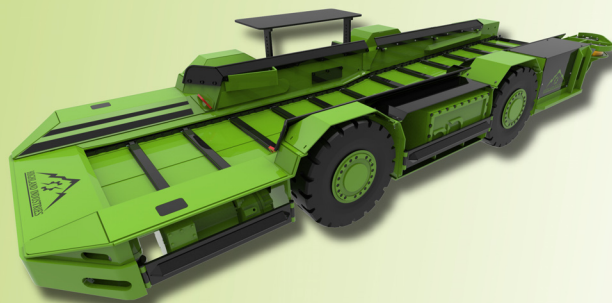




10/21K SHUTTLE CAR



Specifications:

Electrical:

Input Voltages:

- 480 through 1140 Volt AC 50 or 60 hertz
- 550 volt DC

Traction:

- AC VFD high torque closed loop. 2 x 55 kW or 2 x 85 kW 440 Volt AC motors. Closed loop VFD eliminates low speed cogging.
- DC 2 x 26 kW 250 Volt DC

(Both systems offer infinitely variable speed control through the complete speed range (NO STEPS))

Conveyor:

- AC VFD. 1 x 26 kW 460 volts or 1 x 55 kW 440 volts.
- DC 1 x 22 kW 250 Volt DC OR 1 x 26 kW 250 Volt DC.
- AC across the line (vacuum starter). 1 x 22 kW x input voltage.

(VFD and DC systems offer infinitely variable speed control through the complete speed range (no steps and no cogging)).

Pump:

- AC across the line. 1 x 19 kW
- AC VFD. 1 x 19 kW or 1 x 30 kW

Lights:

- LED
- Red, White and Green directional

Audible / Safety:

- Flashing and or rotating beacons
- Horns
- Direction sirens
- Cameras

Proximity Detection:

- Customer specified proximity detection can be married to either drive package to slow the vehicle, stop the vehicle, and or remove power from the vehicle.

Mechanical:

Traction:

- Interchangeable planetary wheel units
- Full time 4 wheel drive with electronic traction differential increasing component longevity and overall steerability.
- Interchangeable spur gear traction reducers tie the service and park brake to the traction motors
- Lube for life drive lines

Steering:

- Lube for life automotive style tie rod ends
- High strength cast steel steering arms and levers
- Heavy walled tube drag links with locking nuts
- High pressure welded steering cylinders
- Master spline cross shaft keeps the steer levers in time

Conveyor:

- Proven worm drive conveyor reducer
- Heavy duty 4.01 ladder (flight bar) style chain
- Grease style take-up with shims
- Elevating conveyor
- Conveyor beds available to meet your mining conditions
- Structural steel with wear strips standard
- Wear rated steel with or without wear strips optional
- Chromium carbide overlay steel (CCO) optional

Hydraulic:

- Pump
- Proven two section gear type pump
- Optional high output variable displacement pump/gear pump
- Cable reel driven by a hydraulic gear motor

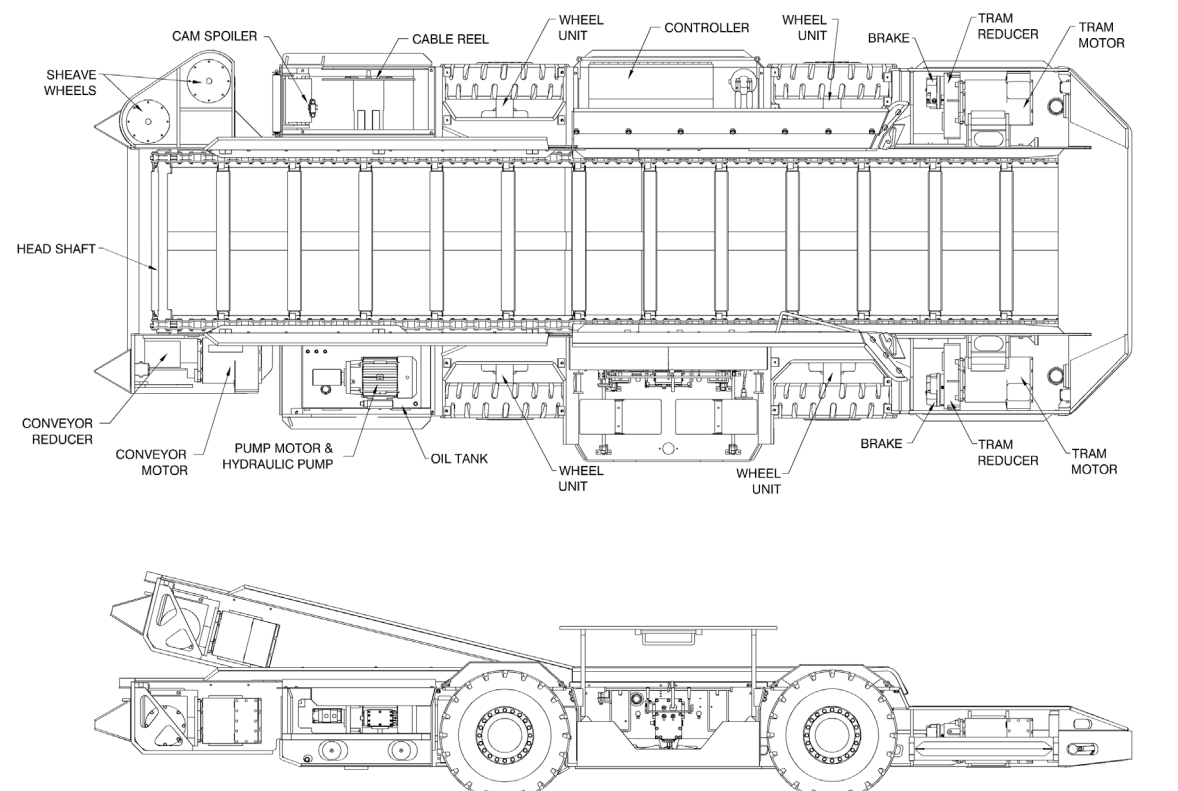
Brakes:

