

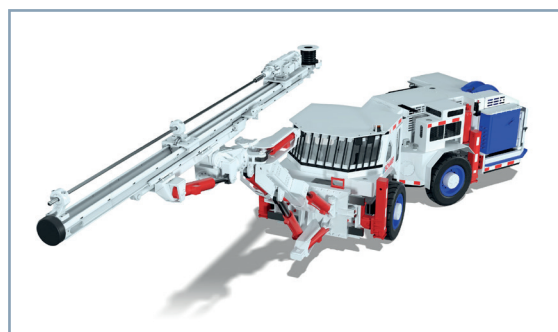
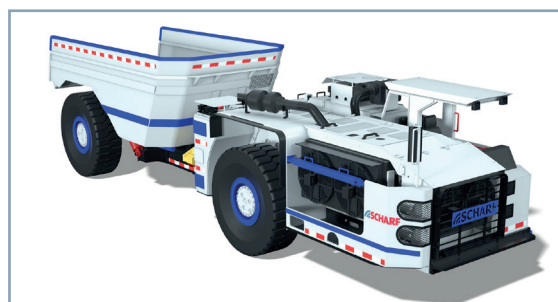


RUBBER-TYRED VEHICLES

SMT Scharf - Product Guide



Designed with
simplicity in mind.
Easy to operate.
Easy to maintain.
Hard to break.



OUR COMMITMENT TO CUSTOMER SATISFACTION, QUALITY AND SERVICE

SMT Scharf develops, manufactures and services transportation and infrastructure equipment for underground mining as well as for tunnel construction. Together with the SMT Scharf Canada - RDH (formerly RDH Mining Equipment) range of rubber-tyred diesel and electric vehicles we are committed to providing innovative and cost-effective ways to increase equipment productivity while decreasing costs for our customers. We incorporate the latest technology to ensure the highest standards are met throughout the manufacturing process.

We continually enhance our product line with exciting innovations that make our equipment invaluable at customer sites around the world. SMT Scharf has over 75 years of experience in the mining market, developing a wide range of mining equipment specifically suited to the harsh conditions of underground mining and tunnelling. Our skilled technical staff ensures our designs are engineered to provide performance to meet the demands of production schedules.

We aim to enhance customer satisfaction by continuously providing products that meet and exceed our customer requirements.

Whether you own a single machine or a fleet of our equipment, your complete satisfaction is our goal.



WHAT DIFFERENTIATES OUR PRODUCTS AND SERVICES FROM OUR COMPETITORS?

Customization

Working with customers to customize our equipment to suit their individual needs.

Simplicity

Our machines are designed with simplicity in mind. They are easy to operate, easy to maintain, and hard to break.

