KOMATSU

JOY

Haulage Systems

Product Overview

Who we are:

Since 1921, Komatsu has stood for unrivaled quality and reliability. Our enduring global success stems from the principles of our founder, Meitaro Takeuchi, who envisioned a sustainable future built through globalization, quality first, technology innovation and talent development. These defining principles, along with an emphasis on safety and compliance, remain part of our Komatsu DNA. With each brand and company added to the Komatsu family, we expand our capabilities, leveraging our global teams to push beyond what can be done and create what can be imagined. We believe partnering directly with our stakeholders and being in the workplace (gemba) is the best way to gain insight into their challenges, win their trust and develop cutting-edge solutions.

What we do:

Komatsu is an indispensable partner to the mining, forestry, industrial and construction industries that maximizes value for customers through innovative solutions. With a full line of products supported by our advanced IoT technologies and global service network, we help customers safely and sustainably optimize their operations. Our **Komatsu, P&H, Joy** and **Montabert** equipment and services are used to extract fundamental minerals and develop modern infrastructure.

Shuttle cars

The role of haulage equipment is to efficiently remove the cut material from the working face in such a manner as to enhance the performance of the continuous miner and maximize the productivity of the overall section. Joy Global fully understands this role and proactively works with the mining industry to provide comprehensive "system" solutions to suit individual application needs.

Joy shuttle cars continue to develop, evolve and improve.

Since the introduction of our first shuttle car in 1938, Joy shuttle cars continue to be the mainstay of the industry for batch haulage vehicles. Their exceptional reliability, low operating cost and sustained high levels of productivity are unmatched. Through the extensive use of sophisticated computer-aided design systems, Joy shuttle cars continue to develop, evolve and improve.

Heavy duty by design

Underground mines are tough places for haulage vehicles to operate – Joy shuttle cars are designed to meet the challenge. Every element of a Joy shuttle car is engineered to balance performance and efficiency.

Joy shuttle cars have a heavy-duty, high-power drive train that enables them to haul loads in extremely arduous conditions. The permanent four-wheel drive system is powered by two 85kW VFD AC traction motors (50kW in lower seam models). Wheel units have been upgraded to be more robust and durable and the cast pivot axles are virtually indestructible. A four-wheel independent suspension system is also available to help maintain higher tram speeds and improve the operator's comfort on uneven and/or broken roadways.

The Joy shuttle car chassis and rolling gear are designed using Finite Element Analysis (FEA) techniques to find the optimal balance of volumetric load, vehicle dimensions, load-carrying ability and fatigue life. Heavy-duty conveyor reducers and abrasion-resistant conveyor decking further improve reliability and durability.

Increased production

Taking it to the next level...

With over 100 units in the field today, Joy shuttle cars are available with an optional remote control system. Remote control permits deeper cuts as the shuttle car, now unmanned, can follow the miner under unsupported roof. This significantly improves the overall productivity of a room and pillar section.

Optidrive

The Optidrive AC Variable Frequency Drive System integrates electrical, software, electronic and mechanical systems to provide every Joy shuttle car with a wealth of performance-enhancing features:

- Increased Tram Speed - The maximum vehicle tram speed is now at the statutory limit of 6 mph (9.6 km/hr). This is approximately a 50% increase over previous drive systems and translates into more haulage trips per shift. The Optidrive system also significantly increases the tractive effort available, improving the shuttle car's ability to climb gradients and negotiate difficult roadway conditions.
- Regenerative Braking - Automatic regenerative braking by the electric motors supplements the mechanical brakes allowing the latter to run cooler with extended wear life. Regenerative braking is also highly effective at automatically maintaining the shuttle car at a constant speed when descending gradients.
- Better Speed Control - With infinitely variable tram speed capability, operators are easily able to precisely control the shuttle car's speed. Smooth acceleration and deceleration leads to less operator fatigue and the ability to creep the shuttle car forward behind the miner during the cutting cycle, preventing damage caused by inadvertent machine contact.
- Less Maintenance - AC traction motors are typically more reliable, more durable and require less maintenance than DC traction motors because there are no commutator brushes to inspect and replace.

