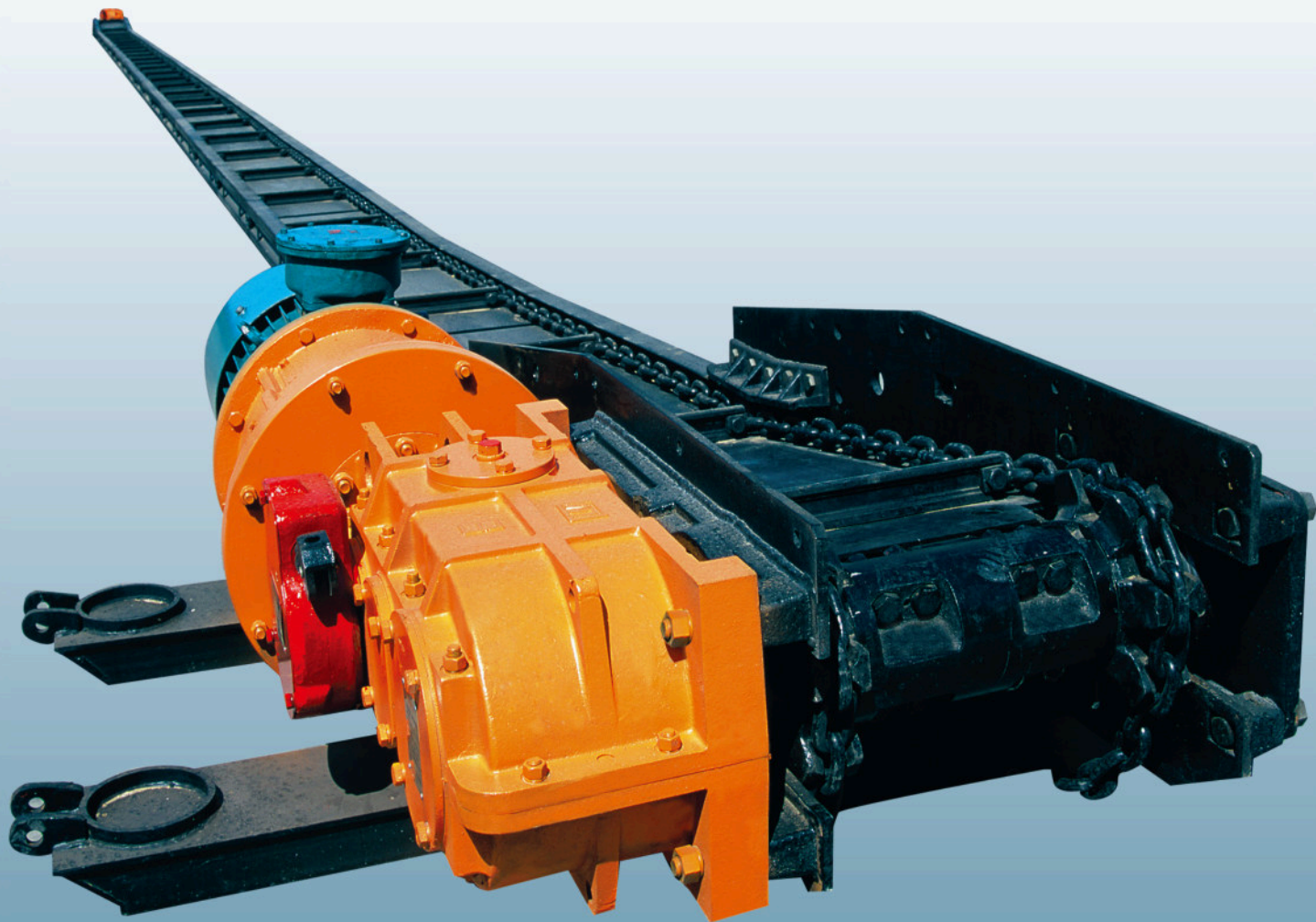
Features:

The filling AFC primarily consists of a drive head, line pans, trough, telescopic tail, flight-bar chains, and other components. Key characteristics include:

- Bending Performance:** The AFC exhibits excellent bending capability—vertical bending accommodates height changes of the work face and adapts to the powered roof support’s height adjustments during advancement. Horizontal bending meets powered roof support advancement requirements.
- High Connection Strength:** Line pans feature high-strength connections. The line pan combines casting grooves with wear-resistant deck assembly welding. Forged dogbone joints between grooves ensure strength during advancement, reduce maintenance, and extend service life.
- Movable Insert Plates:** Line pans use overlapping movable insert plates with dual-side pushing cylinders. The cylinders control pumping and insertion of the plates to complete filling.
- Flight-bar Chains:** Twin middle or twin side structures are adopted. Flight bars use high-strength materials, undergo overall quenching and tempering at both ends, and have wear-resistant surface layers to ensure strength, rigidity and durability.
- Telescopic Tail:** The tail features compact hydraulic tension and mechanical locking telescopic mechanisms. This allows convenient adjustment of chain pre-tension, maintaining optimal chain tension for smooth sprocket engagement, reducing chain-jumping incidents, and extending sprocket and chain life.

Technical parameter

Type	Output capacity (t/h)	Designed length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Line pan specifications (L×W×H)
SGZ630/132	300	80	132	0.86	φ22×86	1500×590×245
SGZ630/160	350	80	160	1.04	φ22×86	1500×590×245
SGZ730/160	400	80	160	1.16	φ26×92	1500×690×260
SGZ730/200	450	80	200	1.16	φ26×92	1500×690×260
SGZ730/250	500	80	250	1.24	φ30×108	1500×690×260
SGZ764/200	450	80	200	1.16	φ26×92	1500×724×260
SGZ764/250	500	80	250	1.24	φ30×108	1500×724×260
SGZ764/315	600	100	315	1.29	φ30×108	1500×724×260
SGZ800/315	650	100	315	1.5	φ34×126	1500×800×300
SGZ800/375	700	100	375	1.5	φ34×126	1500×800×300
SGZ800/400	700	100	400	1.5	φ34×126	1500×800×300



5. Medium and Light AFC

This series of products is mainly used for conveying coal in conditions involving gently inclined medium-thick or thick coal seams, thin or ultra-thin coal seams, and applications such as blasting mining, conventional mining, and high-grade conventional mining. It can also be used for drivage and gateway conveyance.

Technical parameter

Type	Output capacity (t/h)	Designed length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Line pan specifications (L×W×H)
SGD320/18.5	40	80	18.5	0.63	φ14×50-B	1200×320×150
SGB388/22	50	100	22	0.79	φ14×50-B	1200×388×150
SGB388/30B	70	100	2×15	0.86	φ14×50-B	1200×388×150
SGB388/30	70	100	30	0.79	φ14×50-B	1200×388×150
SGB420/22	60	100	22	0.79	φ14×50-B	1200×420×150
SGB420/30B	80	100	2×15	0.86	φ14×50-B	1200×420×150
SGB420/30	80	100	30	0.79	φ14×50-B	1200×420×150
SGB520/22	70	80	22	0.79	φ14×50-B	1200×520×150
SGB520/30B	80	100	2×15	0.86	φ14×50-B	1200×520×150
SGB520/30	80	100	30	0.79	φ14×50-B	1200×520×150
SGB420/40	100	100	40	0.86	φ18×64-C	1200×420×180
SGB520/40	100	100	40	0.86	φ18×64-C	1500×520×180
SGB620/40T	150	100	40	0.86	φ18×64-C	1500×620×180
SGZ620/40	150	100	40	0.86	φ18×64-C	1500×620×180
SGB620/55	150	100	55	0.86	φ18×64-C	1500×620×180
SGZ620/55	150	100	55	0.86	φ18×64-C	1500×620×180
SGB620/80T	150	160	2×40	0.86	φ18×64-C	1500×620×180
SGZ620/80	150	160	2×40	0.86	φ18×64-C	1500×620×180
SGB620/110	150	160	2×55	0.86	φ18×64-C	1500×620×180
SGZ620/110	150	160	2×55	0.86	φ18×64-C	1500×620×180
SGB630/75	250	75	75	0.868	φ18×64-C	1500×630×190
SGD630/90	400	75	90	1.07	φ26×92-C	1500×630×222
SGZ630/90	400	75	90	1.07	φ22×86-C	1500×630×222
SGB630/90	400	75	90	1.07	φ22×86-C	1500×630×222
SGD630/110	450	75	110	1.07	φ26×92-C	1500×630×222
SGZ630/110	450	75	110	1.07	φ22×86-C	1500×630×222
SGB630/110	450	75	110	1.07	φ22×86-C	1500×630×222
SGB630/150	250	150	2×75	0.868	φ18×64-C	1500×630×190
SGZ630/150	250	150	2×75	0.868	φ18×64-C	1500×630×190



6. High-grade Blasting AFC

The AFC series are designed for blasting mining work faces with capacities of 0.2-0.9 Mt/a (million tons per annum). They were developed for high-grade blasting mining shovel loading and are serialized as SGB630/2×75, SGB620/2×55, SGB520/2×55, SGB420/2×55, and SGB420/30. A patent was filed for this series on January 12, 2012. Positioned between fully mechanized mining and conventional mining, this series employs cutting roof prop supporting and hydraulic cylinder coal shoveling to enhance mechanization and automation levels. It reduces labor requirements by approximately 50% compared to conventional AFC systems while increasing coal output and ensuring a higher lump coal rate in blasting mining operations.

Features:

1. The line pan, baffle groove, and shovel plate groove are cast integrally from ZG30MnSi material. The line pan is reinforced with NM360 high-strength wear-resistant steel plates and connected via forged dog bone pins, ensuring rigid push-force resistance and extended service life.
2. Each line pan is welded with a bottom plate making it light weight and easy to handle. This design maximizes the bending angle of the AFC and increases the stroke distance.
3. Equipped with roof-cutting hydraulic props and hydraulic systems, the AFC accelerates working face advancement and boosts output. Reduces the number of hydraulic props required at the work face, lowering labor intensity and minimizing wood consumption.

Technical parameter

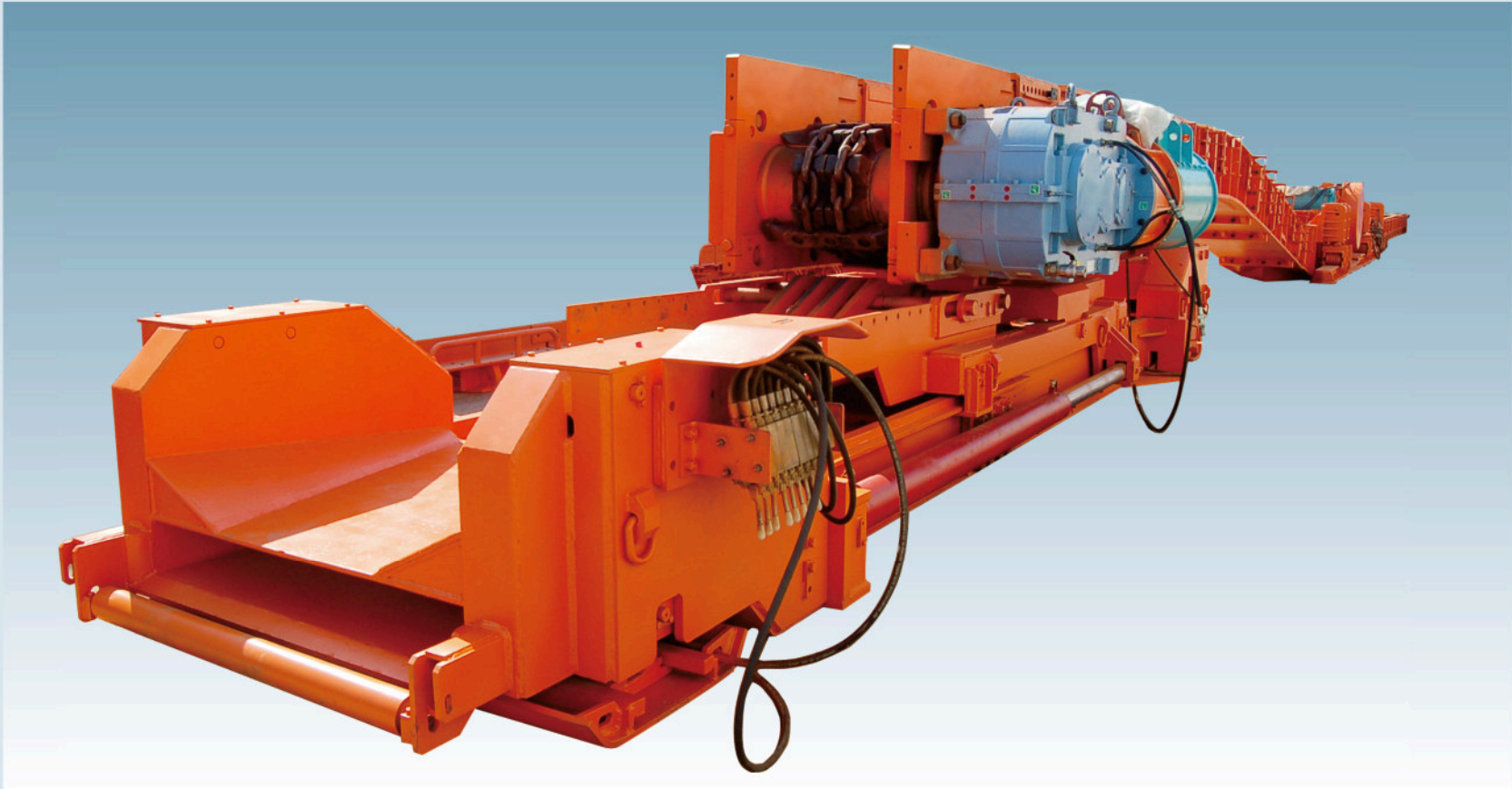
Type	Output capacity (t/h)	Designed length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Line pan specifications (L×W×H mm)
SGB630/2×75	250	150	2×75	0.868	18×64-C	1000×630×205
SGB620/2×55	150	150	2×55	0.86	18×64-C	1000×620×205
SGB520/2×55	100	150	2×55	0.86	18×64-C	1000×520×205
SGB420/2×55	100	150	2×55	0.86	18×64-C	1000×420×205
SGB420/30	80	100	30	0.77	14×50-C	1200×420×170





NO.3 Bridge Stage Loader (BSL)

SHANDONG MINING MACHINERY GROUP



Bridge Stage Loader (BSL)

Gateway BSL offers two structural configurations: rolling line pan assembly and fully welded box structure to meet diverse user requirements. The fully assembled welded box structure provides advantages such as easy installation and low-maintenance operation, with a service life (for coal) ranging from 0.4 to 10 Mt.

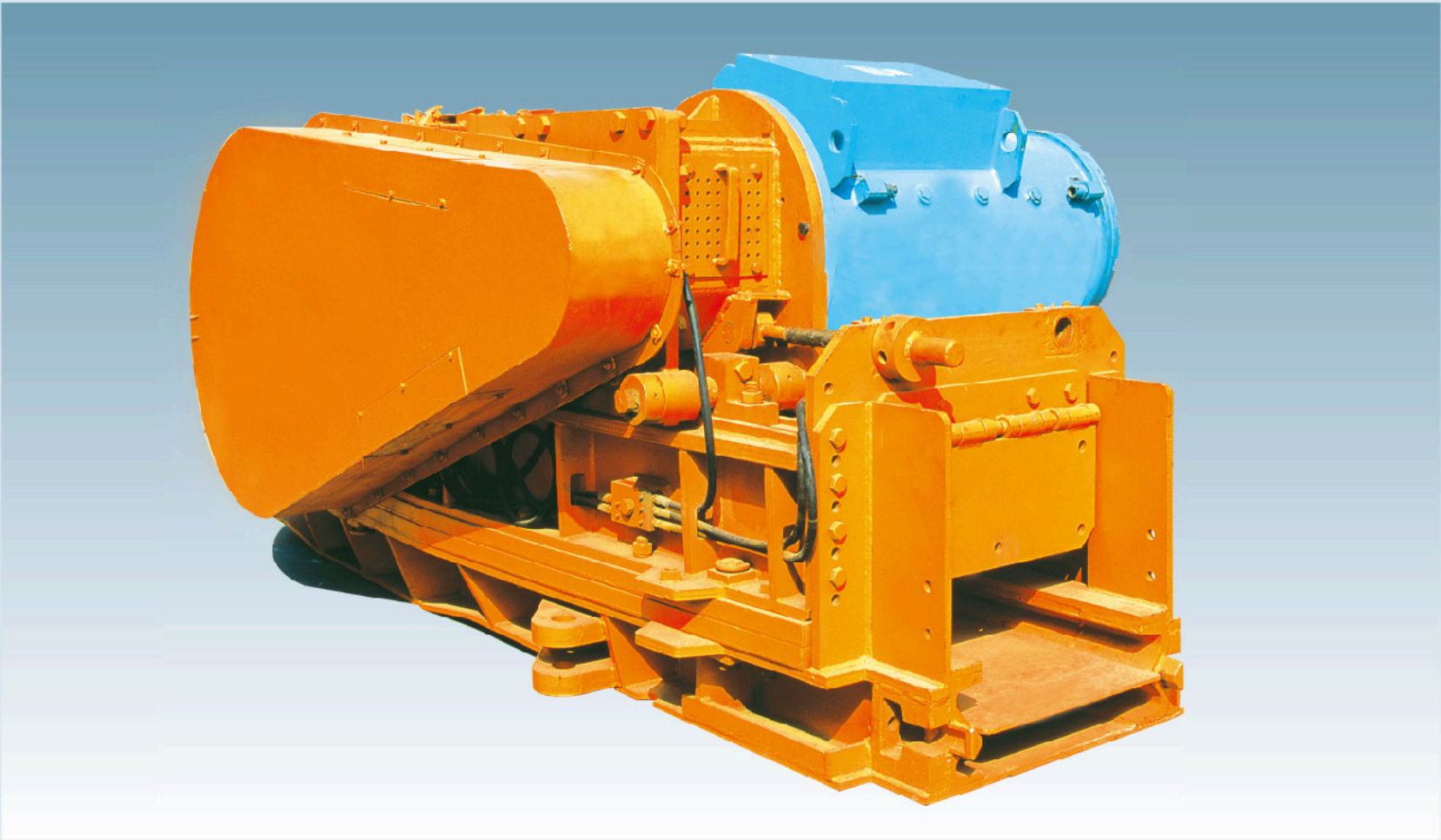
The SMMG Gateway BSL series features a range of specifications: Installed power: 40–700 kW, Line pan width: 630–1550 mm, Conveying capacity: 400–4000 t/h.