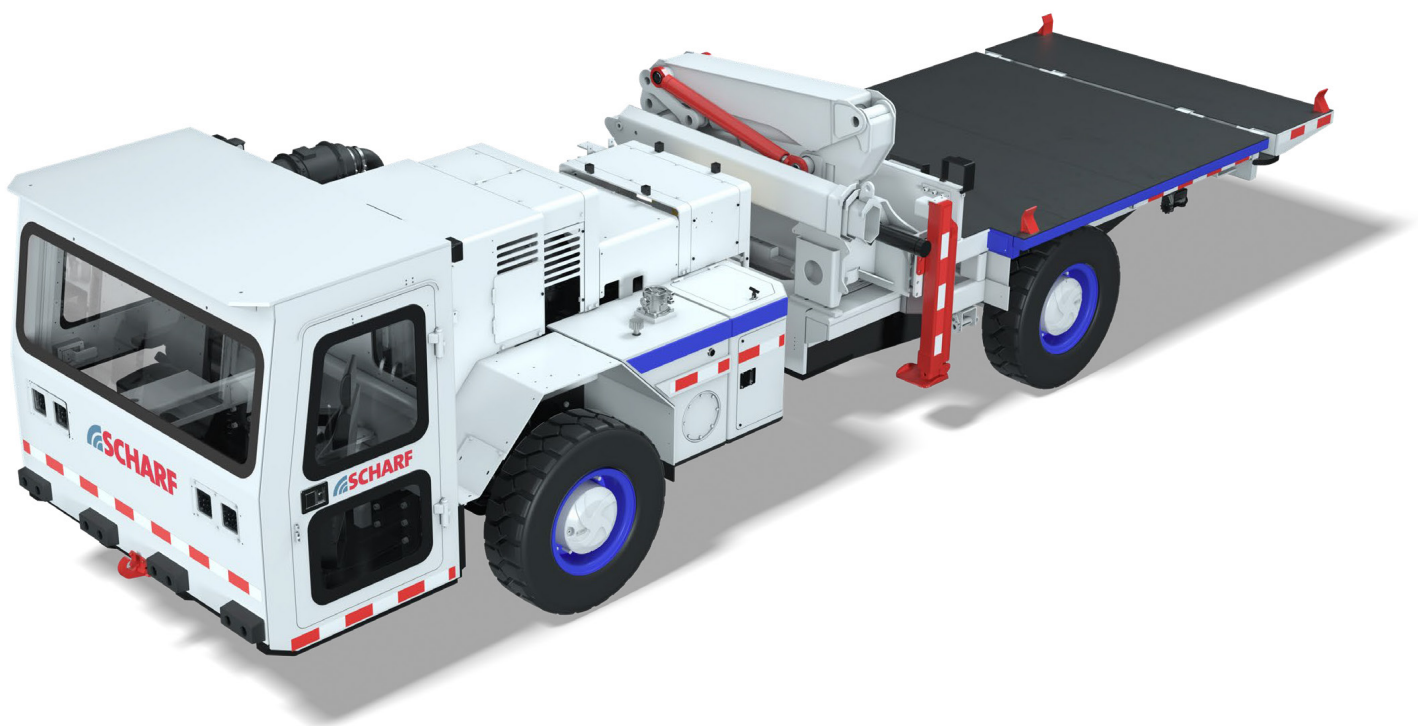
Premium Quality

Ensuring quality in our processes, products and services drives customer satisfaction and builds pride of workmanship.

Cooperation, Communication and Integrity

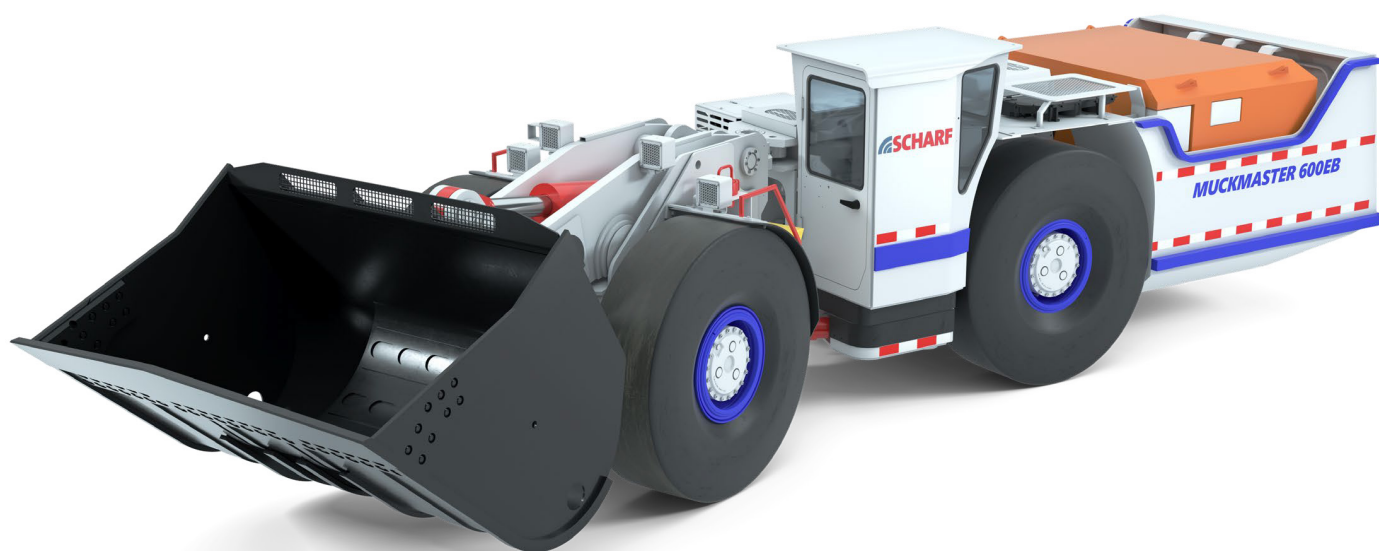
We build strong partnerships with every customer by employing business principles of clear communication, collaborative participation and integrity to ensure we exceed every client expectation.