Operator comfort

JoyRide™ *the latest in shuttle car suspension...*

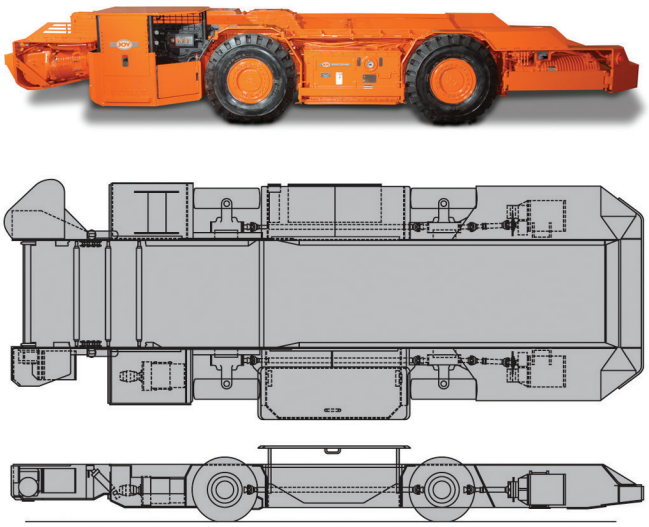
Joy shuttle car four-wheel independent suspension systems are available on select models and are recommended for applications with uneven and/or broken roadways. Each wheel rides on struts that compress and absorb the energy associated with a bump, in doing so reducing the energy transmitted to the rest of the car and the operator. Less energy transferred to the operator means being able to more comfortably maintain higher shuttle car speeds with less fatigue. Similarly, less energy transferred to the chassis means less structural damage and longer overall machine working life.

Komatsu history

Tradition in quality and pride...

With over 17,500 units shipped since 1938, the Joy shuttle car is the most prolific batch haulage vehicle in the underground mining industry. This success is a result of a tradition of quality and pride in how Joy Global products are designed, engineered and built. This tradition endures today and Joy shuttle cars are expected to continue to lead the industry in terms of safety, productivity and cost-effectiveness well into the future.

Joy shuttle cars



*The rated load capacity listed for each shuttle car model is the maximum amount the drive train and chassis are rated to haul. The actual carrying capacity is dependent on numerous factors, including but not limited to, the conveyor width, the sideboard height, the density of the material as conveyed, the ability of the continuous miner to load into the shuttle car, and the mining height. Certain combinations of sideboard height, conveyor width, specific density of the material being transported, and floor gradient can exceed the allowable load rating of the car. Consult Engineering before ordering.

21SC04

Low-to-mid seam

General arrangement		5000021535	
Rated load capacity*		8 tonnes	9 tons
Machine weight		18,000 kg	40,000 lbs
Ground pressure at max. rated load		8.5 kg/cm2	121 psi
Tire		35 x 15-15	35 x 15-15
Length		8.3 m	27 ft 3 in
Width with 56 in (1.42 m) conveyor		3.20 m	126 in
Chassis height		.9 m	34 in
Load end height		.8 m	30 ½ in
Minimum canopy height		1.0 m	38 ½ in
Minimum seam height		1.2 m	48 ½ in
Ground clearance		212 mm	8 ½ in
Motors (with preferred Optidrive)			
Pump	60 Hz	1-30 kW	1-40 hp
	50 Hz	1-25 kW	1-34 hp
Conveyor	60 Hz	1-20 kW	1-26 hp
	50 Hz	1-16 kW	1-22 hp
Traction	50 or 60 Hz	2-50 kW	2-67 hp