Under optimal gateway conditions, the BSL is equipped with Matilda (a self-advancing device) enabling continuous work face advancement.

Technical parameter

Type	Conveying capacity (t/h)	Design length (m)	Motor power (kW)	Chain speed (m/s)	Chain specification (mm)	Lie pan specifications (L×W×H mm)	Matching machine		
							Crusher	Belt conveyor	Moving method
SZB630/40	400	25	40	0.854	φ18×64-C	1500×630×190			
SZB630/75	600	25	75	1.33	φ18×64-C	1500×630×190			
SZZ630/110	700	37	110	1.07	φ26×92-C	1500×630×222	PLM800		
S7B730/40	400	25	40	0.854	φ18×64-C	1500×730×190			
SZZ730/132	700	41.2	132	1.3	φ26×92-C	1500×730×222	PLM1000	DSJ80 DSJ100	2LY
SZZ730/160	1100	41.2	160	1.4	φ26×92-C	1500×730×222	PLM1000	DSJ80 DSJ100	2LY
SZZ730/200	900	51	200/100	1.33	26×92-C	1500×690×248	PLM1000	DSJ80	ZY1100
S7B764/110	700	29.7	110	1.07	φ22×86-C	1500×764×222	PLM1000	DSJ80 DSJ100	2LY
SZB764/132	700	29.7	132	1.34	φ22×86-C	1500×764×222	PLM1000	DSJ100	2LY
SZZ764/160	1100	41.2	160	1.3	φ26×92-C	1500×764×222	PLM1200	DSJ100 DSJ120	5LY
SZZ730/200 (box-type)	1000	50	200	1.3	φ26×92-C	690 (inner width)	PLM1200	DSJ100 DSJ120	ZY1100 Self-moving device
SZZ764/200 (box-type)	1000	55	200	1.3	φ26×92-C	724 (inner width)	PLM1200	DSJ100 DSJ120	ZY1100 Self-moving device
SZZ800/200 (box-type)	1200	36	200	1.465	φ30×108-C	770 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ830/200 (box-type)	1200	36	200	1.465	φ30×108-C	780 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ830/315 (box-type)	1500	36	315	1.47	φ30×108-C	780 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ800/400 (box-type)	1800	36	400	1.56	φ34×126-C	800 (inner width)	PLM2000		ZY1100 Self-moving device
SZZ900/250 (box-type)	1500	36	250	1.44	φ38×137-C	900 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ900/315 (box-type)	1500	36	400	1.56	φ38×137-C	900 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ900/375 (box-type)	1500	36	375	1.42	φ38×137-C	900 (inner width)	PLM1500		ZY1100 Self-moving device
SZZ900/400 (box-type)	1800	36	400	1.56	φ38×137-C	900 (inner width)	PLM2000		ZY1100 Self-moving device
SZZ1000/315 (box-type)	2000	50	315	1.5	φ34×126-C	1000 (inner width)	PLM2000		ZY1100 Self-moving device
SZZ1000/525 (box-type)	2500	50	525	1.8	φ38×137-C	1000 (inner width)	PLM2500		ZY1100 Self-moving device
SZZ1200/525 (box-type)	2500	50	525	1.44	38×137-C	1500×1200×388	PLM4000	DSJ140	ZY1100
SZZ1200/700 (box-type)	3500	60	700/350	1.71	38×137-C	1500×1200×388	PLM4500	DSJ140	ZY1100
SZZ1300/525 (box-type)	2500	50	525/263	1.71	38×137-C	1500×1300×388	PLM5000		ZY1500
SZZ1350/525 (box-type)	2500	50	525/263	1.43	38×137-C	1500×1350×322	PLM5000		ZY1500
SZZ1350/700 (box-type)	3500	50	700/350	1.82	42×146-C	1500×1350×394	PLM5000		ZY1500
SZZ1550/800 (box-type)	3500	50	800/400	1.82	42×146-C	1500×1550×394	PLM5000		ZY1500
SZZ1550/1000 (box-type)	4000	50	1000	1.82	42×146-C	1500×1550×394	PLM5000		ZY1500
SZZ630/160	700	48	160	1.3	φ26×92-C	1500×590×248	PLM1000		ZY1100 Self-moving device

NO.4 Crusher



Crusher

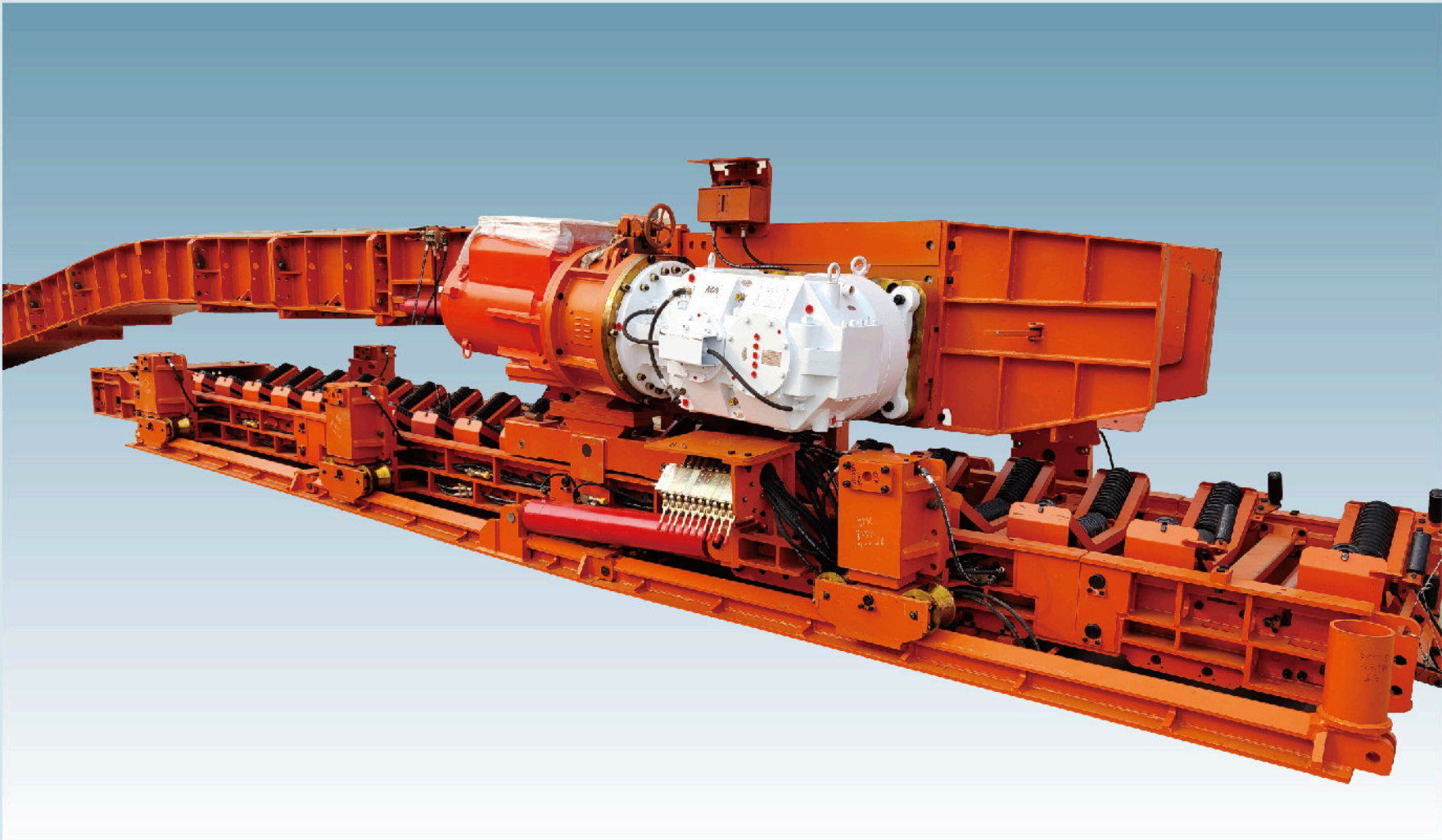
The crusher is installed in the floor section of the BSL (Bridge Stage Loader) to crush large lumps of coal conveyed by the BSL system. This prevents large coal lumps from blocking the conveying system or damaging the belt. The crusher series offers installed power up to 400 kW, with a crushing capacity ranging from 500 to 3500 t/h. The hammer crusher features a simplified structure, compact design, and easy integration with the BSL system. It achieves installed power up to 400 kW, high crushing capacity, low operational resistance, and adjustable height via a subplate to control the crushing size. The hammer crusher is driven by either a V-belt or gear drive system. However, due to the V-belt drive's limitations in transmission power and efficiency at higher loads, the gear drive is recommended for installations requiring maximum power transmission.

The gear transmission device employs the transmission mode of “motor - hydraulic coupling - gearbox”. Compared to the V-belt drive, this design is helpful to avoid issues such as belt overload, elastic deformation, and energy loss. Additionally, it is easy to install and maintain, thereby solving the technical problem of unreliable belt drives in high-power crushers.

Technical parameter

Type	Outer dimension (L×W×H mm)	Motor power (kW)	Crushing capacity (t/h)	Inlet/outlet lump (mm)	Transmission mode
PLM500	2993×1510×1354	75	500	700×600 (no length limit) /200～150	V-belt drive
PLM800	3540×1874×1714	90	800	700×650 (no length limit) /200～150	V-belt drive
PLM1000	3540×1874×1714	110	1000	700×650 (no length limit) /300～150	V-belt drive
	4500×2025×1822	110	1000	700×700 (no length limit) /300～150	V-belt drive
PLM1200	3540×1785×1721	110	1200	700×950 (no length limit) /300～150	V-belt drive
	3540×1785×1741	110	1200	700×950 (no length limit) /300～150	V-belt drive
	3540×1930×1784	110	1200	700×950 (no length limit) /300～150	V-belt drive
PLM1500	3540×1874×1714	125	1500	700×650 (no length limit) /300～150	V-belt drive
	4560×2095×1892	132	1500	800×800 (no length limit) /300～150	V-belt drive
	3540×1785×1741	132	1500	700×950 (no length limit) /300～150	V-belt drive
PLM2000	3540×1930×1895	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×1930×1784	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×1930×1717	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×1930×1744	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×1930×1722	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×1941×1736	160	2000	800×800 (no length limit) /300～150	V-belt drive
	3540×2281×1736	160	2000	600×780 (no length limit) /300～150	V-belt drive
PLM2200	3540×2180×1833	200	2200	780×700 (no length limit) /300～150	V-belt drive or gear drive
	3540×1941×1736	200	2200	800×800 (no length limit) /300～150	V-belt drive or gear drive
PLM2500	4150×2964×1840	250	2500	900×800 (no length limit) /300～150	gear drive
PLM3000	4050×2184×2069	200	3000	1000×850 (no length limit) /300～150	V-belt drive
PLM3500	4150×2964×1840	250	3500	900×800 (no length limit) /300～150	gear drive
PLM4000	4295×3743×2220	315	4000	1600×1500 (no length limit) /300～150	gear drive
PLM4500	4295×3743×2220	375	4500	1600×1500 (no length limit) /300～150	gear drive
PLM5000	4295×3943×2220	400	5000	1600×1700 (no length limit) /300～150	gear drive

N0.5 Matilda



Multi-function Belt Conveyor Self-advancing Tail Device (Matilda)

Matilda can achieve "one machine for two purposes". When used for the driving face, the "roadheader - Matilda - belt conveyor mode" is employed to achieve the rapid advancing of Matilda. When used for the mining face, the "BSL - Matilda - belt conveyor mode" is adopted to achieve the rapid advancing and correct overlap of Matilda, so as to achieve efficient advancement of the work face. Meanwhile, the device has functions such as belt deviation adjustment, BSL straightening direction control, and self - advancing, etc., to ensure smooth transportation in the gate and good connection of the conveying machine. Compared with the traditional Matilda, it has the characteristics of a large stroke, light weight, convenient disassembly, and so on.

Technical parameter

Type	Working pressure (Mpa)	Belt width (mm)	Overlap with BSL (m)	Push cylinder		Vertical cylinder		Horizontal cylinder		Control method
				Stroke (mm)	Push/pull force (kN)	Stroke (mm)	Push force (kN)	Push/pull force (kN)	Stroke (mm)	
DWZY800	31.5	800	≥10	1100	2×633/385	220	8×247	185/185	200	manual, automatic
DWZY1000		1000	≥10	1100	2×633/385	220	8×247	185/185	200	manual, automatic
DWZY1200		1200	≥10	1100	2×633/385	250	8×386	185/185	200	manual, automatic
DWZY1400		1400	≥10	1100	2×633/385	250	8×633	260/260	250	manual, automatic
DWZY1600		1600	≥10	1100	2×633/385	250	8×633	260/260	250	manual, automatic



NO.6 Belt Conveoror

SHANDONG MINING MACHINERY GROUP

1. Fixed Belt Conveyor for Coal Mine

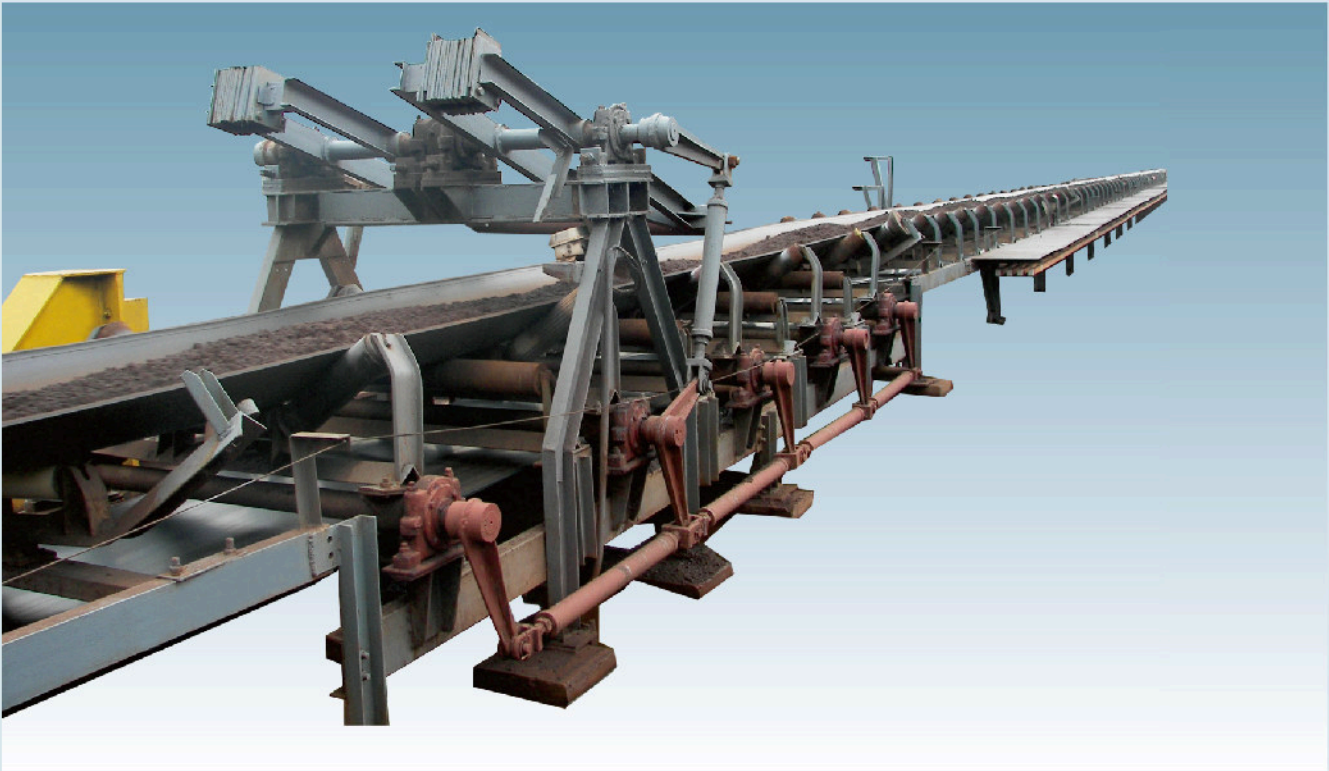
Belt conveyors offer several advantages, including high reliability, advanced technology, energy efficiency, and the ability to enable continuous transportation and automatic control. The technology has evolved from general-purpose systems to large-scale, complex, specialized, and self-sufficient systems.

Belt conveyors are widely used in various industries such as coal, metallurgy, mining, ports, power plant, building materials, light industry, chemical industry, and transportation, among others. Our company has standardized and serialized over 200 types of belt conveyors, all of which are China MA-certified.