- + Standardized hydraulic and electric systems across our product line, reducing our customers spare parts inventories and simplifying the purchasing process and inventory control
- + Each unit is engineered to suit to our client's specific application
- + Exemplary service - quick response
- + Competitive pricing
- + Short delivery times



LOAD AND HAUL - MUCKMASTER Battery

SMT Scharf Battery MuckMasters underwent a universal redesign process to incorporate all the benefits of electrification technologies into an exceptional performing loader; improving performance, safety and sustainability goals while reducing operating costs. Quick swapping battery packs coupled with SMT Scharf high speed DC Chargers ensure minimal down-time and supreme loading cycles per shift. There is a suitable MuckMaster solution for hang-wall heights from 2 500 mm down to 1 550 mm, which is entirely exclusive to SMT Scharf products.



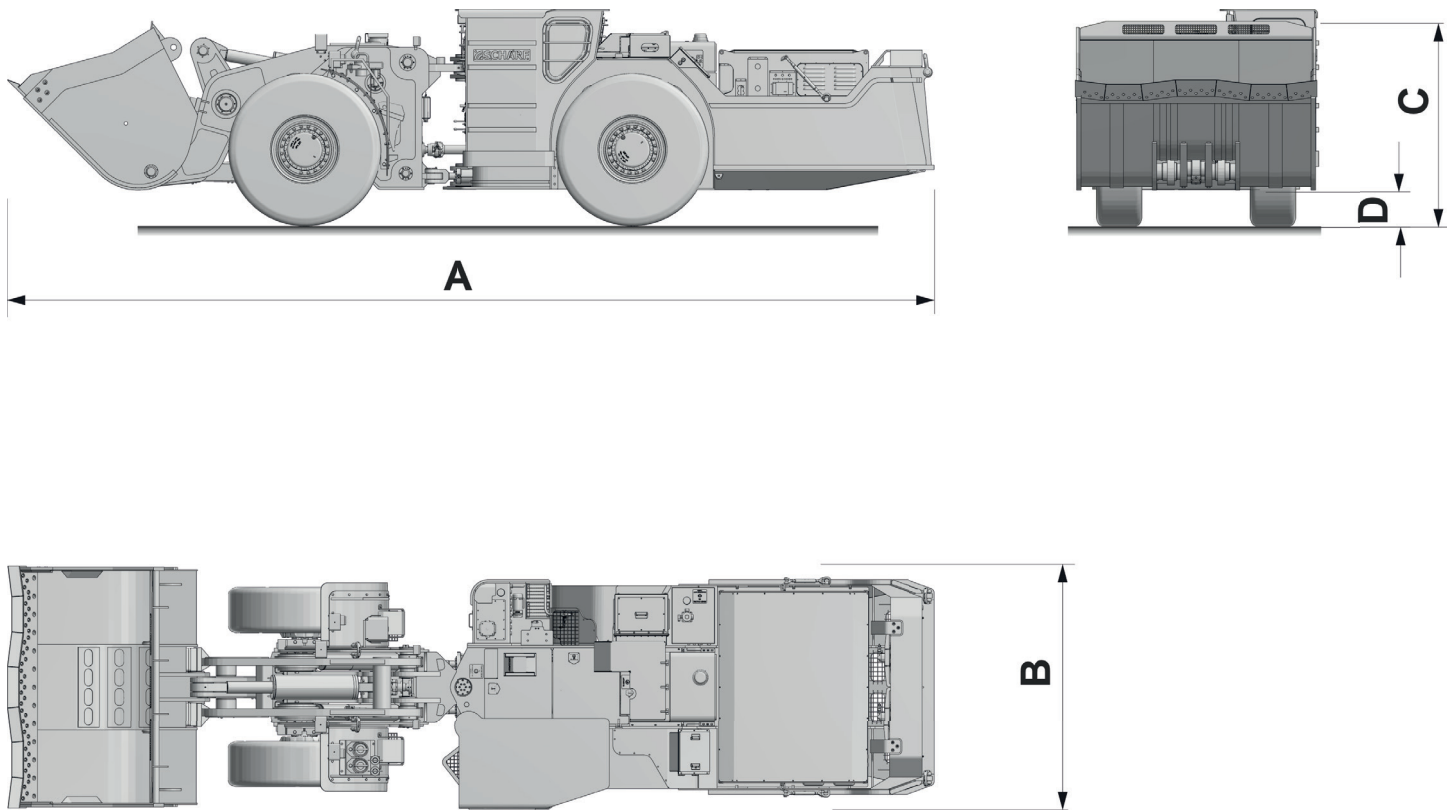
Optional Offerings all MuckMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Radio Remote Control
- + Counterbalance Valves on Bucket & Boom Functions (CE Requirement)
- + Replaceable Bucket half-arrow GET's