10SC32B

Mid-to-high seam

General arrangement		ET002927-0004	
Rated load capacity*		14 tonnes	15 tons
Machine weight		25,000 kg	55,000 lbs
Ground pressure at max. rated load		10 kg/cm2	142 psi
Tire		14 x 20	14 x 20
Length		9 m	29 ft 6 in
Width with 56 in (1.42 m) conveyor		3.42 m	134 ½ in
Chassis height		1.3 m	51 ½ in
Load end height		1.3 m	51 ½ in
Minimum canopy height		1.6 m	61 ½ in
Minimum seam height		1.9 m	73 in
Ground clearance		290 mm	11 ½ in
Motors (with preferred Optidrive)			
Pump	60 Hz	1-30 kW	1-40 hp
	50 Hz	1-25 kW	1-34 hp
Conveyor	60 Hz	1-25 kW	1-34 hp
	50 Hz	1-24 kW	1-32 hp
Traction	50 or 60 Hz	2-85 kW	2-115 hp

10SC32AA

ET002961-0003	
11 tonnes	12 tons
21,000 kg 9.9 kg/cm2	46,000 lbs 141 psi
12 x 20	12 x 20
8.7 m 3.43 m	28 ft 7 in 135 in
1.0 m 1.0 m 1.1 m 1.3 m 254 mm	37 ¼ in 37 ¼ in 43 ¼ in 53 in 10 in
1-30 kW 1-25 kW 1-25 kW 1-24 kW 2-50 kW	1-40 hp 1-34 hp 1-34 hp 1-32 hp 2-67 hp

10SC32A

ET002947-0001	
11 tonnes	12 tons
21,000 kg 9.9 kg/cm2	46,000 lbs 141 psi
12 x 20	12 x 20
8.7 m 3.35 m	28 ft 6 in 132 in
1.0 m 1.0 m 1.2 m 1.5 m 254 mm	37 ¼ in 37 ¼ in 45 ¼ in 57 in 10 in
1-30 kW 1-25 kW 1-25 kW 1-24 kW 2-50 kW	1-40 hp 1-34 hp 1-34 hp 1-32 hp 2-67 hp

10SC32AB

ET002947-0007	
14 tonnes	15 tons
23,000 kg 9.4 kg/cm2	50,000 lbs 133 psi
14 x 20	14 x 20
8.8 m 3.35 m	29 ft 132 in
1.2 m 1.0 m 1.3 m 1.6 m 290 mm	44 ¾ in 38 ¾ in 50 ¾ in 63 in 11 ½ in
1-30 kW 1-25 kW 1-25 kW 1-24 kW 2-85 kW	1-40 hp 1-34 hp 1-34 hp 1-32 hp 2-115 hp

10SC32BC

5000000983	
16 tonnes	18 tons
27,000 kg 9.6 kg/cm2	60,000 lbs 137 psi
14 x 24	14 x 24
9.4 m 3.51 m	30 ft 10 ½ in 138 in
1.4 m 1.4 m 1.7 m 2.0 m 343 mm	57 in 57 in 67 in 79 in 13 ½ in
1-30 kW 1-25 kW 1-25 kW 1-24 kW 2-85 kW	1-40 hp 1-34 hp 1-34 hp 1-32 hp 2-115 hp

10SC32C

ET002927-0008	
20 tonnes	22 tons
30,000 kg 11.1 kg/cm2	66,000 lbs 157 psi
14 x 24	14 x 24
9.3 m 3.64 m	30 ft 5 in 143 in
1.4 m 1.4 m 1.7 m 2.0 m 318 mm	56 in 56 in 65 in 77 in 12 ½ in
1-30 kW 1-25 kW 2-17 kW 2-24 kW 2-85 kW	1-40 hp 1-34 hp 2-23 hp 2-32 hp 2-115 hp