Technical parameter

Model	Max capacity (t/h)	Distance (m)	Belt width (m)	Belt speed (m/s)	Motor power (kW)	Drive drum diam. (mm)	Idler diam. (mm)	Drivehead overall dim. (W×H mm)	Reference weight (t)
DTL240/1000/4×2500	10000	3000	2400	5	4×2500	2000	219	7850×3600	1135
DTL240/1000/3×1800	10000	3000	2400	5	3×1800	2000	219	7620×3600	1070
DTL220/900/4×2500	9000	3000	2200	5	4×2500	2000	194	7650×3600	1042
DTL220/900/3×1800	9000	3000	2200	5	3×1800	2000	194	7420×3600	981.5
DTL200/800/4×2500	8000	3000	2000	5	4×2500	2000	194	7450×3600	946.8
DTL200/800/3×1800	8000	3000	2000	5	3×1800	2000	194	7220×3600	891.6
DTL180/600/4×2500	6000	3000	1800	5	4×2500	2000	194	7250×3600	852.2
DTL180/600/3×1800	6000	3000	1800	5	3×1800	2000	194	7020×3600	802.5
DTL160/450/3×1600	4500	3000	1600	5	3×1600	2000	159	6720×3600	700.2
DTL160/450/3×1250	4500	3000	1600	5	3×1250	1800	159	6650×3600	682.2
DTL160/450/3×800	4500	2000	1600	5	3×800	1600	159	6525×3600	420.5
DTL160/400/3×630	4000	2000	1600	4.5	3×630	1400	159	6350×3500	375.1
DTL160/400/3×400	4000	1900	1600	4.5	3×400	1000	159	5920×2650	329.2
DTL140/315/3×800	3150	2000	1400	4.5	3×800	1600	159	6325×3600	356.2
DTL140/315/3×710	3150	2000	1400	4.5	3×710	1400	159	6210×3500	338.1
DTL140/250/3×500	2500	1800	1400	4	3×500	1250	159	6070×3100	300
DTL140/250/3×400	2500	1400	1400	4	3×400	1000	159	5650×2650	251.5
DTL120/200/3×800	2000	2000	1200	4	3×800	1600	159	6125×3600	289.2
DTL120/200/3×630	2000	2000	1200	3.5	3×630	1400	133	5950×3500	253.5
DTL120/200/3×500	2000	1500	1200	3.5	3×500	1250	133	5850×3100	210.2
DTL120/200/3×315	2000	1000	1200	3.5	3×315	800	133	5450×2250	143.6
DTL120/200/3×250	2000	1000	1200	3.5	3×250	800	133	5400×2250	139.8
DTL120/200/3×200	2000	1000	1200	3.5	3×200	800	133	5380×2250	138.3

Model	Max capacity (t/h)	Distance (m)	Belt width (m)	Belt speed (m/s)	Motor power (kW)	Drive drum diam. (mm)	Idler diam. (mm)	Drivehead overall dim. (W×H mm)	Reference weight (t)
DTL100/120/3×630	1200	2500	1000	3.5	3×630	1250	159	5720×3500	280.2
DTL100/120/3×560	1200	2500	1000	3.5	3×560	1250	159	5690×3500	264.3
DTL100/120/3×315	1200	1600	1000	3.5	3×315	800	133	5470×2250	135.89
DTL100/120/3×250	1200	1000	1000	3.5	3×250	800	133	5380×2250	127.2
DTL100/120/3×200	1200	1000	1000	3.5	3×200	800	133	5180×2100	125
DTL100/80/2×160	800	1000	1000	2.5	2×160	630	108	3737×1665	100.97
DTL100/63/2×75	630	700	1000	2	2×75	630	108	3066×1615	63.9
DTL80/60/2×315	600	3800	800	2.5	2×315	800	133	3579×2100	375.3
DTL80/60/2×250	600	3000	800	2.5	2×250	800	133	3579×2100	225.4
DTL80/60/2×200	600	2600	800	2.5	2×200	800	133	3579×2100	197.3
DTL80/40/2×110	400	1000	800	2	2×110	630	108	3537×1665	71.47
DTL80/40/2×75	400	1000	800	2	2×75	630	89	2066×1565	57.3
DTL80/40/2×40	400	800	800	2	2×40	500	89	1942×1465	53.7
DTL65/20/2×40	200	800	650	2	2×40	500	89	1742×1465	43.1
DTL65/20/2×30	200	1200	650	1.6	2×30	500	89	1742×1465	56.8





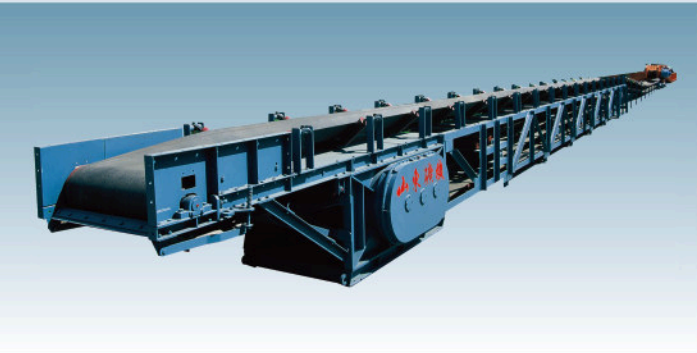
2. Telescopic Belt Conveyor

This type is primarily used for material conveying in gateways of fully mechanized mining, high-grade conventional mining, and conventional mining work faces in underground coal mines. It can also be employed for material conveying in roadway driving. When used in a gateway, the belt conveyor tail overlaps with the BSL, when used in roadway driving, the belt conveyor tail overlaps the roadheader.

Technical parameter

Model	Max capacity (t/h)	Distance (m)	Belt width (m)	Belt speed (m/s)	Motor power (kW)	Drive drum diam. (mm)	Idler diam. (mm)	Machine head overall dim. (W×H mm)	Reference weight (t)
DSJ180/600/3×1250	6000	3000	1800	5	3×1250	1600	194	6750×2900	700.5
DSJ180/600/3×800	6000	3000	1800	5	3×800	1600	194	6720×2900	672.3
DSJ160/400/4×710	4000	3000	1600	5	4×710	1400	159	6520×2900	621.3
DSJ160/400/4×560	4000	3000	1600	5	4×560	1250	159	6520×2900	578.43
DSJ140/315/3×710	3150	1600	1400	5	3×710	1000	159	6220×2860	308.48
DSJ140/315/3×630	3150	1450	1400	5	3×630	1000	159	6220×2850	295.36
DSJ140/315/3×560	3150	1400	1400	5	3×560	1000	159	5880×2850	283.38
DSJ140/250/3×500	2500	3000	1400	4	3×500	1000	159	5650×2842	450.2
DSJ140/250/3×400	2500	3000	1400	4	3×400	1000	159	5326×2842	437.5
DSJ120/200/(1-3)×400	2000	1000	1200	3.5	3×400	800	133	4750×2150	189.98
DSJ120/200/(1-3)×355	2000	1000	1200	3.5	3×355	800	133	4726×2150	155.1
DSJ120/200/(1-3)×315	2000	1000	1200	3.5	3×315	800	133	4710×2150	157.9
DSJ120/200/(1-3)×250	2000	1000	1200	3.5	3×250	800	133	4698×2150	147.1
DSJ120/200/(1-3)×200	2000	1000	1200	3.5	3×200	800	133	4686×2150	145.6
DSJ100/120/(1-3)×355	1200	2500	1000	3.5	3×355	800	133	4526×1725	229.4
DSJ100/120/(1-3)×315	1200	2400	1000	3.5	3×315	800	133	4510×1725	224.1
DSJ100/120/(1-3)×250	1200	800	1000	3.5	3×250	800	133	4498×1725	108.54
DSJ100/120/(1-3)×200	1200	800	1000	3.5	3×200	800	133	4486×1725	107.04
DSJ100/80/(1-2)×160	800	1000	1000	2.5	2×160	630	108	2589×1665	94.16

Model	Max capacity (t/h)	Distance (m)	Belt width (m)	Belt speed (m/s)	Motor power (kW)	Drive drum diam. (mm)	Idler diam. (mm)	Machine head overall dim. (W×H mm)	Reference weight (t)
DSJ100/63/2×110	630	700	1000	2	2×110	630	108	2537×1665	86.5
DSJ100/63/(1-2)×90	630	700	1000	2	2×90	630	108	2537×1665	85.8
DSJ100/63/2×75	630	700	1000	2	2×75	630	108	2266×1615	61.0
DSJ80/60/(1-2)×315	600	3000	800	2.5	2×315	800	133	2485×1725	292.3
DSJ80/60/(1-2)×250	600	3000	800	2.5	2×250	800	133	2385×1725	284.1
DSJ80/60/(1-2)×200	600	2600	800	2.5	2×200	800	133	2385×1725	248.7
DSJ80/60/(1-2)×160	600	2400	800	2.5	2×160	630	108	2250×1665	156.2
DSJ80/40/(1-2)×110	400	2400	800	2	2×110	630	108	2250×1665	150.5
DSJ80/40/(1-2)×90	400	2200	800	2	2×90	630	108	2250×1665	140.3
DSJ80/40/2×75	400	800	800	2	2×75	630	89	2066×1565	68.8
DSJ80/40/2×40	400	800	800	2	2×40	500	89	1942×1465	52.153
DSJ65/20/2×40	200	800	650	2	2×40	500	89	1742×1465	59.5
DSJ65/20/2×22	200	800	650	1.6	2×22	500	89	1742×1465	48.7



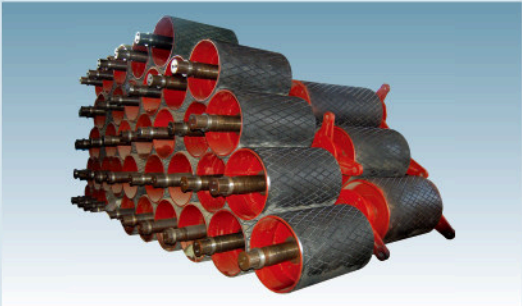


3. Steep Inclined Upward and Downward Belt Conveyor

Generally, the upward inclination angle of a belt conveyor is less than 18 degrees , and the downward inclination angle is greater than or equal to -17 degrees. If the upward angle exceeds 18 degrees or the downward angle is less than -17 degrees, materials on the conveyor belt may slide downward, causing a serious rolling accident. To address the challenges of large-angle upward or downward transportation in conventional conveyor belts, the following technical measures are taken:

- 1. Soft start and soft brake
- 2. Deep-groove idler sets
- 3. Patterned conveying belt
- 4. Backstop and disc brake
- 5. Variable frequency start + disc brake
- 6. Hydraulic viscous soft start + controllable disc brake
- 7. Hydraulic coupling + controllable disc brake
- 8. Special machine frame structure
- 9. Special control technology

Based on these techniques and our extensive theoretical and practical experience, we have developed mature design concepts for belt conveyors with upward and downward inclination angles ranging from -26° to +30°. These solutions are customized to meet diverse customer requirements.



4. DTG(DTS)(DSS) Series Hanging Belt Conveyor

Mainly used for conveying raw coal in underground roadways. Different from the DTL series, its middle part consists of steel cable-hung rollers. It is suitable for floors with large fluctuations. The belt conveyors are simple in structure and easy to install and maintain.

Technical parameters of DTG(DTS)(DSS) Series Hanging Belt Conveyor:

Model	Conveying capacity (t)	Belt width (mm)	Belt Speed (m/s)	Max Conveying Length (m)	Main Motor Power (kW)
DTG (DTS, DSS)50	100	500	0.8~2.5	800	1.1~22
DTG (DTS, DSS)65	200	650	0.8~2.5	1000	22~2×55
DTG (DTS, DSS)80	400	800	0.8~3.15	1500	30~2×250
DTG (DTS, DSS)100	630	1000	0.8~4	2000	75~2×355
DTG (DTS, DSS)120	1200	1200	1~5	2000	200~2×400

5. Fixed Belt Conveyor for Plane Turning

The fixed belt conveyor for planar turning is suitable for transporting bulk materials or packed goods. It can be used as a single machine or for horizontal or inclined transportation in combination with overlapping multiple conveyors. The conveyor can follow the natural terrain by using a combination of convex arcs, concave arcs, straight line segments, or planar bending.

Technical parameters of Fixed Belt Conveyor for Plane Turning:

Model	Belt width (mm)	Conveying capacity (t/h)	Belt Speed (m/s)	Max Conveying Length (m)	Main Motor Power (kW)
DTL(G)	500	70~220	0.8~2.5	500	1.1~200
	650	130~400	0.8~2.5	800	1.1~315
	800	200~800	0.8~3.15	2500	1.1~2×500
	1000	325~3200	0.8~4	4000	1.5~2×630
	1200	600~5200	2~4.5	5000	5.5~2×710
	1400	825~8200	2~5	8000	15~5×1400
	1600	1400~12000	2.5~5.6	10000	200~5×2000
	1800	1750~18000	2.5~6.3	12000	250~5×2240
	2000	2200~22000	2.5~6.3	12000	315~6×2500
	2200	3400~30000	3.15~7.1	15000	315~6×2500
	2400	4150~40000	3.15~7.1	15000	315~6×2500



6. (TD75, DTII, DTII(A)) General Fixed Belt Conveyor

The DX series reinforced belt conveyor can be designed based on user requirements for conveying capacity (t/h), conveying distance (m), lifting height (m), and site conditions. It is equipped with protection systems including anti-deviation protection, coal level monitoring, slip protection, smoke detection, belt breakage protection, and longitudinal tear protection, etc. It also addresses soft start, soft braking, and automatic belt tensioning. The DT II fixed belt conveyor is an updated version of TD75 and some DX models, with improved components over the original design.

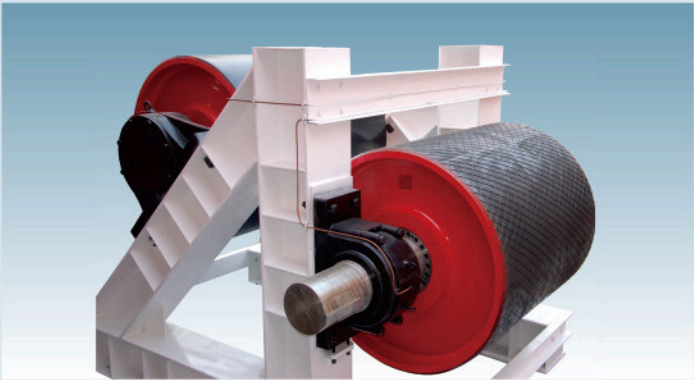
The DT II triangular frame offers distinct advantages. TD75 employs a steel-welded frame, while DX uses a box frame. Both are still widely used today and can be combined in practice as needed.

Technical parameters of General Fixed Belt Conveyor:

Model	Max capacity (t/h)	Distance (m)	Belt width (mm)	Belt speed (m/s)	Motor power (kW)	Drive drum diam. (mm)	Idler diam. (mm)	Inclination range (°)
DX3~DX11	388~40000	≥1000	800~2400	1.6~7.1	Max.n×2500	800~1800	89~194	+30~-30
DT II 01~T II 11*	69~40000	≥1000	500~2400	0.8~7.1	Max.n×2500	500~1800	89~194	+30~-30
TD1*~TD6*	69~4130	≥300	500~1400	0.8~5.0	Max.n×500	500~1400	89~159	+20~-17

7. Open-pit Relocatable Belt Conveyor

In open-pit mining, the main types of relocatable belt conveyors include fully relocatable rotating conveyors, fully relocatable belt conveyors, and semi-relocatable belt conveyors. These systems are designed for horizontal movement, typically towed by mobile machinery on rails or skid-based platforms. They are equipped with quick-replacement idler assemblies, enabling efficient long-distance, high-capacity material transport. A key advantage is their foundation-free design, which simplifies installation and relocation for large-scale operations.



Technical parameters of Open-pit Relocatable Belt Conveyor:

Model	Belt width (mm)	Belt Speed (m/s)	Conveying capacity (t/h)	Max machine Length (m)	Motor Power (kW)
DXY4	1000	2.0~4.0	800~2800	5000	3×450
DXY5	1200	2.0~4.5	1000~3000	5000	3×500
DXY6	1400	2.5~5.0	2000~5000	6000	4×630
DXY7	1600	2.5~5.6	2500~12000	6000	4×900
DXY8	1800	2.5~6.3	4000~18000	5000	4×1250
DXY9	2000	2.5~6.3	5000~22000	5000	4×1600
DXY10	2200	3.15~7.1	6500~30000	5000	4×1800
DXY11	2400	3.15~7.1	8000~40000	5000	4×2240

8. Pipe Belt Conveyor

Pipe belt conveyor is a type of specialized belt conveyor developed from the trough belt conveyor. It enables closed conveying, effectively preventing issues such as material leakage, spillage, dust emission, impurity mixing, and exposure to rain and snow. It features excellent sealed performance, low environmental impact, high conveying inclination angles, and suitability for complex terrain layouts. The design allows for easy planar and spatial turns, occupies minimal space, and supports bidirectional material transportation.



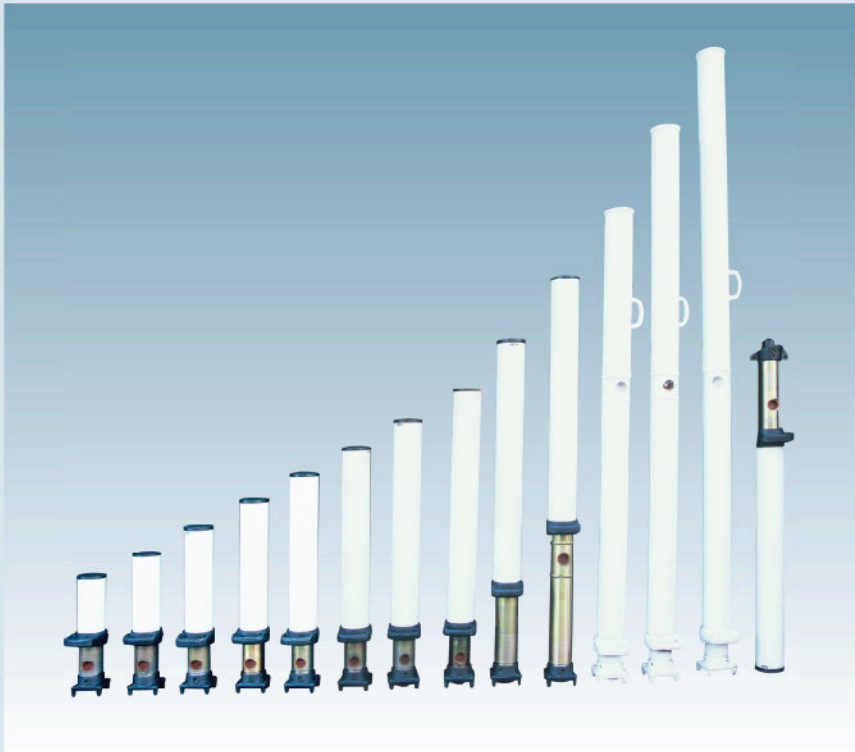
Technical parameters of General Fixed Belt Conveyor:

Pipe diameter (mm)	Belt Width (mm)	Belt speed (m/s)									
		0.8	1.0	1.25	1.6	2.0	2.5	3.15	4.0	4.5	5.0
		Conveying Capacity (m/h)									
100	400	13.1	16.4	20.5	26.3	--	--	--	--	--	--
150	600	30.5	38.1	47.6	60.9	76.2	95.2	--	--	--	--
200	750	55.0	68.7	85.9	109.9	137.4	171.8	--	--	--	--
250	910	85.1	106.4	133.0	170.2	212.8	266.0	335.2	--	--	--
300	1100	125.5	156.9	196.1	251.0	313.8	392.2	494.2	627.6	--	--
350	1280	--	214.4	268.1	343.1	428.9	536.1	675.5	857.8	965.0	--
400	1460	--	284.1	355.1	454.5	568.1	710.2	894.8	1136.3	1278.3	1420.3
450	1620	--	367.0	458.7	587.2	734.0	917.4	1156.0	1467.9	1651.4	1834.9
500	1800	--	--	560.9	717.9	897.4	1121.8	1413.4	1794.9	2019.2	2243.6
560	2000	--	--	705.8	903.4	1129.2	1411.5	1778.5	2258.5	2540.8	2823.1
600	2150	--	--	--	1026.4	1282.9	1603.7	2020.6	2565.9	2886.6	3207.4
630	2250	--	--	--	--	1426.7	1783.4	2247.1	2853.4	3210.1	3566.8
700	2500	--	--	--	--	1737.2	2171.5	2736.1	3474.4	3908.6	4342.9
800	2850	--	--	--	--	--	2903.1	3657.9	4644.9	5225.5	5806.1
850	3000	--	--	--	--	--	3308.6	4168.9	5293.8	5955.5	6617.3

N0.7 Hydraulic Prop

DW type external injection hydraulic prop is a kind of external liquid supply constant resistance prop, and equipped with HDJA or HDJC roof master, used for coal mine stope working face roof support, can also be used for fully mechanized mining top caving working face end support or temporary support.

