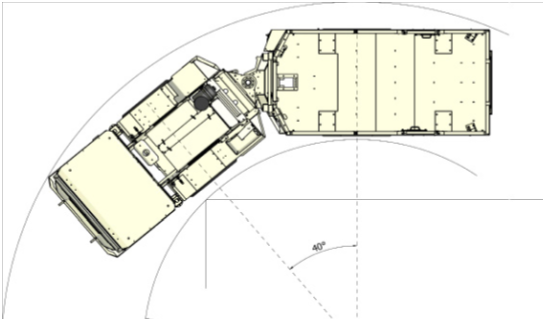
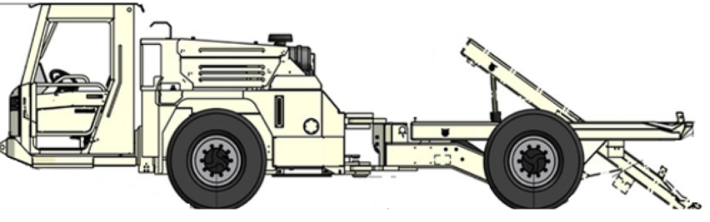
**Technical Specification**

**for the manufacture and supply of self-propelled mining equipment**

**(multi-functional self-propelled machine)**

**for Underground Operations of Kumtor Gold Company CJSC**

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| **Item No.** | **List of Key Data and Requirements** | **Key Data and Requirements** |
| 1 | Place of Delivery | Kumtor Gold Company CJSC, Kyrgyz Republic, Balykchy city, Narynskoe Highway, 9. |
| 2 | Customer | Kumtor Gold Company CJSC, Underground Operations. |
| 3 | General Provisions | The subject of this technical specification is the procurement of two (2) units of multi-purpose self-propelled machines intended for transporting personnel and various types of cargo in underground mine workings.  The chassis must allow installation of multiple interchangeable cassettes, including:  • Personnel transport cassette  • Fuel transport and refueling cassette  • Lubricants (Fuels & Lubricants) transport and refueling cassette  • Cassette for transporting a scissor lift and shotcrete mix (concrete carrier), etc.  The equipment must be new, not previously operated, and not refurbished.  Manufacture and supply must comply with applicable industrial safety and occupational health standards. |
| 4 | Geometrical Characteristics of Mine Workings | Maximum height:  • Main workings — 5200 mm  • Operational workings — 4500 mm  Maximum width:  • Main workings — 5500 mm  • Operational workings — 4500 mm  Minimum turning radius:  • External — 7200 mm  • Internal — 3800 mm  Maximum ramp gradient — 15%  Road surface — rock. |
| 5 | Environmental Conditions | 1. Altitude up to 4000 m  2. Ambient temperature: –35°C to +40°C  3. Underground air temperature: +2°C to +5°C  4. Humidity: ~70%  5. Ventilation airflow: 20 m³/s  6. Water supply: technical water  7. Gas contamination: none   1. 8. Dust contamination: none |
| 6 | **Equipment Requirements** |  |
| 6.1 | Technical Specifications | 1. Machine Configuration:  1.1 Model, brand, and manufacturer — subject to selection.  1.2 Fuel tank volume — subject to selection.  1.3 Year of manufacture — not earlier than 2025.  2. Engine:  2.1 Brand — to be determined.  2.2 Fuel — Diesel.  2.3 Engine displacement — to be determined.  2.4 Output power — to be determined.  2.5 Turbocharger — required.  2.6 Turbo-timer (delayed shutdown system) for cooling the engine and turbocharger — required.  2.7 Liquid cooling system — required.  2.8 Exhaust system — catalytic gas neutralizer and muffler.  *The engine must be certified for underground mine operation and adapted for high-altitude conditions, including a cold-climate package.*  *Operating mode: continuous 24/7 operation, 11-hour production shift, 365 days/year.* |
| 6.2 | Electrical System Requirements | 1. Supply voltage — 24 V.  2. Battery pack — 2 units.  3. Yellow flashing beacon — 1 unit.  4. LED parking lights, brake lights, turn indicators, and status indication signals.  5. Front and rear LED headlights (4,200 lm, 6,000 K).  6. LED lighting for steps and service/work areas.  7. Electrical wiring in non-flammable and waterproof insulation.  8. Equipment for external connectivity: WLAN / 3G / 4G / 5G / LTE. |
| 6.3 | Cassette Platform | 1. Load capacity — 6,000 to 10,000 kg.  2. Lifting mechanism for cassette installation — required. |
| 6.4 | Brake System | 1. Service brake: dual-circuit hydraulic brake system of closed design, multi-disc oil-cooled brakes on both axles.  2. Parking / emergency brake: spring-applied, hydraulically released fail-safe brake. |
| 6.5 | Tires | 1. Single pneumatic tubeless tires, size 12.00–20 PR 20.  2. Spare wheel assembly — 1 unit. |
| 6.6 | Steering System | 1. Hydraulic steering with articulated frame, orbitrol type.  2. Frame articulation locking pin to prevent machine folding during transport.  3. Frame articulation steering angle: ±40° (to be confirmed). |
| 6.7 | Transmission | 1. Hydro-mechanical transmission with hydraulic pump drive.  2. Full-time all-wheel drive. |
| 6.8 | Hydraulic System | 1. Variable displacement pumps (for steering and boom) — model and brand to be determined.  2. Pump capacity — to be determined.  3. Hydraulic oil tank capacity — provided by manufacturer.  4. Return-line oil filtration.  5. Indicators for oil level, filtration status, and temperature.  6. Hydraulic system must support Mixer-type cassette connection. |