10SC32D

5000009339	
30 tonnes	33 tons
34,000 kg 7.3 kg/cm2	75,000 lbs 104 psi
18 x 25	18 x 25
9.7 m 3.85 m	31 ft 11 in 151 ½ in
1.7 m 1.7 m 2.4 m 2.7 m 350 mm	66 in 66 in 92 in 104 in 13 ¾ in
1-30 kW 1-25 kW 2-22 kW 2-24 kW 2-85 kW	1-40 hp 1-34 hp 2-30 hp 2-32 hp 2-115 hp

10SC42BC

5100005833	
16 tonnes	18 tons
33,000 kg 6.0 kg/cm2	73,000 lbs 85 psi
17.5 x 25	17.5 x 25
9.8 m 3.74 m	32 ft 3 in 147 ¼ in
1.6 m 1.6 m 2.2 m 2.5 m 450 mm	63 in 63 in 88 in 100 in 17 ¾ in
1-30 kW 1-25 kW 1-30 kW 1-30 kW 2-85 kW	1-40 hp 1-34 hp 1-40 hp 1-40 hp 2-115 hp

Battery haulers

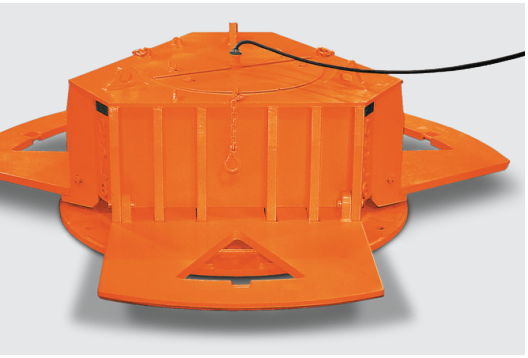
A Joy battery hauler benefits from a variety of innovative technologies that contribute to extended battery life and/or improved maneuverability and operational flexibility. This makes the Joy battery hauler the market leader in battery-powered underground haulage machines for room and pillar applications.

A market leader in battery-powered underground haulage machines.

The AC-Variable Frequency Drive Control System (AC-VFD) is a proven system that enhances and maximizes the efficiency and operational performance of all Joy battery-powered haulage vehicles. Having an independent traction drive design, the AC-VFD control system provides the reliability and availability benefits that customers have come to value in the DC-Lionetics control system.

Advanced diagnostics on all AC-VFD models can be queried directly from the machine display to reduce the time required to troubleshoot and repair a machine. Data logging and data acquisition allows for enhanced machine diagnostics as well as providing more user-friendly and focused preventative maintenance programs.

Maximum availability
The Joy battery change carousel...



The Joy battery change carousel saves the overall time and space required for battery change out. Each electrically driven carousel can carry three batteries and is easily contained within a single cross-cut with no projection into the adjacent intersection. The battery hauler operator can single-handedly change the battery on the vehicle without requiring a jumper cable, thus saving time compared to other change-out station layouts.

Auto-loading position

The ejector bed retract cycle has been completely automated. Following an off-load, the operator presses the “auto-load" button to commence the sequence and is then free to focus on tramming back to the miner. Using pressure transducers, the control system sequences the retract process through to completion, pausing only when hydraulic pressure is required for steering. This simultaneous tram and retract process saves significant time and increases the number of trips possible during a shift.

High-efficiency hydraulics

The hydraulic system on AC-VFD battery haulers has been redesigned to minimize resistance to the flow of fluid through piping and valves. Consequently, faster hydraulic functions create 20% shorter discharge and retract time intervals and more responsive steering. Decreased load on the pump improves motor efficiency indicated by a 40% reduction in pump motor temperature. Ultimately, the overall benefit is a 10-12% increase in battery life.

AC-VFD control

The AC-VFD control system is the latest and most advanced battery hauler control system and is available on all Joy battery hauler models. The benefits of the AC-VFD control system relate to improved electrical efficiency and/or operational performance:

Electrical efficiency benefits

- An AC-VFD-equipped hauler has a 240V battery. By doubling the supply voltage from the battery, current draw and associated thermal losses are reduced.
- The electronically-activated steering assist feature promotes smooth and easy steering and relieves undue stress on motors, drive train and tire assemblies.
- Both of the above reduce consumption of energy, ultimately extending the life of the battery and minimizing the number of battery changes over time.