DW type external injection hydraulic prop has formed φ100 and φ110mm two series.



top cap



handle bar



three usages valve



piston



base

φ100 technical parameters:

Model	Rated work resistance (KN)	Rated working pressure (MPa)	setting load (KN)	Pump pressure (MPa)	Max. Height (mm)	Min. Height (mm)	Stroke (mm)	Cylinder diameter (mm)	Working fluid	Weight (kg)
DW35-180/100	180	23	118-157	15-20	3500	2700	800	100	Containing 10% emulsifier or MD10 emulsifier 1-2% emulsion	80
DW31.5-180/100	180	23	118-157	15-20	3150	2350	800	100		73
DW28-250/100	250	31.8	118-157	15-20	2800	2000	800	100		69
DW25-250/100	250	31.8	118-157	15-20	2500	1700	800	100		59
DW22-300/100	300	38.2	118-157	15-20	2240	1440	800	100		55
DW20-300/100	300	38.2	118-157	15-20	2000	1235	765	100		50
DW18-300/100	300	38.2	118-157	15-20	1800	1105	695	100		47
DW16-300/100	300	38.2	118-157	15-20	1600	1000	600	100		43.5
DW14-300/100	300	38.2	118-157	15-20	1400	895	505	100		40
DW12-300/100	300	38.2	118-157	15-20	1200	787	413	100		36.3
DW10-300/100	300	38.2	118-157	15-20	1000	680	320	100		32
DW08-300/100	300	38.2	118-157	15-20	800	573	227	100		26.2
DW06-300/100	300	38.2	118-157	15-20	630	480	150	100		25.1

φ110 technical parameters:

Model	Rated work resistance (KN)	Rated working pressure (MPa)	setting load (KN)	Pump pressure (MPa)	Max. Height (mm)	Min. Height (mm)	Stroke (mm)	Cylinder diameter (mm)	Working fluid	Weight (kg)
DW45-250/110	250	26.3	143-190	15-20	4500	3216	1284	110	Containing 10% emulsifier or MD10 emulsifier 1-2% emulsion	138
DW42-250/110	250	26.3	143-191	15-21	4200	3200	1000	110		132
DW40-250/110	250	26.3	143-190	15-20	4000	2966	1000	110		126
DW38-250/110	250	26.3	143-190	15-20	3800	2800	1000	110		121
DW35-300/110	300	31.6	143-190	15-20	3500	2620	880	110		113
DW31.5-300/110	300	31.6	143-190	15-20	3150	2270	880	110		103
DW28-300/110	300	31.6	143-190	15-20	2800	1920	880	110		95
DW25-350/110	350	42.1	143-190	15-20	2500	1629	871	110		81.8
DW22-350/110	350	42.1	143-190	15-20	2240	1369	871	110		76.6
DW20-350/110	350	42.1	143-190	15-20	2000	1247	753	110		70.8
DW18-350/110	350	42.1	143-190	15-20	1800	1122	678	110		65
DW16-350/110	350	42.1	143-190	15-20	1600	1016	584	110		59.5
DW14-350/110	350	42.1	143-190	15-20	1400	910	490	110		54.5
DW12-350/110	350	42.1	143-190	15-20	1200	803	397	110		49
DW10-350/110	350	42.1	143-190	15-20	1000	696	304	110		44
DW08-350/110	350	42.1	143-190	15-20	800	588	212	110		38.8
DW06-350/110	350	42.1	143-190	15-20	630	495	135	110		34.2

Suspending Hydraulic Prop

SHANDONG MINING MACHINERY GROUP



DWX100 technical parameters:

Model	Rated work resistance (KN)	Rated working pressure (MPa)	Setting load (KN)		Max. Height (mm)	Min. Height (mm)	Stroke (mm)	Cylinder diameter (mm)	Working fluid	Weight (kg)
			Pump pressure (15MPa)	Pump pressure (20MPa)						
DW06-250/100X	250	34.6	108.5	144.7	630	400	230	100	Containing 10% emulsifier or MD10 emulsifier 1-2% emulsion	24.6
DW08-250/100X	250	34.6	108.5	144.7	800	490	310	100		27.6
DW10-250/100X	250	34.6	108.5	144.7	1000	595	405	100		31.3
DW12-250/100X	250	34.6	108.5	144.7	1200	700	500	100		34.8
DW14-250/100X	250	34.6	108.5	144.7	1400	810	590	100		38.5
DW16-250/100X	250	34.6	108.5	144.7	1600	920	680	100		42.2
DW18-250/100X	250	34.6	108.5	144.7	1800	1035	765	100		46.1
DW20-250/100X	250	34.6	108.5	144.7	2000	1150	850	100		50
DW22-250/100X	250	34.6	108.5	144.7	2240	1280	960	100		54.4
DW25-250/100X	250	34.6	108.5	144.7	2500	1440	1060	100		59.4
DW28-250/100X	250	34.6	108.5	144.7	2800	1610	1190	100		65.1
DW31.5-250/100X	250	34.6	108.5	144.7	3150	1800	1350	100		71.6
DW35-250/100X	250	34.6	108.5	144.7	3500	1980	1520	100		77.6

DWX110 technical parameters:

Model	Rated work resistance (KN)	Rated working pressure (MPa)	Setting load (KN)		Max. Height (mm)	Min. Height (mm)	Stroke (mm)	Cylinder diameter (mm)	Working fluid	Weight (kg)
			Pump pressure (15MPa)	Pump pressure (20MPa)						
DW06-300/110X	300	34	132.3	176.4	630	400	230	110	Containing 10% emulsifier or MD10 emulsifier 1-2% emulsion	29
DW08-300/110X	300	34	132.3	176.4	800	490	310	110		32.2
DW10-300/110X	300	34	132.3	176.4	1000	595	405	110		36.2
DW12-300/110X	300	34	132.3	176.4	1200	700	500	110		40.1
DW14-300/110X	300	34	132.3	176.4	1400	810	590	110		44.1
DW16-300/110X	300	34	132.3	176.4	1600	920	680	110		48.4
DW18-300/110X	300	34	132.3	176.4	1800	1035	765	110		52.6
DW20-300/110X	300	34	132.3	176.4	2000	1150	850	110		56.9
DW22-300/110X	300	34	132.3	176.4	2240	1280	960	110		61.7
DW25-300/110X	300	34	132.3	176.4	2500	1440	1060	110		67.2
DW28-300/110X	300	34	132.3	176.4	2800	1610	1190	110		73.6
DW31.5-250/110X	250	28.3	132.3	176.4	3150	1800	1350	110		80.6
DW35-250/110X	250	28.3	132.3	176.4	3500	1980	1520	110		87.4
DW38-250/110X	250	28.3	132.3	176.4	3800	2140	1660	110		93.4
DW40-250/110X	250	28.3	132.3	176.4	4000	2250	1750	110		97.5
DW42-250/110X	250	28.3	132.3	176.4	4200	2360	1840	110		101.5
DW45-250/110X	250	28.3	132.3	176.4	4500	2520	1980	110		107.5



N0.8 Roof Master

SHANDONG MINING MACHINERY GROUP

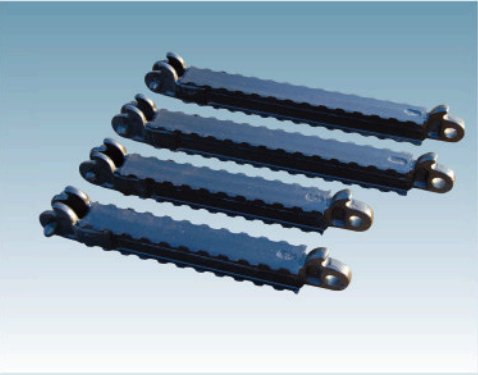
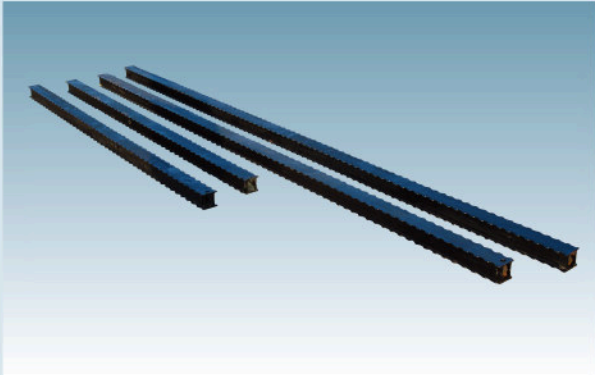
It is mainly used for coal mine work face roof support. It is serialized joint roof master and roof master.

Different length of roof master:

1400	1600	1800	2000	2200	2400	2600	2800
3000	3200	3400	3600	3800	4000	4200	4400

DJB joint roof master:

Model	Length (mm)	Bending angle (KNM)		Adjustable angle		Weight
		Beam	Joint part	Up and down	Left and right	
DJB600/470	600	52.5	30	≥7	≥3	18.9
DJB800/420	800					22.9
DJB1000/300	1000					26.93
DJB1200/300	1200					30.95



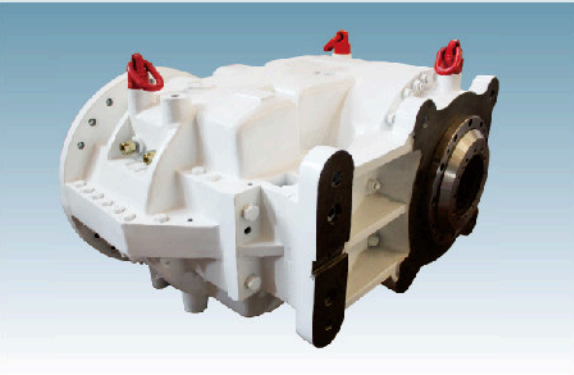
N0.9 Gearbox

SHANDONG MINING MACHINERY GROUP

Technical parameters:

Model	Mode	Power (KW)	Ratio			Usage
JS15	Three stage cone cylindrical gear transmission	15	19.77			AFC, Belt conveyor
JS18.5	Three stage cone cylindrical gear transmission	18.5	24.95			AFC, Belt conveyor
JS30	Three stage cone cylindrical gear transmission	30	22.24			AFC, Belt conveyor
JS40	Three stage cone cylindrical gear transmission	40	15.14	18.4494	24.56	AFC, BSL, Belt conveyor
JS75	Three stage cone cylindrical gear transmission	75	15.76	19.414	24.437 26.56	AFC, BSL, Belt conveyor
JSP90	Three stage cone cylindrical gear transmission	90	23.55			Belt conveyor
JS110	Three stage cone cylindrical gear transmission	110	25.38		29.362	AFC, BSL
JS110	Parallel arrangement of planetary gear transmission	110	23.99		29.755	AFC, BSL
JSP125	Three stage cone cylindrical gear transmission	125	24.645			Belt conveyor
JS132	Three stage cone cylindrical gear transmission	132	25.44	27.38	30.667	AFC, BSL
			23.6789		32.677	
			23.28		29.285	
	Vertically arranged planetary gear transmission	132	30.472	36.06	40.4	AFC, BSL
JX132	Vertically arranged planetary gear transmission	132	29.647			AFC, BSL
JS160	Three-stage bevel cylindrical gear transmission	160	25.238	29.948	39.737	AFC, BSL
JX160	Vertically arranged planetary gear transmission	160	29.647			AFC, BSL
JSP160	Three stage cone cylindrical gear transmission	160	19.867			Belt conveyor
JS200	Three stage cone cylindrical gear transmission	200	22.98	27.223	27.635	AFC, BSL
			27.727	33.158	38.8	
JS200	Parallel arrangement of planetary gear transmission	200	25.9	28.288	30.136 36.737	AFC, BSL
JX200	Vertically arranged planetary gear transmission	200	27.218		36.737	AFC, BSL
JS250	Three stage cone cylindrical gear transmission	250	30.1938		3.54	AFC, BSL, Crusher
JX250	Vertically arranged planetary gear transmission	250	35.788			AFC, BSL
JS315	Parallel arrangement of planetary gear transmission	315	29.858		33.16	AFC, BSL
			27.46		33.147	
JX315	Vertically arranged planetary gear transmission	315	33.147			AFC, BSL
JS375	Parallel arrangement of planetary gear transmission	375	24.255		33.147	AFC, BSL
JX375	Vertically arranged planetary gear transmission	375	33.147			AFC, BSL
JS400	Parallel arrangement of planetary gear transmission	400	27.46	33.16	38.25 3.54	AFC, BSL, Crusher
JX400	Vertically arranged planetary gear transmission	400	38.25			AFC, BSL
JS525	Parallel arrangement of planetary gear transmission	525	30.56	36.15	38.97	AFC, BSL
JX525	Vertically arranged planetary gear transmission	525	30.38			AFC, BSL
JS700	Parallel arrangement of planetary gear transmission	700	37.94			AFC, BSL
JX700	Vertically arranged planetary gear transmission	700	37.94			AFC, BSL
JS800	Parallel arrangement of planetary gear transmission	800	39.83			AFC, BSL
JS855	Parallel arrangement of planetary gear transmission	855	39.83			AFC, BSL
JX855	Vertically arranged planetary gear transmission	855	37.45			AFC, BSL
JS1000	Parallel arrangement of planetary gear transmission	1000	28.43		37.45	AFC, BSL
JX1000	Vertically arranged planetary gear transmission	1000	28.405			AFC, BSL
JS1200	Parallel arrangement of planetary gear transmission	1200	33.37			AFC, BSL
JX1200	Vertically arranged planetary gear transmission	1200	30.38			AFC, BSL

Gearbox (used for AFC and belt conveyor) has been researched and developed by SMMG and manufactured for more than 30 years. Currently, the production capacity has reached over 3,000 units per year, with a power range of 15kW to 1,200kW. By utilizing advanced German processing centers and heat treatment equipment, SMMG ensures consistent quality, noise levels, and operating temperatures, making the product competitive both domestically and internationally. Through continuous optimization and innovation, the issue of bearing lubrication under large or steeply inclined working conditions has been resolved. According to customer requirements, intelligent monitoring of parameters such as vibration, temperature, cooling water pressure, and flow rate is implemented.





NO.10 Cylinder

SHANDONG MINING MACHINERY GROUP

SMMG is committed to manufacturing high-end, anti-corrosion, pure-water-powered roof support legs and cylinders. With over 30 years of experience in research, development, design, production, and sales, SMMG provides products and services to a wide range of powered roof support manufacturers. Currently, it has developed into one of the nation's key coal cylinder production bases, achieving an annual production capacity of 24,000 tons (equivalent to 200,000 pieces annually) and a valuation of 500 million CNY.

The company offers more than 50 product specifications, ranging from Φ63 mm to Φ630 mm (categorized by cylinder inner diameter). All products have passed testing and inspection by the China Mining Products Safety Approval and Certification Center, earning the Mining Products Safety Approval Certificate and other relevant qualifications.

SMMG possesses advanced surface treatment capabilities, including copper melting, cladding, copper plating, chrome plating, and PIP (Plasma Immersion Processing), to meet diverse customer requirements.