| 6.9 | Fire Protection System | 1. Automatic fire suppression system — required.  2. Portable fire extinguisher — required. |
|  | Operator Cab Requirements | 1. Cab type: enclosed cab with protection against falling objects / rollover (ISO 3449 / ISO 3471), ROPS and FOPS certified.  2. Passenger seat: dual seat with fixed lap seat belts.  3. Driver seat: T-back seat with pneumatic suspension and 3-point safety belt.  4. Heating / air conditioning — required.  5. Multifunction display showing: speed, RPM, engine hours, fluid levels, temperature, pressure, alarm indicators, diagnostic codes, etc.6. Two rear-view mirrors.7. Rear-view camera.8. Control labels and markings in Russian language. |
| 6.10 | Lubrication System | Centralized lubrication system. |
| 7 | Spare Parts and Tools | 1. The Supplier shall provide a spare parts kit for 2,000 operating hours together with the equipment.  2. Special tools required for maintenance of the equipment.  3. Wheel chocks with mounting brackets. |
| 8 | Technical Documentation | 1. The Supplier shall provide complete supporting technical documentation together with the equipment (certificates of conformity, technical passports, operation manuals, spare parts catalogues, and other necessary documentation required for safe operation, as well as for customs clearance and registration with state authorities of the Kyrgyz Republic).  2. Operation and maintenance manuals — 2 copies.  3. Spare parts catalogue — 2 copies.  4. Documentation in PDF format on USB — 2 units.  5. Certificate of quality and origin.  *All documents must be provided in both electronic and paper form in Russian and English.* |
| 9 | Warranty Period | 1. The Supplier shall provide a warranty period for the purchased equipment of up to 24 months and/or 2,000 operating hours from the date of commissioning.  2. Availability of a service center and spare parts warehouse in the Kyrgyz Republic.  3. If no service center and warehouse are available in the Customer’s country, the Supplier shall create the necessary conditions to ensure service support and technical assistance in the Customer’s country. The equipment shall operate continuously (24/7).  4. The Supplier shall conduct personnel training at the Kumtor mine site. |
| 10 | Equipment Acceptance | Acceptance of the equipment by quantity and quality shall be performed at the Kumtor mine site with participation of the Supplier’s representative. |
| 11 | Commissioning | 1. All costs for additional works identified during equipment inspection shall be borne by the Supplier. |
| 12 | Performance Evaluation Criteria | 1. During the warranty period, equipment performance will be evaluated. The performance characteristics must match the manufacturer’s specifications.  2. In case of non-compliance with the stated requirements, the Supplier shall bear all costs related to corrective actions. |
| 13 | Payment Terms and Delivery Time | 1. Payment terms: as per the Contract.  2. Delivery shall be carried out at the Supplier’s cost and responsibility.  3. Delivery terms: for non-residents of the Kyrgyz Republic — DAP, for residents — DDP.  4. Delivery location: Kyrgyz Republic, Balykchy city, Narynskoe Highway, 9.  5. Delivery time: up to 160 calendar days from the Contract signing date.  6. Assembly and commissioning within the deadlines set by the Customer. |
| 14 | Technical Regulations and Standards | The equipment must comply with the requirements of the current Technical Regulation of the Customs Union (TR CU 010/2011) “On the Safety of Machinery and Equipment” and other applicable EAEU standards (if necessary). |
| 15 | Safety | Braking interlock and overload protection systems, fire safety equipment, and lighting must comply with the technical passports.Moving parts posing safety hazards must be guarded, except where guarding is impossible due to operational function. Guards must be supplied complete with mounting hardware. |
| 16 | Note | The requirements in this Technical Specification are indicative and may be adjusted during discussions with potential Suppliers. |

**** **Illustrative photo from the internet**