Operational performance benefits

- Regenerative braking assists operators in maintaining a safe speed on declines while reducing the wear on brakes.
- Brushless AC-traction motors require minimal maintenance and are highly reliable. This increases machine availability by reducing associated downtime and maintenance.
- The VFD drive in conjunction with AC traction motors provides increased maximum torque to the wheels allowing the machine to ascend steeper inclines under load. Combined with existing vertical articulation and two-wheel hydraulic assist capabilities, the increased torque makes the AC-VFD battery hauler the most capable vehicle of its kind.
- Although the top-end speed of the VFD-AC controlled machine is equal to that of the DC-Lionetics machine, the AC-VFD machine will maintain a higher average rate of speed during the duty cycle through the joint benefits of the increased efficiencies in the electronics and hydraulic systems of the AC–VFD machine package.

DC-lionetics control system

Where mining conditions do not require the performance benefits of the AC-VFD drive, the DC-Lionetics becomes the preferred control system. The DC-Lionetics Control System has also been improved to maximize its efficiency and operational performance.

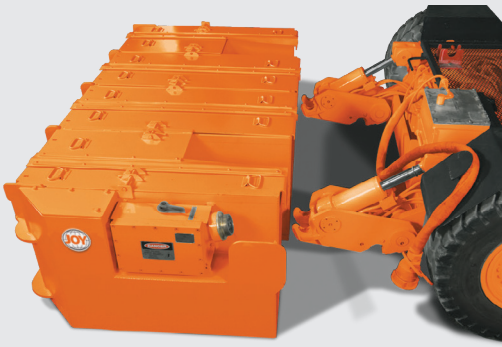
The 128V battery powers left and right traction control modules. Compared to previous DC control systems, the drives have a higher current rating and improved long-term reliability and, being independent, should either side become compromised, the other side remains operational and the machine remains mobile.

The Lionetics system has improved diagnostic capabilities and all motors have current- and thermal-overload protection. Infinitely variable tram speed control and an improved cab layout promote operator comfort and reduced fatigue levels.

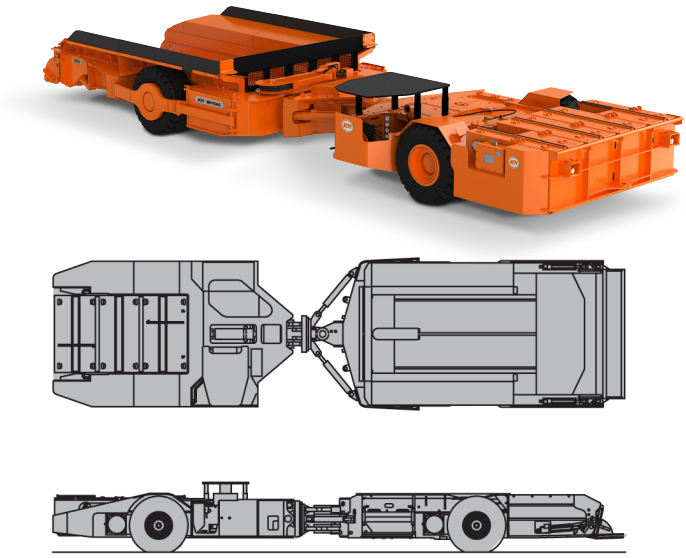
Maximum versatility

Lift-from-Grade in battery change out...

Joy battery haulers interface with their battery packs using the patented Joy ground base battery lift-arm system. This particular battery change-out system is unique to Joy battery powered haulers. The robust design of this system results in a highly reliable battery change out system that does not compromise overall equipment availability. The battery can be lifted from any surface. In addition, the lift arms are easily fitted to existing support vehicles to create effective and efficient battery movers. Increasing the overall versatility of battery change out equipment reduces the battery change out time, increasing the availability of the Joy battery hauler.