Single telescopic cylinder technical parameters:

Diameter of cylinder (mm)	Diameter of piston (mm)	Setting load (KN) (P=31.5Mpa)	Dropping force (KN) (P=31.5Mpa)
φ140	120	484.7	128.6
φ160	130	633	215
φ180	160	802	168
φ200	φ185	989.1	142.8
φ230	φ210	1308.1	217.7
φ250	φ235	1546	180
φ280	φ260	1938.6	267
φ320	φ290	2533.3	452.6
φ360	φ340	3204.7	346.2
φ400	φ380	3956.4	385.7

Double telescopic cylinder technical parameters:

Diameter of cylinder (mm)	Diameter of piston (mm)	Setting load (KN) (P=31.5Mpa)	Dropping force (KN) (P=31.5Mpa)
φ140/φ100	φ130/φ85	Primary cylinder: 237.4	Primary cylinder: 66.7
		Secondary cylinder: 247.3	Secondary cylinder: 68.7
φ160/φ125	φ150/φ105	Primary cylinder: 246.6	Primary cylinder: 76.6
		Secondary cylinder: 386.4	Secondary cylinder: 113.8
φ180/φ140	φ170/φ120	Primary cylinder: 316.6	Primary cylinder: 86.4
		Secondary cylinder: 484.7	Secondary cylinder: 128.7

Diameter of cylinder (mm)	Diameter of piston (mm)	Setting load (KN) (P=31.5Mpa)	Dropping force (KN) (P=31.5Mpa)
φ200/φ140	φ185/φ130	Primary cylinder: 504.5	Primary cylinder: 142.8
		Secondary cylinder: 484.6	Secondary cylinder: 66.8
φ280/φ200	φ260/φ185	Primary cylinder: 949.5	Primary cylinder: 267
		Secondary cylinder: 989.1	Secondary cylinder: 142.8
φ300/φ220	φ280/φ195	Primary cylinder: 1028.7	Primary cylinder: 286.8
		Secondary cylinder: 1196.8	Secondary cylinder: 256.5
φ320/φ230	φ290/φ210	Primary cylinder: 1224	Primary cylinder: 452.7
		Secondary cylinder: 1308.7	Secondary cylinder: 217.7
φ360/φ270	φ340/φ230	Primary cylinder: 1402.1	Primary cylinder: 346.2
		Secondary cylinder: 1802.6	Secondary cylinder: 494.5
φ380/φ280	φ360/φ260	Primary cylinder: 1632	Primary cylinder: 366
		Secondary cylinder: 1938.6	Secondary cylinder: 267
φ400/φ300	φ380/φ260	Primary cylinder: 1730.9	Primary cylinder: 385.7
		Secondary cylinder: 2225.5	Secondary cylinder: 553.9
φ420/φ290	φ390/φ260	Primary cylinder: 2282.3	Primary cylinder: 600.9
		Secondary cylinder: 2079.6	Secondary cylinder: 408
φ440/φ330	φ420/φ300	Primary cylinder: 2094.4	Primary cylinder: 425.3
		Secondary cylinder: 2692.8	Secondary cylinder: 467.4
φ460/φ350	φ440/φ310	Primary cylinder: 2203.2	Primary cylinder: 445.1
		Secondary cylinder: 3029.1	Secondary cylinder: 652.8
φ480/φ360	φ455/φ310	Primary cylinder: 2492.5	Primary cylinder: 578
		Secondary cylinder: 3204.7	Secondary cylinder: 828.4
φ500/φ360	φ475/φ335	Primary cylinder: 2977.2	Primary cylinder: 602.7
		Secondary cylinder: 3204.7	Secondary cylinder: 429.6
φ530/φ380	φ500/φ355	Primary cylinder: 3375.3	Primary cylinder: 764.1
		Secondary cylinder: 3570.6	Secondary cylinder: 454.4



NO.11 High Grade Chain

SHANDONG MINING MACHINERY GROUP

Technical parameters of General Fixed Belt Conveyor:

Specification d×P (mm)	Diameter d (mm)		Pitch P (mm)		Width C (mm)	Inner width		Outer width		Weight
						Flat chain	Vertical chain	Flat chain	Vertical chain	
					C max	a1 min	a2 min	b1 max	b2 max	kg/m
22×86	22	±0.7	86	±0.9	25	26	26	74	60	9.5
26×92	26	±0.8	92	±0.9	30	30	30	86	74	12.8
30×108	30	±0.9	108	±1.0	33	34	34	98	86	18.0
34×126	34	±1.0	126	±1.2	37	38	38	109	97	22.7
38×137	38	±1.1	137	±1.4	42	42	42	121	110	28.5
42×146	42	±1.3	146	±1.5	46	46	46	135	115	34.2
48×152	48	±1.5	152	±1.5	56	62	53	163	127	46.8
52×170	52	±1.7	170	±1.5	64	64	56	172	127	53.8
56×187	56	±1.9	187	±1.5	65	69	60	187	131	60.0

Specification (mm)	Test load (kN)	Elongation under test load (% max)	Breaking load (kN min)	Total elongation at breaking load (% min)	Min. Immunity (mm)	Mechanical property
22×86	490	1.6	610	12	18	C
26×92	680	1.6	850	12	21	C
30×108	900	1.6	1130	12	24	C
34×126	1160	1.6	1450	12	30	C
38×137	1450	1.6	1810	12	34	C
42×146	1770	1.6	2220	12	38	C
48×152	2320	1.6	2900	12	42	C
52×170	2800	1.6	3500	12	46	C
56×187	3200	1.6	4000	12	50	C



Automatic Chain Braiding machine



Automatic Chain Welding Machine



NO.12 Sprocket and Link Connector

SHANDONG MINING MACHINERY GROUP

SMMG possesses independent sprocket assembly production capacity. The branch is equipped with 10 CNC lathes, 4 CNC milling and boring machines, 2 grinding machines, 2 gear hobbing machines, 2 gear shaping machines, 2 spline shaft milling machines, and 40 wire-cutting machines. The technical team comprises over 50 personnel, including 5 engineers, 16 senior technicians, and more than 20 senior workers. SMMG provides a full range of services, from design, processing, assembly, testing, inspection, to after-sales support. The product range is comprehensive, with diverse structures and excellent performance.

The sprocket assembly can adapt to conveyor pan widths ranging from 630mm to 1400mm, accommodating flight chains from 22x86-C to 52x170-C, including twin middle chains, twin side chains, middle single chains, quasi-side double chains, and other series. The sprocket body is manufactured from high-quality wear-resistant alloy steel, undergoing full heat treatment processes such as tempering, medium-frequency quenching, or flame surface quenching. The special manufacturing center strictly controls the chain socket dimensions, ensuring product quality reaches the domestic first-class level. The finished products feature advanced technology, reliable quality, low coal consumption, and leading trouble-free operation time domestically.

Link connector products mainly include flat-type, open-type, and lock-type designs, covering ladder gear type, arc gear type, V-lock type, chain-lock type, and other full-range products. The design is rational, and the quality is dependable.



NO.13 Moveable Mine Refuge Chamber

SHANDONG MINING MACHINERY GROUP

The KJYF series movable mine refuge chamber is primarily designed to provide temporary refuge in dangerous disaster environments when explosions, coal and gas outbursts, roof falls, external fires, or other accidents occur in underground coal or non-coal mines, particularly in cases of complete interruption of external water, gas, and power supply. It can independently maintain the safe survival of the rated number of at-risk personnel for over 110 hours. Additionally, it functions as a mine gas monitoring system under normal conditions and serves as a temporary underground command and dispatch center during mine accidents.

Features:

Shandong Mine Safety Equipment Co., Ltd., a subsidiary of our company, collaborated with the rescue capsule team at Beijing University of Science and Technology to advance research on the key technologies of refuge chambers. The collaboration has resulted in a rescue capsule product system with a capacity of 6–16 people, capable of addressing the complex rescue needs of coal mines worldwide.

A Series: Ice storage refrigeration type refuge chamber

Type	Specification (L×W×H m)	Weight (t)	Personnel	Protection time (h)	Safety factor	高温防护时间 h	Resistance to explosive pressure (Mpa)
KJYF-96/6(A)	4.8×1.7×2	6.5	6	96	1.1	24	1.0
KJYF-96/8(A)	5.8×1.7×2	7.5	8	96	1.1	24	1.0
KJYF-96/10(A)	7.4×1.7×2	10	10	96	1.1	24	1.0
KJYF-96/12(A)	8.4×1.7×2	11	12	96	1.1	24	1.0
KJYF-96/16(A)	10.8×1.7×2	13	16	96	1.1	24	1.0

D series: passive refrigeration type refuge chamber

Type	Specification (L×W×H m)	Weight (t)	Personnel	Protection time (h)	Safety factor	高温防护时间 h	Resistance to explosive pressure (Mpa)
KJYF-96/6(D)	8×1.7×2	8	6	96	1.1	8	1.0
KJYF-96/8(D)	9×1.7×2	10	8	96	1.1	8	1.0
KJYF-96/10(D)	10.6×1.7×2	12	10	96	1.1	8	1.0
KJYF-96/12(D)	11.6×1.7×2	14	12	96	1.1	8	1.0

Features:

110 hours of safety & survival guarantee	Automatic packing toilet
Resistant to gas, coal dust, explosion impact	Multistage oxygen supply
Separate and can be assembled design	Multistage oxygen supply
Intrinsically safe lighting system	Efficient removal of toxic and harmful gases
Multiple mode of delivery	multi-function cold storage air conditioner
Multiple first aid equipment	Intelligent multi-parameter environment detection
Composite insulation structure	Large capacity uninterrupted lithium battery
Pumped multi-parameter external monitoring instrument	Communication camera monitoring intelligent all-in-one
Door linkage block air curtain	Humanized design of survival capsule
Communication equipment for rescue capsule	Life food for refuge chamber
Dual air source air washing	Modular flame retardant tank



KJYF-96/16 (B) Refuge chamber



NO.14 Refuge Chamber

SHANDONG MINING MACHINERY GROUP

As an important safety rescue equipment in underground coal mines, the refuge chamber integrates functions such as oxygen supply, explosion prevention, poison isolation, vibration resistance, cooling, and dehumidification, among others. It is suitable for all coal seams and features the following characteristics: accommodating a large number of people, advanced rescue technology, compact structure, high reliability, stable operation, modular layout, good escape performance, and diverse control methods.



Main technical parameters:

The rated protection numbers 40~100 persons
Rated protection time >96 h
Indoor temperature $\leq 35^{\circ}\text{C}$
Relative humidity in chamber $\leq 85\%$

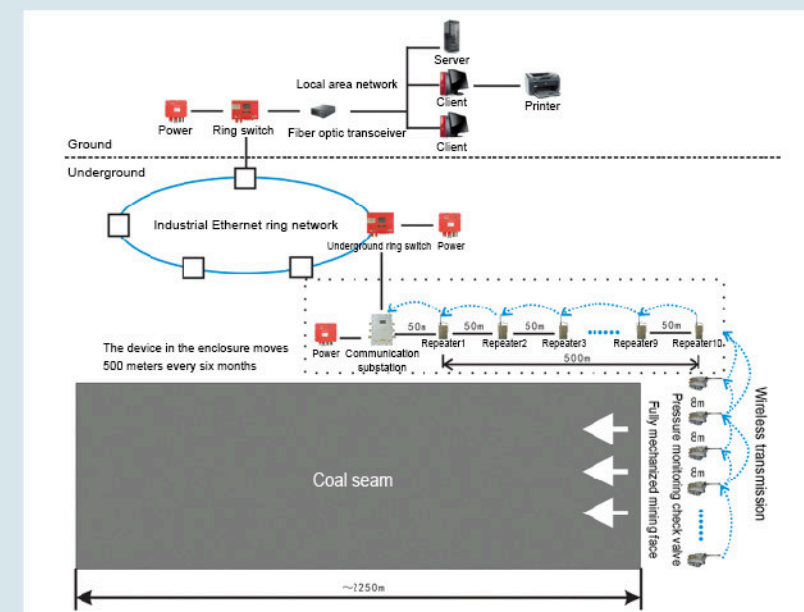
Air supply per person $\geq 0.3\text{m}^3/\text{min}$, Continuous noise $\leq 70\text{dB}$
The oxygen concentration in the survival chamber is between 18.5%~23.0%
Pressure relief rate (air tightness) $\leq 350 \pm 20\text{Pa/h}$
Inside chamber: $\text{CO}_2 < 1.0\%$, $\text{CO} < 24\text{ppmm}$



NO.15 Intelligent Wireless Pressure Monitoring System for Coal Mine Roof

SHANDONG MINING MACHINERY GROUP

According to industrial needs in actual production, this intelligent roof pressure management system has been jointly developed with leading scientific research institutions. The system integrates mechanical, hydraulic, microelectronic, communication, cloud storage, big data computing, and PC/mobile push technologies. Its underground equipment is cable-free and battery-powered, featuring an ultra-low power consumption design that addresses the conflict between high-frequency pressure data acquisition and extended equipment service life. Compared to similar products in China, this system offers advantages such as a long service life, maintenance-free operation, high acquisition frequency, and the capability to capture roof impact pressure data. By analyzing the collected data, the system establishes a database of roof pressure tailored to the geological conditions of underground working faces, providing a foundation for support selection. It intelligently identifies and summarizes strata behavior patterns using advanced algorithms, enabling real-time warnings and notifications to be sent to the ground dispatching center's monitoring host and the mobile terminals of authorized personnel. This significantly reduces the risk of roof accidents.



1. YHY80 Mine Intrinsically Safe Digital Manometer:

Function: The YHY80 mine intrinsically safe digital manometer enables pressure monitoring, performing high- and low-frequency pressure data collection, display, storage, power monitoring, and wireless communication. These manometers can communicate with each other via an ad-hoc network.

Technical parameters:

1. Pressure Measuring Range: 0-80 MPa.
2. Display Mode: 3-digit numeric display.
3. Basic Accuracy: $\pm 2.0\%$ (F.S.).
4. Working Voltage: 3.3 V (battery-powered, operational duration ~500 days).
5. Wireless Communication Distance: 100 m (line-of-sight).
6. Explosion-Proof Type: Intrinsically safe, ExibIMb.



2. KJ334-Z Mine Intrinsically Safe Wireless Repeater

Function: The KJ334-Z mine intrinsically safe wireless repeater connects the underground communication substation to the intermediate equipment of the mine intrinsically safe digital pressure manometer. It transparently transmits data from the mine intrinsically safe digital pressure monitoring equipment to the underground communication master station via the wireless repeater, which is deployed in roadways where wiring is impractical. Additionally, it features electrical monitoring and display capabilities.

Technical parameters:

1. Power Supply: DC 3.3V, battery-powered; operational duration approximately 500 days.
2. Communication Interface: Wireless transmission at 433MHz.
3. Wireless Communication Distance: 100m (line-of-sight).
4. Display Mode: 3-digit numeric display.
5. Explosion-Proof Type: Intrinsically safe, ExibIMb.

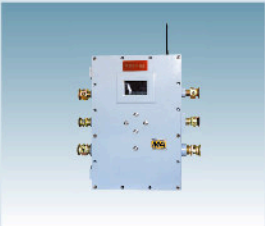


3. KJ334-F Mine Intrinsically Safe Wireless Data Substation

Functions: reading data from the gauge, modifying gauge parameters (by receiving commands from the upper computer and issuing corresponding modification commands), data storage (in case of system disconnection, it can automatically store data that has not been uploaded to prevent data loss), and data transmission to a computer (if using fiber optic communication, a fiber optic communication module needs to be installed on the upper computer. If using Ethernet communication, simply connect the upper computer to the network).

Technical parameters:

- 1. Power supply: DC12V (powered by explosion-proof and intrinsically safe regulated power supply);
- 2. Working current: ≤500mA;
- 3. Display mode: OLED display, 128*64;
- 4. Remote control range: (0~200)m;
- 5. Storage capacity: 1Gb
- 6. Explosion-proof form: intrinsically safe ExibIMb.



4. KJJ12 Mine Intrinsically Safe Ring Network Access Device

Functions: Support plug-and-play SW-Ring redundant ring network protocol, RSTP, static multicast filtering, IGMP interception, IEEE 802.1Q VLAN and port-based VLAN, port priority, port aggregation, port mirroring, trunking, Quality of Service, rate control, SNMP configuration, fault alarms, and firmware online upgrade, etc. An excellent network scheme is adopted to provide 5.6 Gbps non-blocking switching bandwidth.

Technical parameters:

- 1. Supports IEEE 802.3, IEEE 802.3u, IEEE 802.3x, IEEE 802.3ad, IEEE 802.1Q, IEEE 802.1p, and IEEE 802.1W protocols;
- 2. Supports 4× 100-Megabit optical ports, 4×100-Megabit electrical ports, and 2×Gigabit optical ports;
- 3. Supports Web, CLI, and Telnet management functions;
- 4. Supports port bandwidth limitation, broadcast storm suppression, and port flow control;
- 5. Port bandwidth limiting function to optimize bandwidth utilization;
- 6. Working temperature: -20°C to 75°C.



5. KDW127/12 Mine Explosion-proof and Intrinsically Safe DC Stabilized Power Supply

Function: To provide power supply for mine intrinsically safe wireless data transmission substation and mine intrinsically safe ring network access device, ensuring stable and reliable data transmission.

Technical parameters:

- 1. Power box input: AC 127 V, 50 Hz;
- 2. Input voltage fluctuation: 75%~110%;
- 3. Output voltage: 12 V, 1.5 A;
- 4. Protection mode: dual overvoltage and overcurrent protection;
- 5. Explosion-proof type: Exd [ib] I Mb.



6. YHC3.7 Mine Intrinsically Safe Data Acquisition Instrument

Function: Set and modify functions, addresses, and parameters for mining intrinsically safe digital pressure monitoring equipment and wireless repeaters. During staged roof dynamic system operations, this instrument allows underground personnel to monitor ground pressure conditions at fully mechanized mining faces. Current and historical data can be read and uploaded to the ground host computer for analysis and processing.

Technical parameters:

- 1. Working voltage: 3.7V;
- 2. Remote control range: Line of sight (0~100) m;
- 3. Remote control angle range: 0°~360°;
- 4. Storage capacity: 1GB;
- 5. Battery type: Rechargeable lithium battery;
- 6. Explosion-Proof type: Intrinsically safe, Exd [ib] I Mb



7. Mobile APP

Function: The app is compatible with various terminals, enabling users to create accounts and passwords, match identities with roles, and assign login permissions. Real-time pressure data from the working face support can be intuitively visualized through line graphs or bar charts . If the pressure data exceeds the system-defined normal range, the system automatically sends a warning message to alert users of potential safety hazards. Users can also access historical stress data for past reference.