- Spring applied hydraulic released wet multidisc park brake
- Hydraulic applied wet multidisc service brake

Chassis:

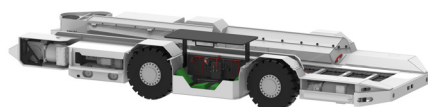
- Fabricate from structural grade steel with reinforcements in high stress areas
- Designed to meet the high stress demands of the mining environment
- Discharge end pivot axle standard
- Custom designs customer specific options available
- Center operator compartments available in both right hand and left hand configurations





		10/21K LA2	10/21K	10/21K HAA	10/21K HA	10/21K HAB	10/21K HB	10/21K HBC
Tire Size		7:50/15	39-15-20	12 x 20	12 x 20	14 x 20	14 x 20	14 x 24
Minimum Canopy Height		.8m (32")	1m (38.5")	1.2m (45.25")	1.2m (45.25")	1.3m (50.75")	1.5m (61.5")	1.9m (74")
Minimum Seam Height		1.2m (48.5")	1.2m (48.5")	1.3m (53")	1.5m (57")	1.6m (63")	1.9m (73")	2.2m (86")
Chassis Height		.9m (34")	1m (41.5")	.9m (37.25")	.9m (37.25")	1.2m (44.75")	1.3m (51.5")	1.4m (57")
Load End Height		7m (28")	.7m (28.5")	.9m (37.25")	.9m (37.25")	1m (38.75")	1.3m (51.5")	1.4m (57")
Ground Clearance		152.4mm (6")	216mm (8.5")	254mm (10")	254mm (10")	290mm (11.5")	290mm (11.5")	343mm (13.5")
Operator Location		Center	Center	Center	Center or End	End	End	End
*Rated Load Capacity		8 Tonnes	10 Tonnes	11 Tonnes	11 Tonnes	14 Tonnes	16 Tonnes	20 Tonnes
Machine Weight		18,000 kg	20,000 kg	21,000 kg	21,000 kg	23,000 kg	25,000 kg	30,000 kg
Ground Pressure at Max Rated Load		8.5 kg/cm2	9.5 kg/cm2	9.9 kg/cm2	9.9 kg/cm2	9.4 kg/cm2	10 kg/cm2	10.5kg/cm2
Length		8.3m (27'-3")	8.8m (28'-9")	8.7m (28'-6")	8.7m (28'-6")	8.8m (29'-0")	9m (29'-6")	9.4m (30'-10")
Width with 56" (1.42m) Conveyor		3.2m (126")	3.43m (135")	3.35m (132")	3.43m (135")	3.35m (132")	3.42m (134.5")	3.3m (129")
Motors with VFD traction option								
Pump	50 Hz	1 - 19 kW	1 - 19 kW	1 - 19 kW	1 - 19 kW	1 - 19 kW	1 - 19 kW	1 - 19 kW
	60 Hz	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW
Conveyor	50 Hz	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW	1 - 22 kW
	60 Hz	1 - 26 kW	1 - 26 kW	1 - 26 kW	1 - 26 kW	1 - 26 kW	1 - 26 kW	1 - 26 kW
Traction	60 Hz	1 - 55 kW	1 - 55 kW	1 - 55 kW	1 - 55 kW	1 - 55 kW	1 - 55 kW	1 - 55 kW
	50 Hz	2 - 55 kW	2 - 55 kW	2 - 55 kW	2 - 55 kW	2 - 55 kW	2 - 55 kW	2 - 55 kW
	60 Hz	-	-	-	-	2 - 85 kW	2 - 85 kW	2 - 85 kW

*The rated load capacity listed for each model is the maximum amount the drive train and chassis are rated to haul. The actual carrying capacity is dependent on a number of factors, including but not limited to conveyor width, side board height, density of material conveyed, mining height and the ability of the continuous miner to load material into the shuttle car.



HIGHLAND INDUSTRIES
40 LAMPLIGHTER ST.
OAK HILL, WV 25901
PHONE: (304) 465-3295
FAX: (304) 465-8576