Joy battery haulers



*The rated load capacity listed for each battery hauler model is the maximum amount the drive train and chassis are rated to haul. The actual carrying capacity is dependent on numerous factors, including but not limited to the trailer capacity, sideboard height, use of a tailgate, the density of the material as mined, the ability of the continuous miner to load into the hauler, the ground clearance selected, and the mining height.

Rated load capacity*
Overall length Overall width - tractor Overall width - trailer
Chassis thickness
Tire size
Ground clearance Minimum canopy height
Lay down tailgate
Sideboard height Overall height @ top of sideboard Overall height @ top of battery
Wheel base
Optimum Seam Height of Operation (OAH)
Inside turning radius Outside turning radius Minimum entry turn
Frame articulation Steering articulation angle
Oscillation Ball bearing
Tram speed
Brakes
Motors Pump motor - 128 V system (DC) Pump motor - 240 V system (AC) Traction motor - 128 V system (DC) Traction motor - 240 V system (AC)

BH-10		BH-18		BH-20	
Low-seam applications (AC or DC model available)		Mid-seam applications (AC or DC model available)		High-seam applications (AC or DC model available)	
11.4 tonne	12.5 ton	16.4 tonne	18 ton	18.2 tonne	20 ton
1183 cm 348 cm 355 cm	38 ft 10 in 11 ft 5 in 11 ft 7 7/8 in	1179 cm 325 cm 341 cm	38 ft 8 ¼ in 11 ft 5 in 12 ft 4 in	1151 cm 340 cm 362 cm	37 ft 9 ¼ in 11 ft 2 in 11 ft 10 in
50.8 cm	20 in	50.8 cm	24 in	71.1 cm	28 in
10:00 x 15 Duals tractor 35x15x15 Single-trailer		18L20 - 111.8 cm	18L20 - 44 in	50x20x20 - 127 cm 17.5R25 - 140 cm	50x20x20 - 50 in 17.5R25 - 55 in
18 cm 94 cm	7.1 in 37 in	229 or 279 mm 1257 mm	9 in or 11 in 49 ½ in	292 or 445 mm 166 cm	11.5 in or 17.5 in 65 in
Optional		Standard		Standard	
17.5 cm 87.6 cm 92.7 cm	6 in 34 ½ in 36 ½ in	17.5 cm 86.4 cm 92.7 cm	14 in 46 ¾ in 36 ½ in	30.5 cm 148 cm 131 cm	12 in 58 ¼ in 51 in
5.76 m	18 ft 10 ¾ in	5.79 m	19 ft	5.7 m	18 ft 7 in
1.0 m to 1.5 m	40 in to 60 in	1372 mm to 1981 mm	54 in to 78 in	183 cm and up	72 in and up
3.0 m 7.1 m 4.9 m	10 ft 0 in 23 ft 3 ½ in 16 ft 3 ½ in	298 cm 717 cm 506 cm	9 ft 9 in 23 ft 6 in 16 ft 7 ½ in	351 cm 768 cm 488 cm	11 ft 6 in 25 ft 2 ½ in 16 ft
25 degrees - 15 up and 10 down Total 120 degrees - 60 L and R		25 degrees - 15 up and 10 down Total 120 degrees - 60 L and R		25 degrees - 15 up and 10 down Total 110 degrees - 55 L and R	
50.8 cm	40 degree 20 in	61 cm	40 degree 24 in	71 cm	40 degree 28 in
8-9.7 kph	5-6 mph	8-9.7 kph	5-6 mph	8-9.7 kph	5-6 mph
4 wheel wet disc		4 wheel wet disc		4 wheel wet disc	
17 kW 37 kW 30 kW x 2 75 kW x 2	22 hp 50 hp 40 hp x 2 100 hp x 2	17 kW 37 kW 30 kW x 2 75 kW x 2	22 hp 50 hp 40 hp x 2 100 hp x 2	17 kW 37 kW 30 kW x 2 75 kW x 2	22 hp 50 hp 40 hp x 2 100 hp x 2

Flexible conveyor train

The Joy Flexible Conveyor Train (FCT) is a truly continuous haulage system that eliminates any haulage related bottlenecks from typical underground continuous miner operations. By removing this restriction, the FCT allows today's high-production continuous miners to operate at their maximum capacity.