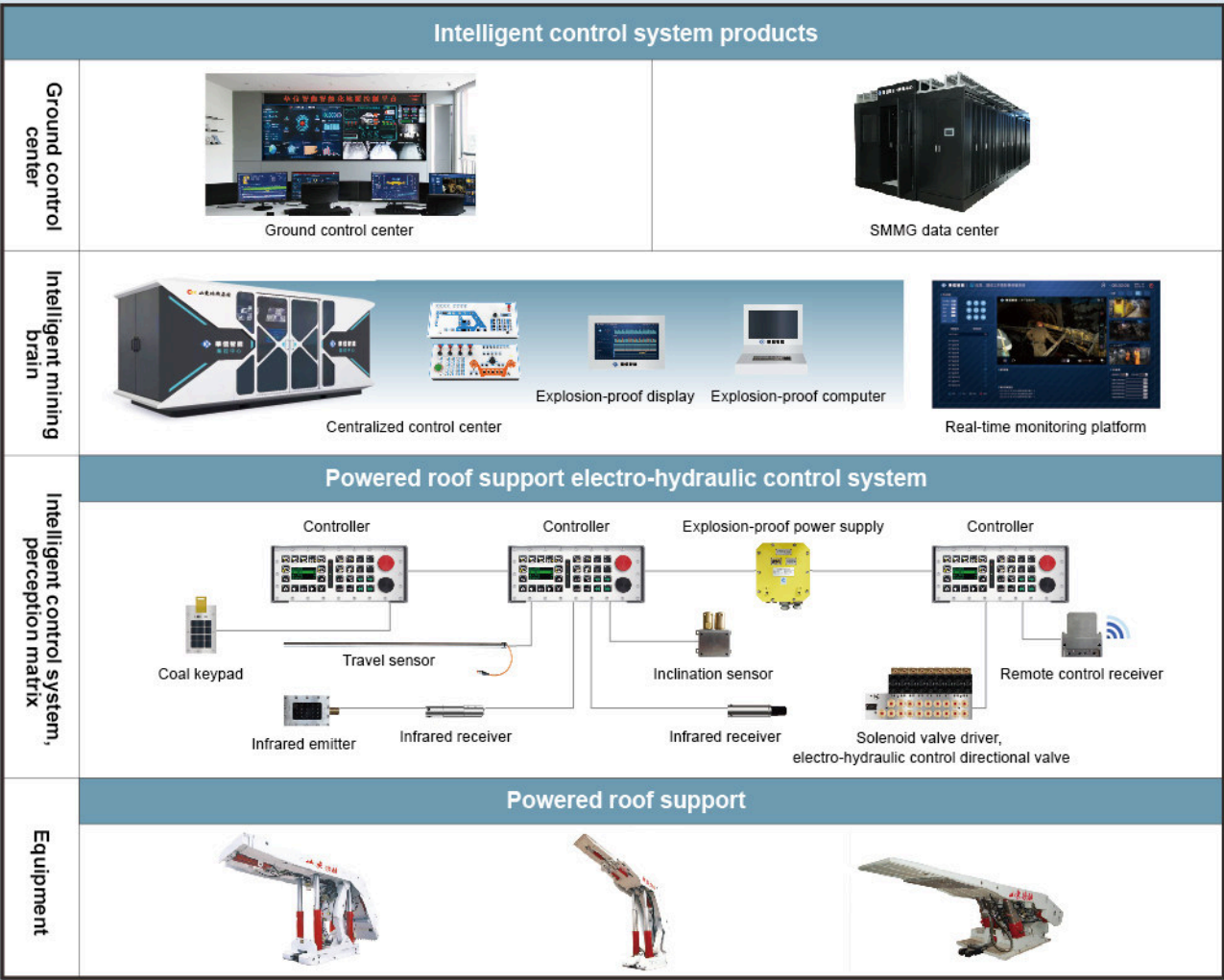
Technical scheme: By establishing a dedicated DMZ (Demilitarized Zone) data center within the mine, the barrier between the internal network and external network can be effectively isolated , while ensuring data security. A scheduled data synchronization program can be developed to synchronize data to the DMZ server database every 5 minutes , achieving near real-time data availability . The front-end application should retrieve DMZ data via a defined API interface for purposes of data presentation, analysis, and statistical reporting.



NO.16 ZDYZ-Z Electro-hydraulic Control System of Hydraulic Support

SHANDONG MINING MACHINERY GROUP

On the basis of an in-depth analysis of the advantages and disadvantages of various electro-hydraulic control systems both domestically and internationally, Shandong Mining Machinery Group innovatively adopted a new system architecture and successfully developed a new generation of electro-hydraulic control system for hydraulic supports. The system is stable and reliable, capable of realizing functions such as single support control, group control, follow-the-machine automatic control, locking and emergency stop, fault display and alarm, automatic pressure compensation, support moving under pressure, mine pressure monitoring, data integration and uploading, tunneling and ground monitoring, data analysis, and information release. Additionally, it innovatively incorporates the functions of adaptive intelligent control for bending sections and maintaining the verticality of the working face, which can meet the needs of coal mines to the greatest extent possible.



Main Components and Technical Parameters of ZDYZ-Z Electro-hydraulic Control System

1. Electro-Hydraulic Control Device of Shield Support

Function: This is a special-purpose microcomputer designed for each support. It integrates both hardware and software components. The hardware includes a microprocessor, memory, various input/output (I/O) interfaces, and communication interfaces. The software comprises system programs and application programs. It stores and executes the program, directly controlling all operations of the support and collecting sensor data.

The system features two dedicated communication interfaces :One for exchanging information with adjacent supports.Another for communicating with other support controllers and the main control computer across the entire working face.These interfaces enable automatic control and monitoring functionalities.

System features:

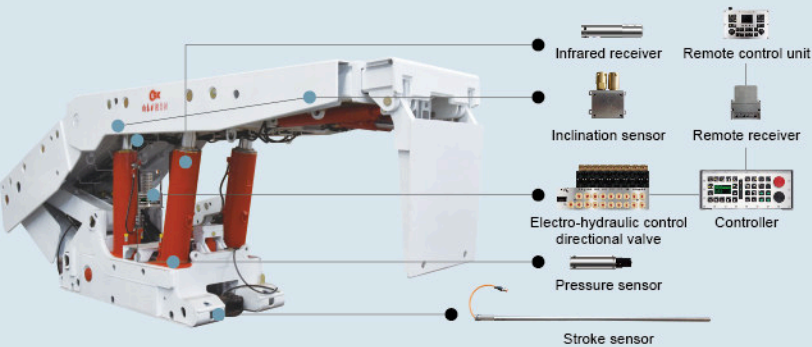
Online parameter adjustment: Control program parameters can be easily set, input, or modified via keyboard.

Dynamic application loading: New applications can be loaded online, facilitating quick program updates and adjustments.

Operator interaction : Parameters, commands, and other data are input through the keyboard.

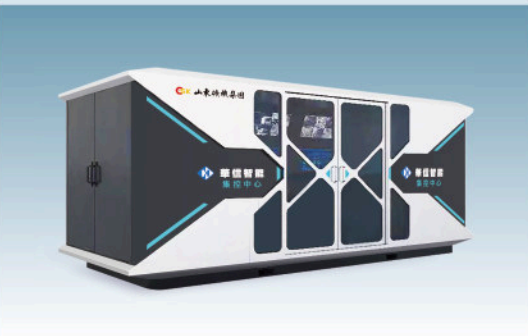
Technical parameters:

1. Rated operating voltage: 12 VDC;
2. Operating current: ≤ 330 mA;
3. Communication port transmission mode: Single-wire CAN (2 channels);
4. Input signals: 2 × RS232 channels, 1 × RS485 channel, 2 × Analog voltage signals;
5. Protection rating: IP68.



2. Gate Control Center

The gate monitoring host system collects, displays, and stores various types of information from the working face system. The tunnel monitoring host system is equipped with multiple standard data communication interfaces, enabling communication with third-party devices (e.g., interacting with the shearer to acquire position data). Additionally, it supports diverse network communication solutions. A standard Ethernet interface ensures connectivity to the mine's surface-level Ethernet network.



Gate monitoring operation center



Monitoring operation center (inside)



Ground control center



NO.17 Intelligent Control Auxiliary System

SHANDONG MINING MACHINERY GROUP

1. Working Face Image Transmission System

This system utilizes a gateway-based ad-hoc network for data transmission, where digital image signals and control signals are entirely transmitted through a data network. Based on the mesh wireless transmission standard, it operates independently of traditional methods such as operator base stations, underground ring networks, optical fiber, 4G, and 5G.

It offers significant layout advantages, enabling real-time monitoring, control, and digital hard-disk video storage. The equipment collects and stores digital images in accordance with international standards. All images are digitized, and transceiver modules interconnect with peer devices' networks to achieve seamless integration.

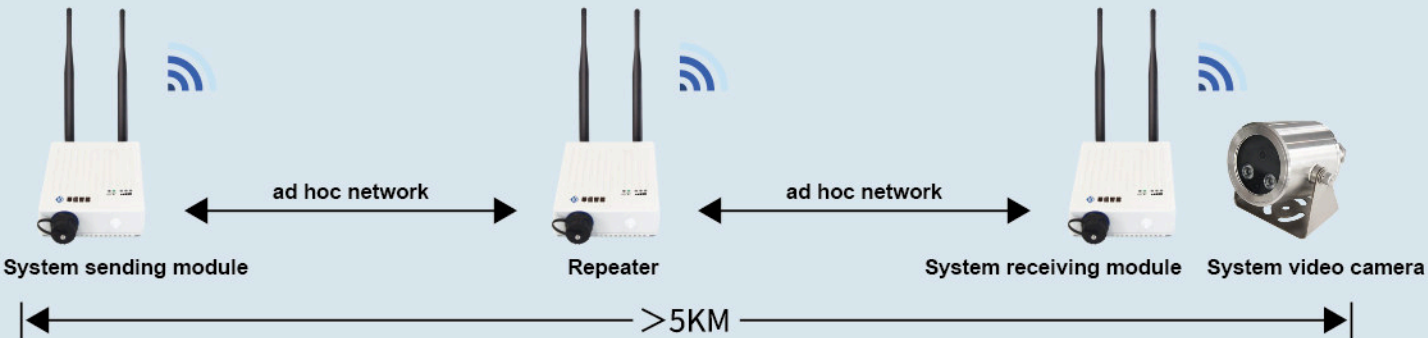
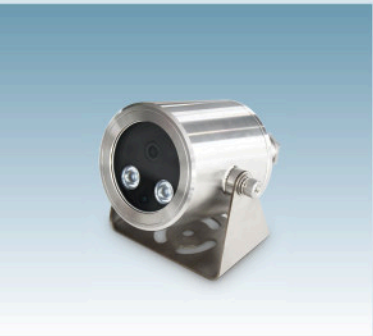
System features:

Ad-hoc network: High-definition video transmission is achieved without reliance on existing networks, such as underground Wi-Fi, optical fiber, or 5G—communication is self-sustained via device-based ad-hoc networking.

Maintenance-Free operation: Ad-hoc communication can be established at any location (with a 5 km communication range).

Ultra-Wide bandwidth: The system supports high-bandwidth data traffic, enabling transmission of diverse data streams.

Automatic storage: In case of underground emergencies, automatic storage can be configured as required.



2. Equipment Health Operation and Maintenance Management System

The product can be used in coal mines, non-coal mines, steel, metallurgy, cement, petrochemical, port, and other industries. The intelligent operation and maintenance system based on vibration characteristics is an intelligent monitoring system that integrates monitoring, diagnosis, alarms, and preventive maintenance, providing an effective means for users to quickly and accurately diagnose equipment faults. By building a private cloud platform and applying data integration and analysis , the system can realize functions such as equipment management, loss prediction of key components , and life cycle prediction, thereby improving production efficiency and reducing enterprise operational and maintenance costs.

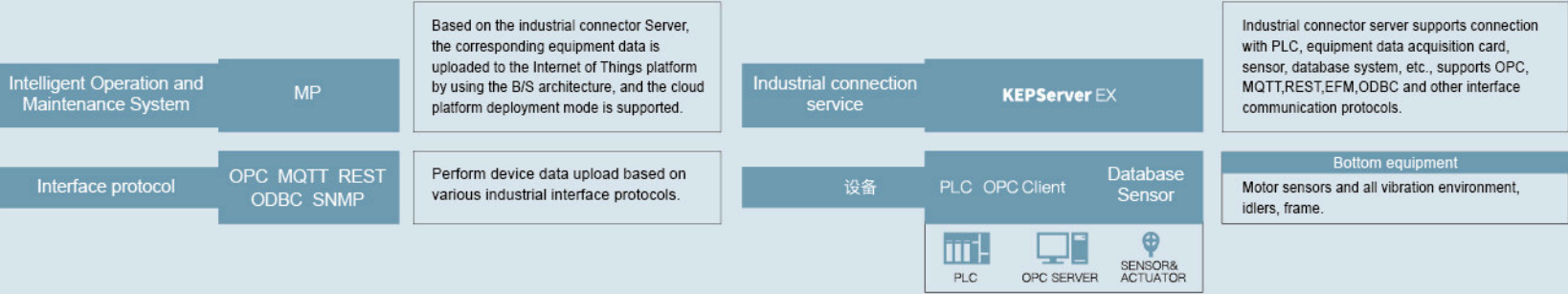
Wireless three-axis temperature and vibration integrated sensors and sensors of various types

Function: As newly developed online monitoring wireless transmission products. They enable long-term, real-time monitoring of vertical and horizontal vibrations and temperatures of rotating equipment. These sensors feature high-frequency response , maintenance-free operation, easy deployment, low power consumption, and high reliability.

They can easily form star, chain, tree, or other network topologies, with a single network accommodating high-density sensor nodes.



Network Topology Diagram



3. Coal Flow Monitoring System

As the frequency conversion integrated machine of the transmission mechanism is continuously applied in intelligent coal mining, the traditional coal flow monitoring system of the scraper conveyor cannot meet the demand by solely using current, power, and other numerical methods. Our company has developed this coal flow monitoring system based on practical application scenarios. By relying on millimeter wave radar sensors, it can scan the coal flow profile of the scraper conveyor in real-time and accurately calculate relevant parameters according to specific algorithms. This greatly reduces the failure rate of the scraper conveyor and energy consumption.

Function description: The system is installed in the proper position of scraper conveyor, and the coal height change curve, actual chain speed, coal flow cross-sectional area and angle of repose are obtained in real time during the operation of scraper conveyor, and the bulk coal volume in unit time is obtained through internal calculation of the system, and then the coal quantity in the same time can be calculated according to the coal quantity coefficient in unit volume, thus achieving the purpose of anti-control and frequency conversion integrated machine.

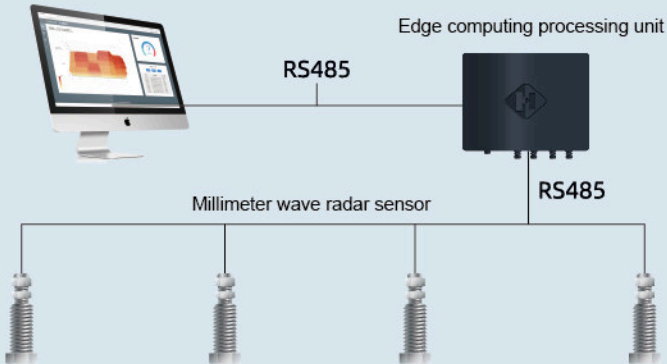
Scheme advantages:

Non-contact detection: no wear, long life;

Reverse-control function: real-time reverse-control frequency conversion integrated machine according to coal quantity;

Multi-redundancy design: if one device is abnormal, other devices will not be affected;

High sensitivity: the frequency is as high as 1000HZ, which can detect coal flow data in real time.



NO.18 Intelligent Helmet

SHANDONG MINING MACHINERY GROUP

In traditional chemical, factory, and mining production processes, controlling and ensuring the safety of personnel can be complex, often requiring workers to carry numerous auxiliary devices. However, this significantly increases their workload, restricts hands-free operation, and results in cumbersome procedures and reduced efficiency.

Now, with our Intelligent Helmet, all essential requirements and functions have been integrated into a single device, eliminating the need for additional equipment and streamlining workflows for workers.

Advantages :

1. Convenient and maintenance-free design

The device maximizes hands-free operation, with all functions controlled autonomously and via voice commands.

2. Ergonomic and user-friendly

Its lightweight, comfortable design enables intuitive operation, easily mastered through brief training. Data processing and interactions are handled seamlessly by the backend system.

3. High reliability and adaptability

A modular structure allows quick attachment of functional modules to suit diverse application scenarios.