Optional Offerings all Battery Powered MM

- + Extra Batteries
- + High Speed DC Charger

Dimensions



	Units	MuckMaster 3TEB	MuckMaster 6TEB	MuckMaster 11TEB	MuckMaster 3TEB LP	MuckMaster 7TEB LP	MuckMaster 10TEB LP
Payload Capacity	kg	3000	6000	11000	3000	7200	10000
Bucket Volume	m³	1,4	2,6	4,5	1,4	2,8	4,2
Breakout Force	kN	67	126	196	65	133	180
Length (A)	mm	6990	8900	10200	7320	8900	10100
Width (B)	mm	1700	2150	2550	2200	2450	2800
Height (C)	mm	2200	2200	2380	1500	1550	1910
Weight	kg	14110	21900	31400	14100	21800	31800
Inner Turning Radius (E)	mm	2700	3830	3190	2960	3070	3080
Outer Turning Radius (F)	mm	4980	5950	6900	5350	6150	7280
Ground Clearance (D)	mm	210	290	330	210	280	300

Technical Data

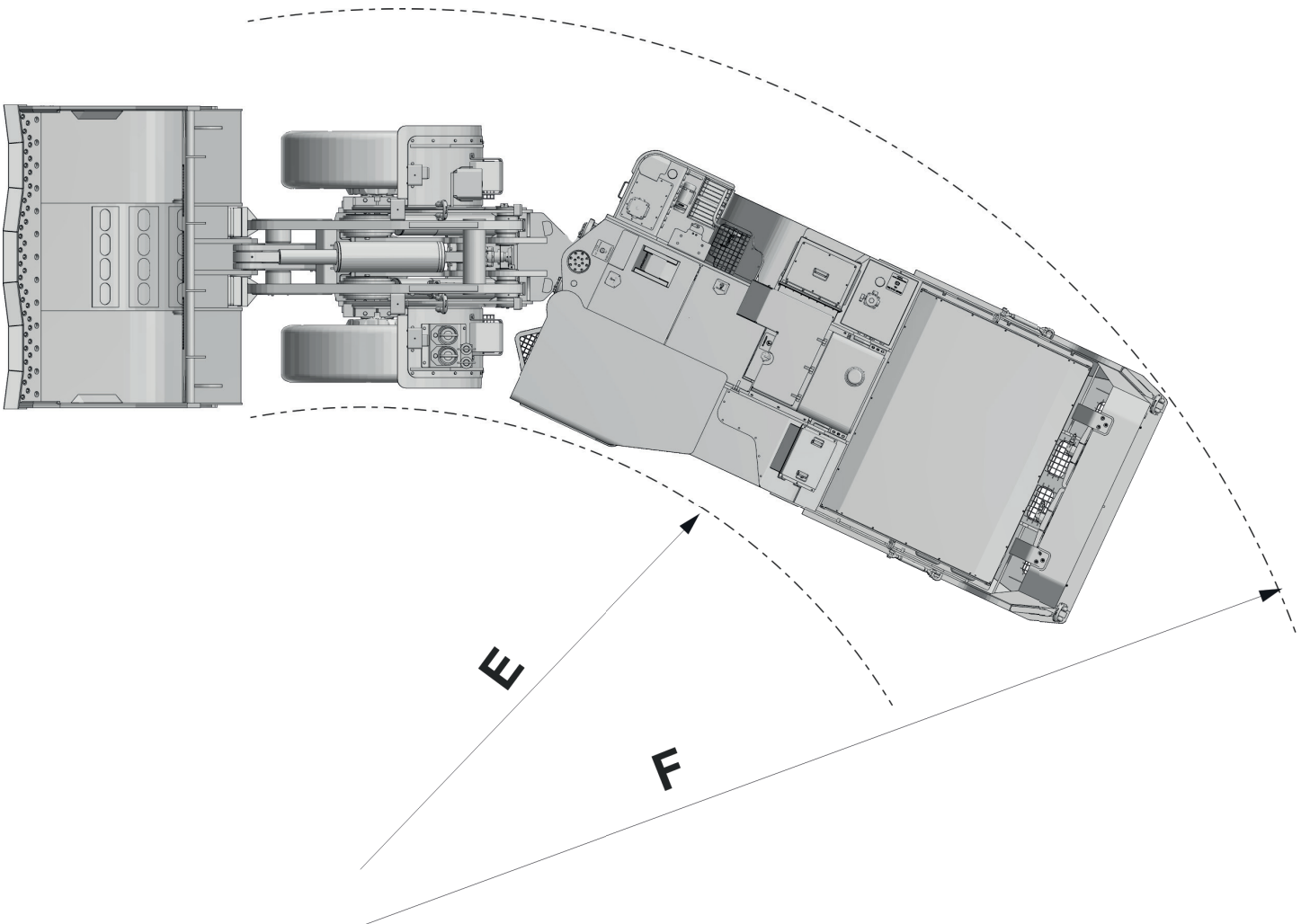
	Units	MuckMaster 3TEB	MuckMaster 6TEB	MuckMaster 11TEB	MuckMaster 3TEB LP	MuckMaster 7TEB LP	MuckMaster 10TEB LP
Electrical Motor	Supplier	Kessler Custom	Dana Sumo MD HV2200-3P	2 x Dana Sumo MD HV2200-3P	Kessler Custom	Kessler Custom	2 x Dana Sumo MD HV2200-3P
Nominal Power	kW	130	145	2 x 120	130	130	2 x 120
Nominal Torque	Nm	1060	1275	2 x 700	1060	1060	2 x 700
Transmission/Transfer Case	Supplier	Kessler W4633 1-Speed	Dana Spicer ESP502	Dana Spicer ESP502	Kessler 1-Speed	Kessler W4633 1-Speed	Dana Spicer ESP502
Axles	Supplier	Dana Spicer 113	Dana Spicer 17D	Dana Spicer 20D	Dana Spicer 113	Kessler D91	Dana Spicer 20D
Wheels	Size	9.00 - 20.00 LS5	17.50 - 25.00 LS5	18.00 - 25.00 LS5	9.00 - 20.00 LS5	17.50 - 25.00 LS5	18.00 - 25.00 LS5
Maximum Installed Battery Capacity	kWh	105	300	400	79	280	340
Battery Nominal Voltage	V	650	650	650	650	650	650
Estimated Battery Weight	kg	2300	4600	5900	1900	4200	5500

Standard Functionality integrated into all MuckMasters

Machine Safety	All machines compliant to ISO 19296:2018				
Braking System		Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	Reverse modulated, immersed multidisc service- and park brakes with wear indication	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	Reverse modulated, immersed multidisc service- and park brakes with wear indication
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting bucket tilt, boom hoist and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves				
Electrical System	24V Circuit, 4 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 1 x strobe/beacon light & 1 x working light, all LED, Reverse Alarm, Hooters, Door limit switch,				
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, motor, inverter and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.				
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.				
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.				
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification				