The FCT allows continuous miners to operate at their maximum capacity.

The key to the effectiveness of the FCT is its patented flexible conveyor and traction system that permits the FCT to be operated as one single unit. The ability to continuously convey material along its length while simultaneously tramming to follow the continuous miner's every move, all with only one operator utilizing radio remote control, is a distinct advantage over all other types of haulage.

The productivity benefits of the FCT are equally applicable to coal-producing room and pillar and longwall development operations, as well as operations utilizing continuous miners to extract industrial minerals, such as salt, trona, potash and gypsum.

Machine safety

The Joy 4FCT flexible conveyor train significantly enhances overall mine safety. It combines all haulage into a single, relatively slow-moving machine that follows a known path of travel, and requires only one operator using remote-control. This reduction in the total number of mobile machines in the section reduces visibility concerns for batch haulage operators and the personnel working on batch haulage sections. Also, less material movement means greater dust control.

Machine performance

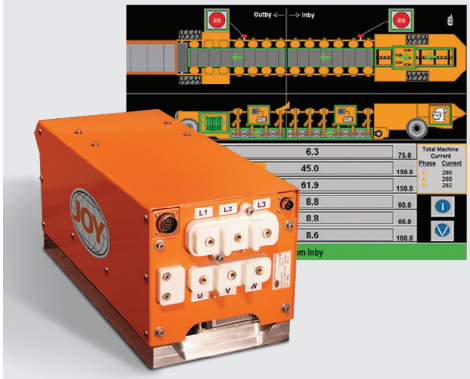
The FCT can convey coal at flow rates of up to 27 tons/minute (24.5 tonnes/minute) and salt, trona, gypsum or potash at up to 40 tons/minute (36.3 tonnes/minute). Infinitely variable control of conveyor belt speed permits maximum belt loading and minimum belt speed, consequently extending the wear life of the belt itself.

Life Cycle Management
Taking it to the next level...

The FCT is a product of Komatsu's commitment to enabling customers to consistently produce at the lowest cost per ton over the life cycle of the equipment. Not only does the life cycle cost per ton of the FCT itself compare favorably to other forms of haulage, the increased production and efficiencies that it unlocks in the typical continuous miner section improve the cost per ton performance of the entire operation.

Total control
Optidrive with Faceboss control...

The traction and belt and chain conveyor motors on the FCT are driven by Optidrive and the overall system is controlled by Faceboss, Joy Global's standard machine control platform. Faceboss includes a user-friendly, graphical interface with advanced diagnostic capabilities. The Optidrive system provides infinitely variable speed control which permits controlled ramp-up of traction and conveyor motors. Optidrive and Faceboss components used on the FCT are common and interchangeable with other similarly equipped Joy Global underground machines.



Operational benefits

The chain traction system is distributed along the entire length of the machine, resulting in incredible traction with exceptionally low ground bearing pressure, when compared to other haulage machinery.

Material degradation is minimal due to there being no transfer points along the length of the FCT. The Optidrive variable frequency drive provides infinite speed control to the conveyor belt and lumpbreaker conveyor chain allowing each to be coordinated to prevent spillage.

The lumpbreaker front-end provides ample FCT maneuverability and the material sizing and metering functions not only control the flow on the FCT belt but also negate the need for a separate feeder-breaker in the section.

The Faceboss control system coupled with the Optidrive variable frequency drive provides soft-start functionality for the FCT traction and conveyor belt systems. This significantly reduces the wear and tear on these parts, extending their operating lives and reliability levels.