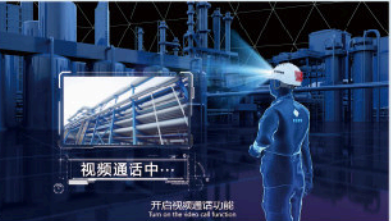
1. Function Information



Personnel location and electronic fence function



Harmful gas detection and early warning function



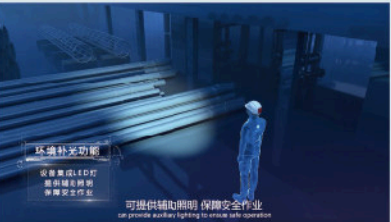
Harmful gas detection and early warning function



Video hazard warning function



Intelligent temperature control



Environmental light filling function

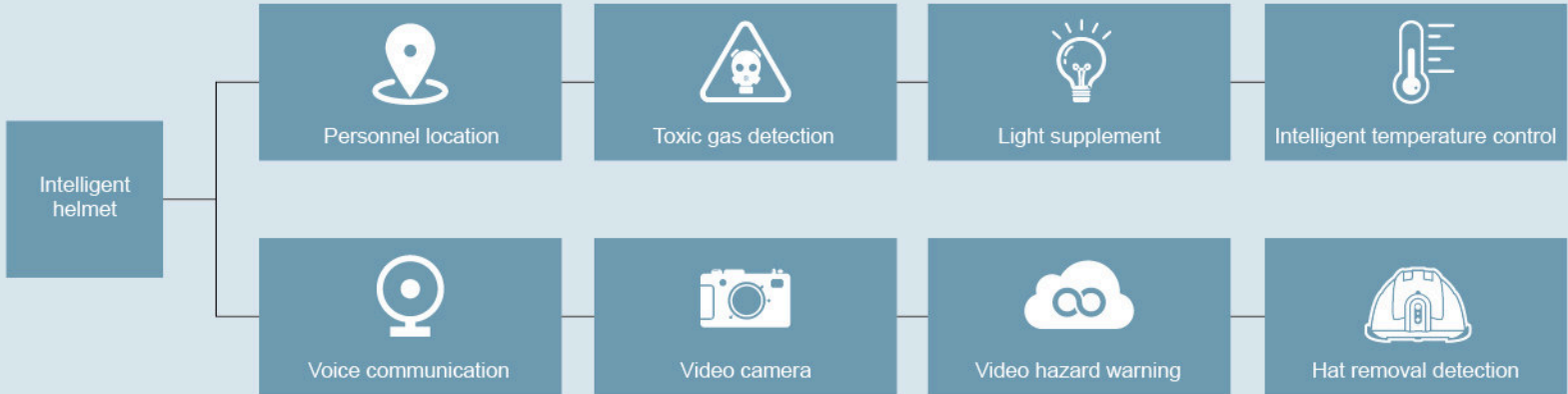


Real-time position information and working trajectory

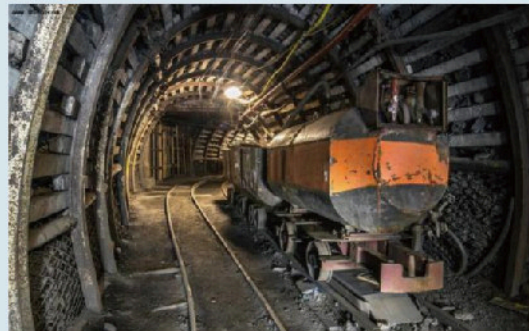


Off-helmet detection

2. Modular Design



3. Applications



Mining



Smart site



Bridge&tunnel



Port wharf



Power inspection



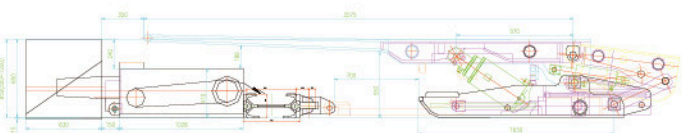
Petrochemicals



Cases of Fully Mechanized Mining Equipment Selection
SHANDONG MINING MACHINERY GROUP

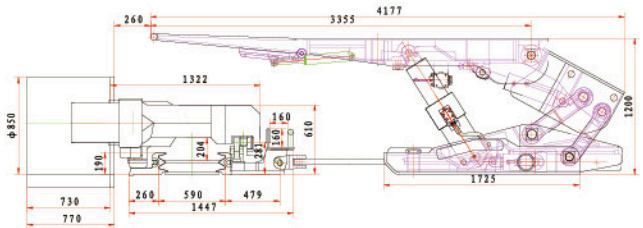
Thin Coal Seam Series

Equipment Configuration of Fully Mechanized Mining Face of Thin Coal Seam of 0.3Mt/a



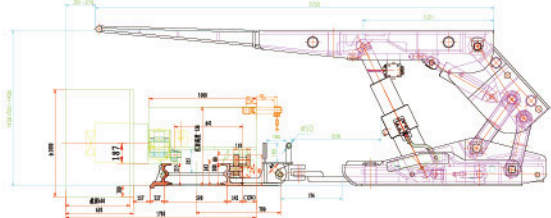
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	BSL	SGB420/40	1. Machine height: 410 2. Groove upper height: 190 3. Mining height range: 650-1100 4. Empty ceiling distance: 320	1. Coal seam thickness: 0.65-1.1m 2. Working face length: 100m
2	Shearer	MG110/130-TPD	5. Mining height range: 650-1100 6. Empty ceiling distance: 320 7. Walking mode of shearer: floor riding 8. Beam end distance: 350 9. Minimum clearance: 550 10. Support control mode: Priority valve	3. Working face inclination: 5-20° 4. Hardness of coal: f54
3	Powered support	ZY2400/5.5/12X		

Equipment Configuration of Fully Mechanized Mining Face of Thin Coal Seam of 0.3-0.45Mt/a



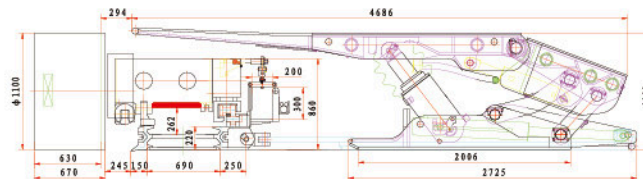
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Middle support	ZY2600/07/14	1. Machine height: 610 2. Coal passing height: 254 3. Spacing of sheeters: 158 4. Groove upper height: 190	1. Coal seam thickness: 0.6-1.3m 2. Working face length: 120m
2	Transitional hydraulic support	ZYG2800/08/16	5. Mining height range: 1000-1500 6. Empty ceiling distance: 380 7. Walking mode of shearer walking on groove 8. Beam end distance: 250-300 9. Minimum clearance: 780 10. 22×45 flat chain	3. Working face inclination: 16° 4. Hardness of coal: f54
3	Shearer	MG100/238WD		
4	BSL	SGZ630/150		

Equipment Configuration of Fully Mechanized Mining Face of Thin Coal Seam of 0.3-0.45Mt/a



S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	BSL	SGZ630/220	1. Machine height: 738 2. Coal passing height: 215 3. Spacing of sheeters: 157 4. Groove upper height: 208 5. Mining height range: 1150-1430 6. Empty ceiling distance: 270-361	1. Coal seam thickness: 1.1-1.4m 2. Working face length: 150m
2	Shearer	MG132/310-BWD	7. Walking mode of shearer: floor riding 8. Beam end distance: 350 9. Minimum clearance: 520 10. 20×42 flat chain	3. Working face inclination: 16° 4. Hardness of coal: f27
3	Middle hydraulic support	ZY2400/7.5/14		
4	Transitional hydraulic support	ZYG2800/10/23		

Equipment Configuration of Fully Mechanized Mining Face of Thin Coal Seam of 0.45-0.6Mt/a



S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	BSL	SGZ730/320	1. Machine height: 690 2. Coal passing height: 262 3. Spacing of sheeters: 245 4. Groove upper height: 220 5. Mining height range: 1100-1400 6. Empty ceiling distance: 254 7. Walking mode of shearer: floor riding 8. Beam end distance: 294 9. Minimum clearance: 330 10. 20×42 flat chain 11. Support control mode: electro-hydraulic control	1. Coal seam thickness: 1.1-1.4m 2. Working face length: 150m
2	Shearer	MG2X160/710-AWD		3. Working face inclination: 16° 4. Hardness of coal: f27
3	Middle hydraulic support	ZY3800/07/16D		
4	Transitional hydraulic support	ZYG3800/11/19		
5	BSL	SGZ730/160		
6	Crusher	PLM1500		



SHANDONG MINING MACHINERY GROUP

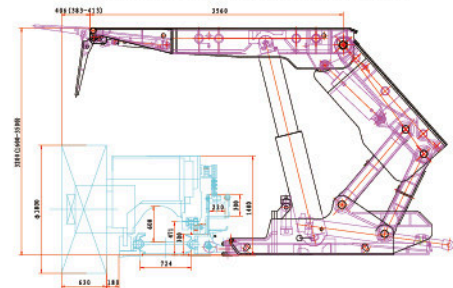
Medium Thick Coal Seam Series



SHANDONG MINING MACHINERY GROUP

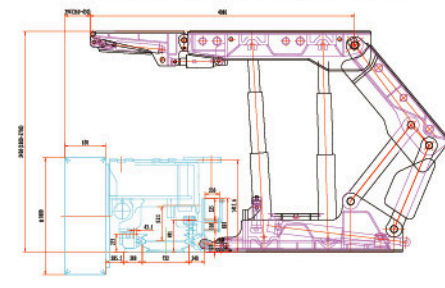
Large Mining Height Series

Equipment Configuration of Fully Mechanized Mining Face of Medium Thick Coal Seam of 0.8-1Mt/a



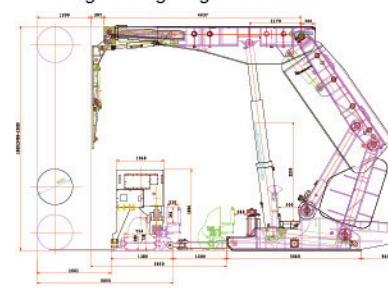
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	AFC	SGZ764/320	1. Machine height: 1400	1. Coal seam thickness: 2.5-4m
2	AFC gate use	SGZ764/160	2. Coal passing height: 500	2. Working face length: 150m
3	Shearer	MG200/475-W	3. Spacing of shovels: 180	3. Working face inclination: 15°
4	Middle hydraulic support	ZY6000/20/35	4. Groove upper height: 300	4. Hardness of coal: f54
5	Transitional hydraulic support	ZYG6000/20/35	5. Mining height range: 1700-2400 6. Empty ceiling distance: 405 7. Walking mode of shearer: Shovel riding	5. Mining height range: 1700-2400 6. Empty ceiling distance: 405 7. Walking mode of shearer: Shovel riding

Equipment Configuration of Fully Mechanized Mining Face of Medium Thick Coal Seam of 1.5-2Mt/a



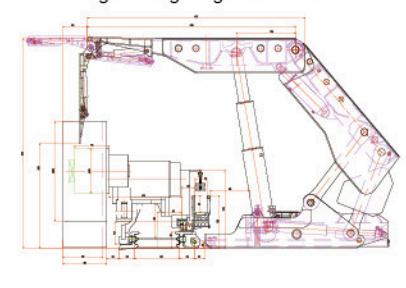
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	SGZ764/320	1. Machine height: 1415.5	1. Coal seam thickness: 2.0-3.5m
2	Middle support	SGZ764/160	2. Coal passing height: 521	2. Working face length: 200m
3	Transitional support	MG200/475-W	3. Spacing of shovels: 285.5	3. Working face inclination: 15°
4	AFC	ZY6000/20/35	4. Groove upper height: 300	4. Hardness of coal: f54
5	BSL	ZYG6000/20/35	5. Mining height range: 1800-2600 6. Empty ceiling distance: 304 7. Walking mode of shearer: Shovel riding	5. Mining height range: 1800-2600 6. Empty ceiling distance: 304 7. Walking mode of shearer: Shovel riding

Equipment Configuration of Fully Mechanized Mining Face of Large Mining Height of 2-2.5Mt/a



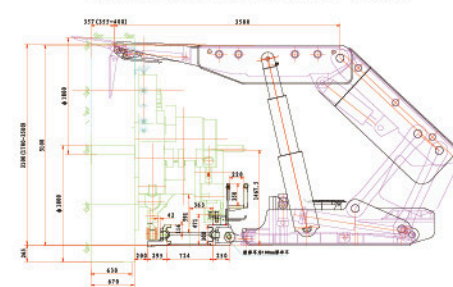
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	AFC	SGZ764/400	1. Machine height: 1805	1. Coal seam thickness: 5.0m
2	BSL	SZZ764/160	2. Coal passing height: 738	2. Working face length: 200m
3	Powered support	ZY5500/24/52	3. Groove upper height: 300	3. Working face inclination: 14-15°
4	Shearer	MG250/600-WD	4. Mining height range: 2500-3100 5. Empty ceiling distance: 287 6. Walking mode of shearer: Shovel riding	4. Hardness of coal: f54

Equipment Configuration of Fully Mechanized Mining Face of Large Mining Height of 1.5-2Mt/a



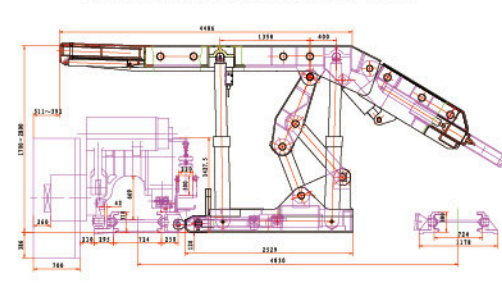
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	MG650/1220-WD	1. Machine height: 1560	1. Coal seam thickness: 2.3-4.3m
2	Middle support	ZY8800/21/45	2. Coal passing height: 883	2. Working face length: 200m
3	AFC	SGZ900/1050	3. Spacing of shovels: 345	3. Working face inclination: 15°
4	BSL	SZZ900/315	4. Groove upper height: 320	4. Hardness of coal: f54
			5. Mining height range: 2300-4300 6. Empty ceiling distance: 490 7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of Medium Thick Coal Seam of 1-1.2Mt/a



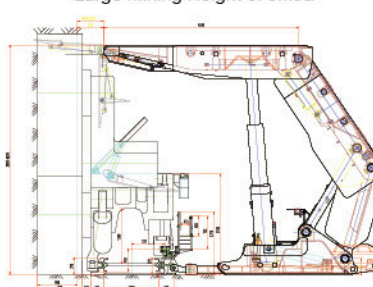
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	AFC	SGZ764/320	1. Machine height: 1407.5	1. Coal seam thickness: 3.5-5.0m
2	BSL	SGZ764/160	2. Coal passing height: 591	2. Working face length: 142m
3	Shearer	MG300/730	3. Spacing of shovels: 200	3. Working face inclination: 1-3°
4	Middle hydraulic support	ZY6800/17/35	4. Groove upper height: 300	4. Hardness of coal: f54
5	Transitional hydraulic support	ZY6800/17/35	5. Mining height range: 1800-2700	
6	Crusher	PLM1000	6. Empty ceiling distance: 357	
7	Melting	ZY2700	7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of Medium Thick Coal Seam of 0.7-1Mt/a



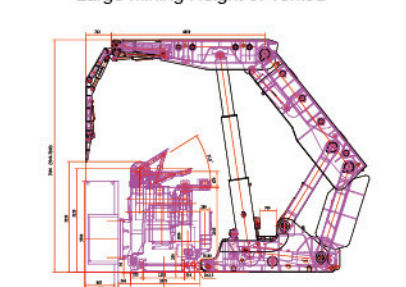
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Front AFC	SGZ764/320	1. Machine height: 1427.5	1. Coal seam thickness: 5.0m
2	Rear AFC	SGZ764/320	2. Coal passing height: 666	2. Working face length: 150m
3	Shearer	MG200/501-WD	3. Spacing of shovels: 210	3. Working face inclination: 8-12°
4	Middle hydraulic support	ZF4000/17/28H	4. Groove upper height: 310	4. Hardness of coal: f54
			5. Mining height range: 1800-2700 6. Empty ceiling distance: 392 7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of Large Mining Height of 8Mt/a



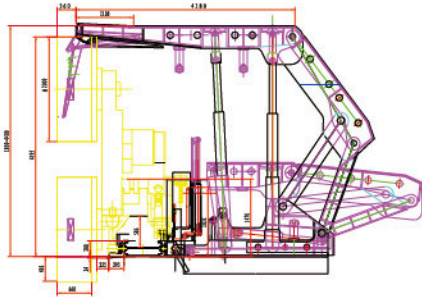
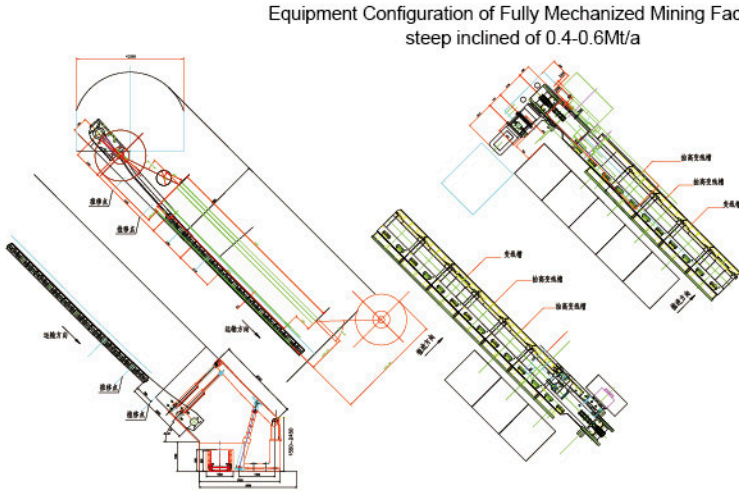
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	MG700/1660-WD	1. Machine height: 2192	1. Coal seam thickness: 2.7-5.2m
2	Middle support	ZY12000/28/62D	2. Coal passing height: 1190	2. Working face length: 300m
3	AFC	SGZ1200/2100	3. Spacing of shovels: 271	3. Working face inclination: 15°
4	BSL	SZZ1400/700	4. Groove upper height: 372	4. Hardness of coal: f54
			5. Mining height range: 2200-3100 6. Empty ceiling distance: 575 7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of Large Mining Height of 10Mt/a



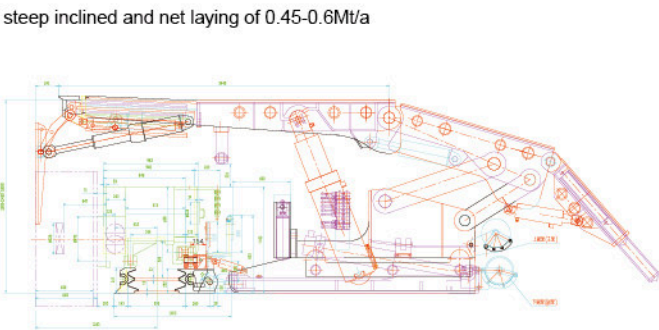
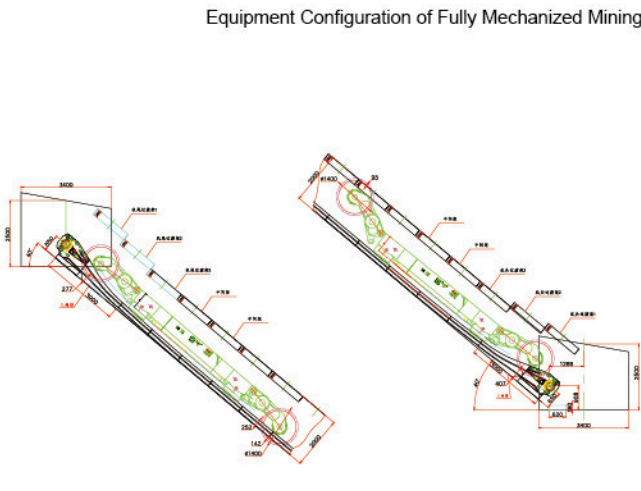
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	MG1100/2860-WD	1. Machine height: 2655	1. Coal seam thickness: 4.0-7.0m
2	AFC	SGZ1250/3×1200	2. Coal passing height: 1042	2. Working face length: 300m
3	Powered support	ZY15000/33/72D	3. Spacing of shovels: 366	3. Working face inclination: ≤15°
			4. Groove upper height: 400	4. Hardness of coal: f54
			5. Mining height range: 4000-7000 6. Empty ceiling distance: 760 7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of steep inclined of 0.4-0.6Mt/a