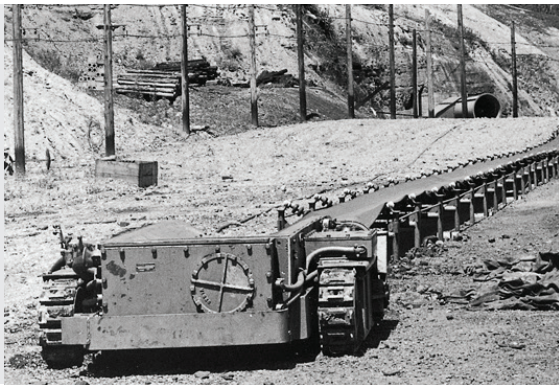
FCT/DMU configurations

Each FCT system includes a DMU (Dynamic Move-Up) unit. The DMU is the interface between the FCT and the mine's panel belt. The FCT and DMU are available in two configurations. The Side-Discharge configuration is applicable to low seam heights and wide entries whereas the Over-The-Top (OTT) configuration is more suited to higher seams with restricted entry width. The OTT system is a self-advancing unit with remote-controlled panel belt move-ups. This system can also be designed for retreat mining. The side discharge design must be advanced using the continuous miner to pull up.

Komatsu history

Tradition in quality and pride...

With eight global patents, the Joy FCT is the only simultaneous tram-and-convey, single-operator, underground continuous haulage system available in the world today. The continuous pursuit of innovation, extensive design and testing practices, renowned built quality, and machine reliability has kept Joy Global as the world's leader in underground mining systems and services for nearly an entire century.



General specifications

Joy FCT/DMU

DMU Side Discharge

	4FCT-B/C		4FCT-C	
Height over lumpbreaker	1.24 m	49 in	1.50 m	59 in
Minimum seam height	1.40 m	55 in	1.65 m	65 in
Entry width	6 m	20 ft	6 m	20 ft

DMU Over the Top (OTT)

	4FCT-B/C		4FCT-C	
Low DMU frames	.64 m	25 in	.64 m	25 in
Height over lumpbreaker	1.88 m	74 in	2.13 m	84 in
	2.03 m	80 in	2.29 m	90 in
Minimum seam height	2.18 m	86 in	2.44 m	96 in
Minimum entry width	4.7 m	15 ft 6 in	4.7 m	15 ft 6 in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Smart Solutions

Integrated Smart Solutions help solve customers' toughest challenges using data-driven intelligence, collaboration through partnership and experience-based service execution. They are a way of partnering with customers to help reduce costs and increase productivity, in line with customers' operating and financial goals.

Smart Service Centers are strategically located around the world in order to conveniently serve our customers. With each new service center built, Komatsu products and people are becoming more connected, allowing for expanded benchmarking. Located strategically in zones of mining activity, each service center brings local support that is world-class. Services offered are structured to fulfill the lifecycle of mining equipment, optimizing equipment for productivity and safety.

Our commitment to world-class service is delivered through world-class processes and metrics. Our Joy OpEx processes bring operational excellence by prioritizing the elimination of waste, simplifying processes, automating and removing people from harm's way. We leverage those principles throughout our network, with the ability to rapidly customize locally, helping customers work smarter, worldwide.

Komatsu service facilities have given world-class service a new home.

Smart Solutions are integrations of smart connected Komatsu products and systems, advanced analytics and direct services customized to solve customers' toughest challenges.

Smart Solutions at work:

Costs

- Lower cost per unit produced by reducing overall parts and consumables expenditures
- Optimize costs for power/fuel, labor and rebuilds

Safety

- Automate processes and controls
- Increase awareness through training and standard setting

Productivity

- Improve system availability, performance, utilization and consistency
- Leverage extensive Komatsu engineering knowledge to solve problems

Smart Solutions

Komatsu Mining Corp. Group

mining.komatsu

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