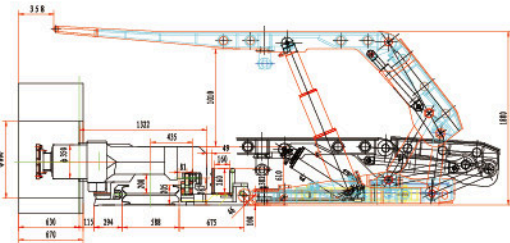
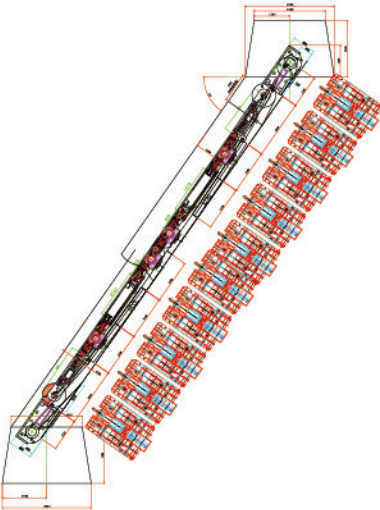
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	MG250/630-WD1	1. Machine height: 1470	1. Coal seam thickness: 3.0-4.3m
2	Working face hydraulic support	ZJ4500/18/44	2. Coal passing height: 595	2. Working face length: 100m
3	AFC	SGZ754/160	3. Spacing of shovels: 225	3. Working face inclination: 42-55°
4	BSL	SZ2754/160	4. Groove upper height: 300	4. Hardness of coal: f5-4
5	Crusher	PLM1000	5. Mining height range: 2000-4300	
			6. Empty ceiling distance: 350	
			7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of steep inclined and net laying of 0.45-0.6Mt/a



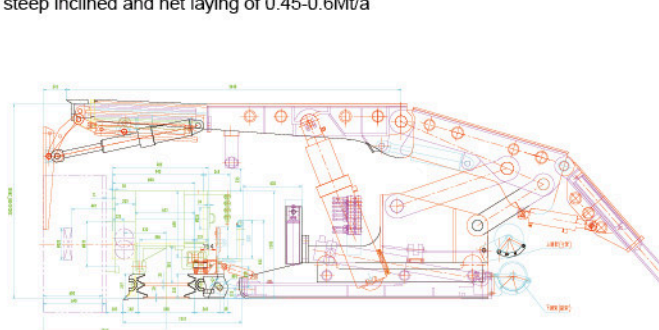
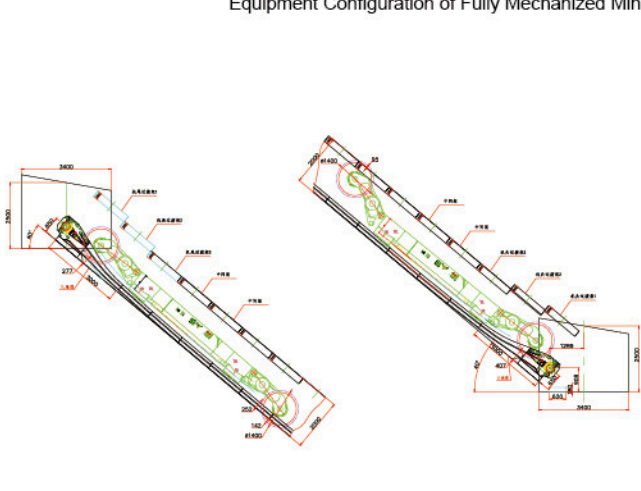
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Middle support	ZPY4800/14/28QS	1. Machine height: 1103	1. Coal seam thickness: 1.5-4.2m
2	AFC	SGZ630/264	2. Coal passing height: 383	2. Working face length: 120m
3	Shearer	MG170/410-WD	3. Spacing of shovels: 163	3. Working face inclination: 25-45°
			4. Groove upper height: 257	4. Hardness of coal: f5-2
			5. Mining height range: 1600-2600	
			6. Empty ceiling distance: 241	
			7. Walking mode of shearer: Groove upper riding	

Equipment Configuration of Fully Mechanized Mining Face of steep inclined of 0.3-0.6Mt/a



S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Shearer	MG100/238-WD	1. Machine height: 610	1. Coal seam thickness: 0.85-1.6m
2	Hydraulic support	ZQY2600/07/18	2. Coal passing height: 200	2. Working face length: 150m
3	AFC	SGZ630/220	3. Spacing of shovels: 115	3. Working face inclination: 40-55°
4	BSL	SZ2730/75	4. Groove upper height: 205	4. Hardness of coal: f5-4
			5. Mining height range: 850-1600	
			6. Empty ceiling distance: 358	
			7. Walking mode of shearer: Shovel riding	

Equipment Configuration of Fully Mechanized Mining Face of steep inclined and net laying of 0.45-0.6Mt/a



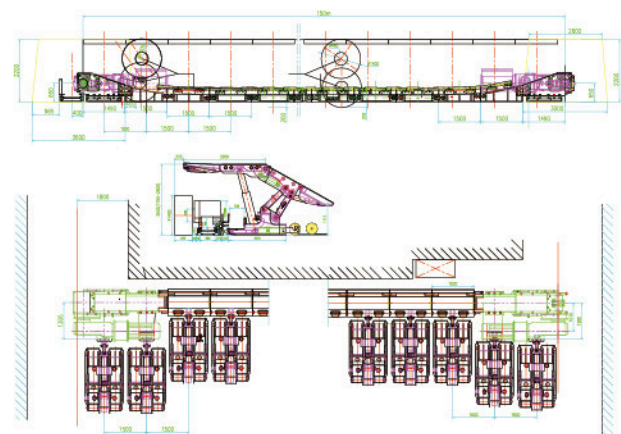
S/N	Equipment	Model	Supporting integrated target	Geological conditions
1	Middle support	ZPY4800/14/28QS	1. Machine height: 1103	1. Coal seam thickness: 1.5-4.2m
2	AFC	SGZ630/264	2. Coal passing height: 383	2. Working face length: 120m
3	Shearer	MG170/410-WD	3. Spacing of shovels: 163	3. Working face inclination: 25-45°
			4. Groove upper height: 257	4. Hardness of coal: f5-2
			5. Mining height range: 1600-2600	
			6. Empty ceiling distance: 241	
			7. Walking mode of shearer: Groove upper riding	



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Layers Netting Series

Equipment Configuration of Fully Mechanized Mining Face of Economic layers netting of 0.6Mt/a



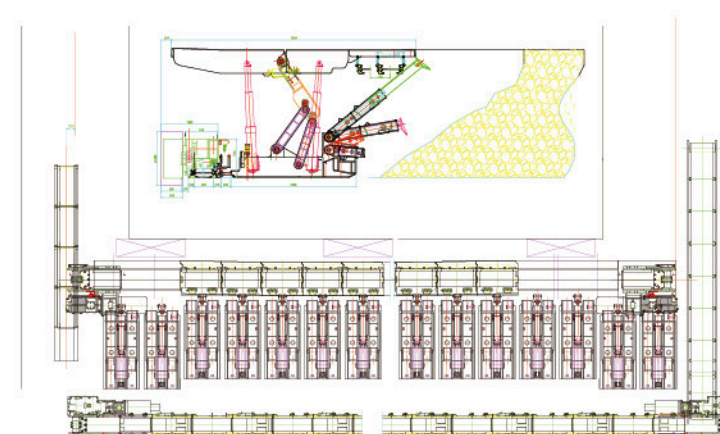
Equipment		Technical parameters	
Shearer	MG150/375-W	Working face mining height	1.9-2.6m
AFC	SGZ630/220	Working face dip angle	≤20°
Hydraulic support	ZPY3200/17/28	Working face length	150m
BSL	SZ2730/90	Hardness of coal	f≤4



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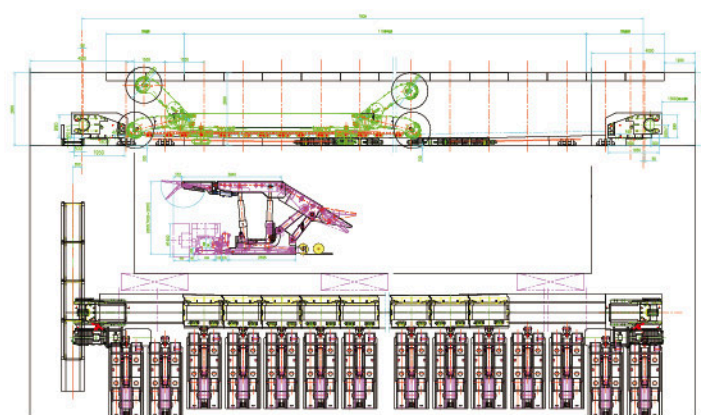
Filling Series

Equipment Configuration of Fully Mechanized Mining Face of Filling Type of 0.3-0.45Mt/a



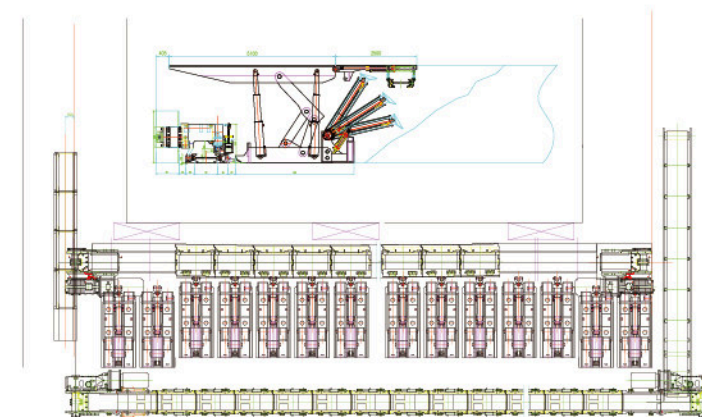
Equipment		Technical parameters	
Shearer	MG160/375-WD	Working face mining height	2.0-2.6m
Scraper conveyor	SGZ630/220	Working face dip angle	20°
Filling conveyor	SGZ630/264	Working face length	130m
Hydraulic support	ZC4800/17/28	Hardness of coal	f≤4
BSL	SZB730/75		

Equipment Configuration of Fully Mechanized Mining Face of layers netting of 0.6-0.9Mt/a



Equipment		Technical parameters	
Shearer	MG250/600-WD	Working face mining height	1.9-3.0m
AFC	SGZ730/320	Working face dip angle	≤20°
Hydraulic support	ZP5200/16/32	Working face length	150m
BSL	SZ2730/160	Hardness of coal	f≤4

Equipment Configuration of Fully Mechanized Mining Face of Filling Type 0.6-0.9Mt/a



Equipment		Technical parameters	
Shearer	MG200/500-WD	Working face mining height	2.2-3.0m
Scraper conveyor	SGZ730/320	Working face dip angle	20°
Filling conveyor	SGZ730/320	Working face length	130m
Hydraulic support	ZC6000/20/32	Hardness of coal	f≤4
BSL	SZ2730/160		



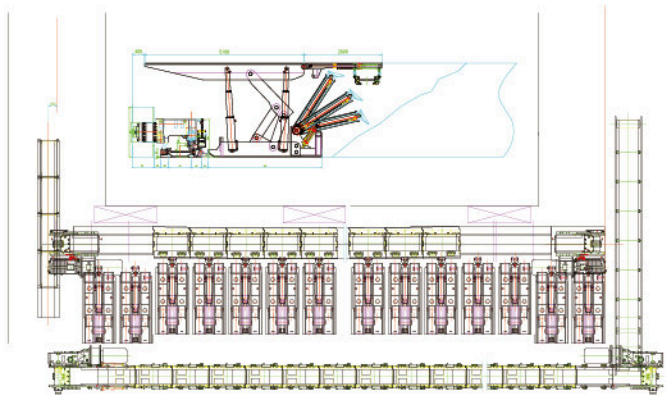
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Fully Mechanized Mining Equipment Show

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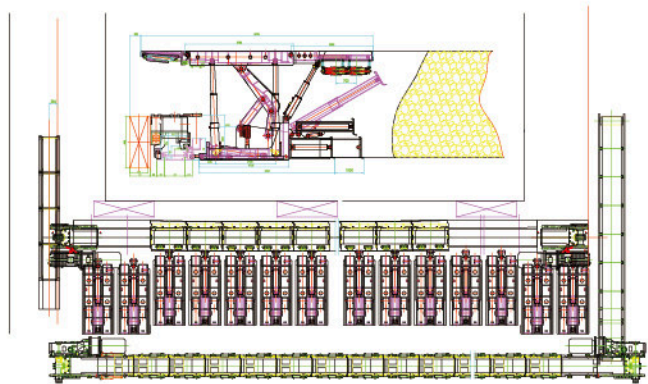
Equipment Configuration of Fully Mechanized Mining Face of Filling Type 1-1.2Mt/a



Equipment		Technical parameters	
Shearer	MG250/600-WD	Working face mining height	2.2-3.0m
Scraper conveyor	SGZ764/400	Working face dip angle	20°
Filling conveyor	SGZ730/400	Working face length	130m
Hydraulic support	ZC6000/20/32	Hardness of coal	fs4
BSL	SZZ764/200		



Equipment Configuration of Fully Mechanized Mining Face of Filling Type 1.2-1.5Mt/a



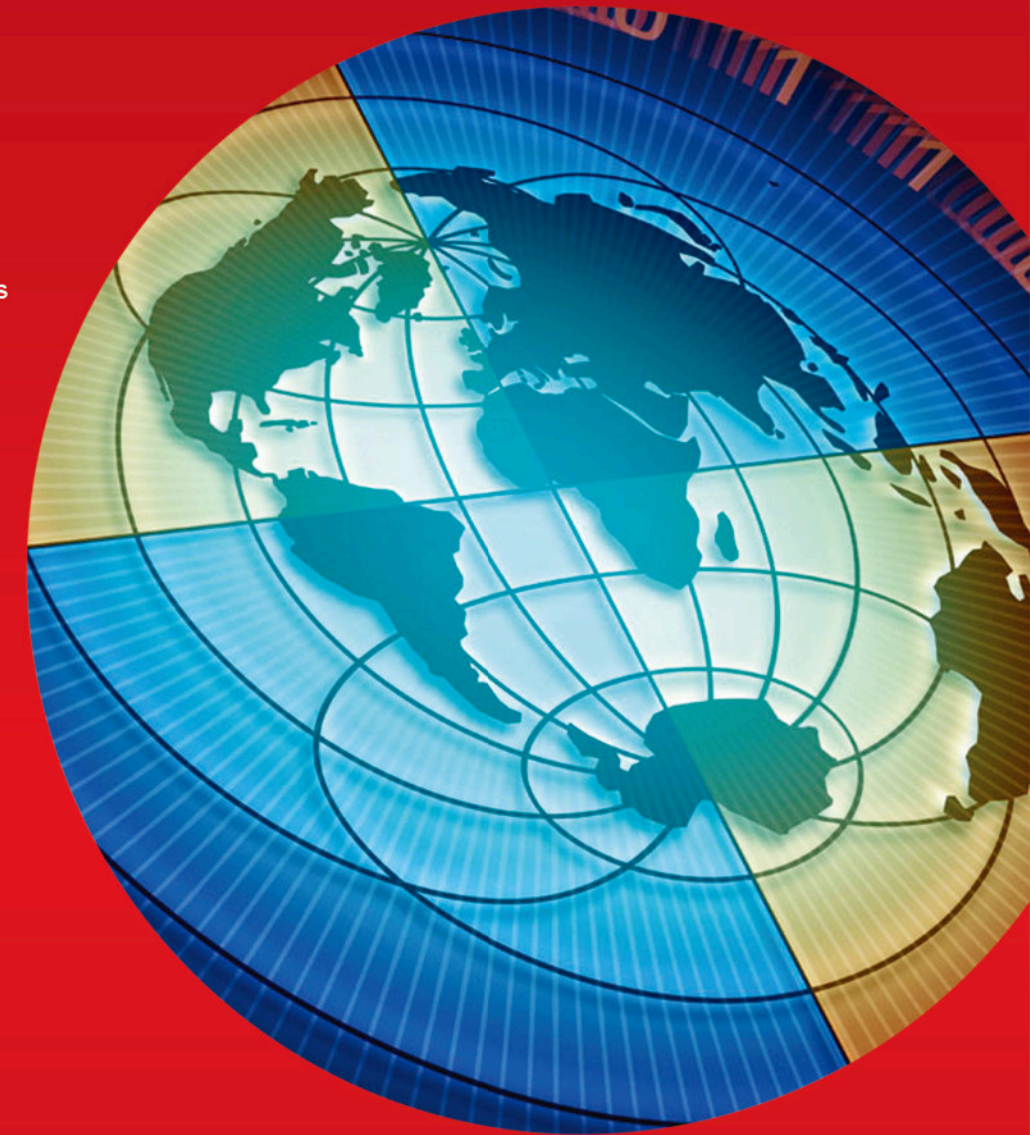
Equipment		Technical parameters	
Shearer	MG300/700-WD	Working face mining height	2.2-3.6m
Scraper conveyor	SGZ764/630	Working face dip angle	20°
Filling conveyor	SGZ764/400	Working face length	130m
Hydraulic support	ZZC8800/18/38	Hardness of coal	fs4
BSL	SZZ764/400		





Marketing and Service Network

With a commitment to honest operation and the pursuit of perfection, Shandong Mining Machinery Group adheres to the customer-first principle. By treating customers as friends and providing expert service that meets their needs, the company's marketing and service network continues to expand.



Zero distance and whole course services, enduring responsibilities

NO.3