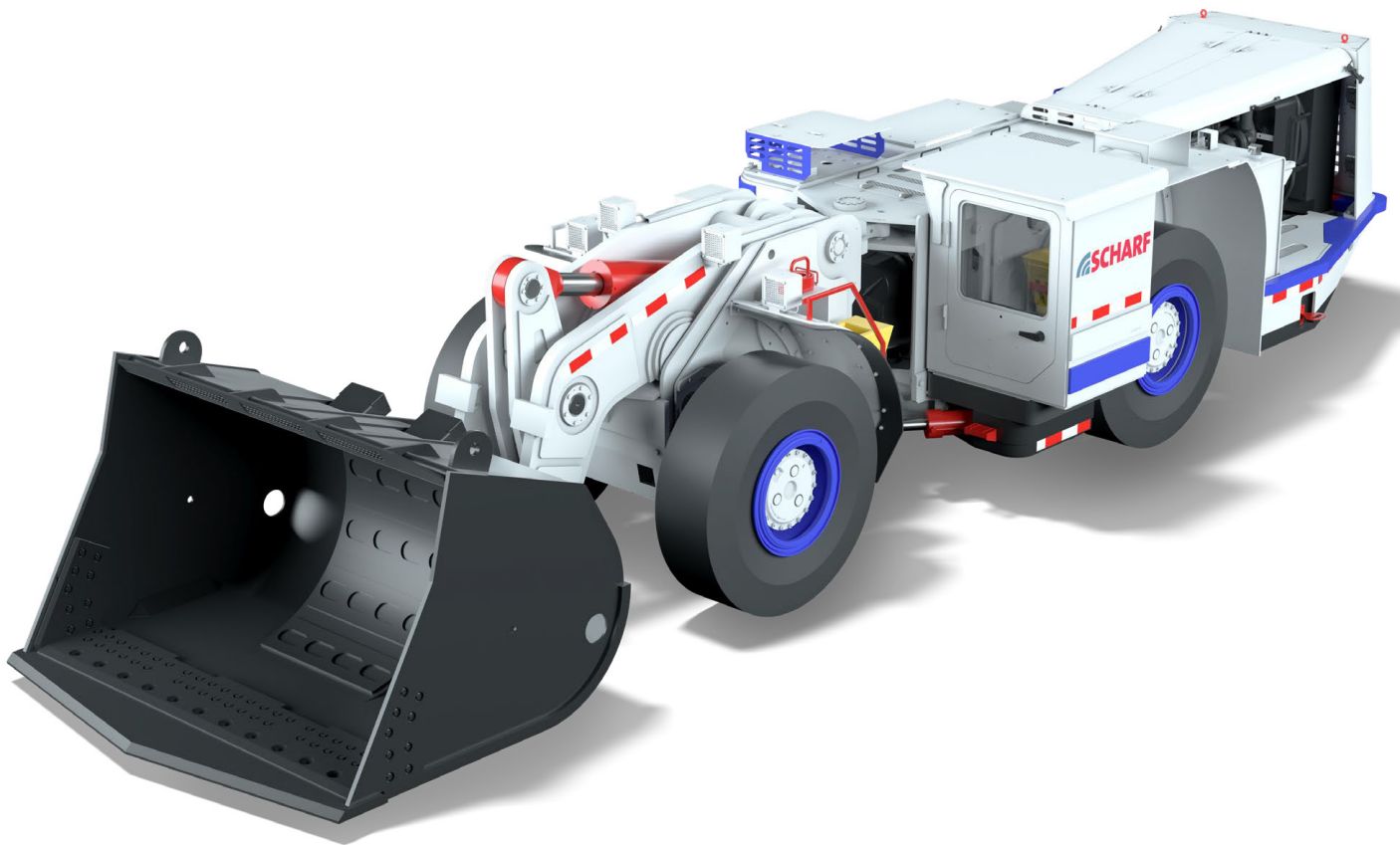


Turning Radius



LOAD AND HAUL - MUCKMASTER Diesel

The SMT Scharf Muckmaster diesel LHD collection is a range of robust and reliable underground loaders designed for high production, low operating cost and simplified maintenance. Durable construction is integrated with high performance powertrain to ensure production KPI's are met, while comprehensive safety features ensure the operator monitors all critical data from the ergonomic and visible cabin. The Muckmaster collection is customizable, with various bucket configurations, engine alternatives and optional extras to ensure every user requirement is met.



Optional Offerings all MuckMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Radio Remote Control
- + Counterbalance Valves on Bucket & Boom Functions (CE Requirement)
- + Replaceable Bucket half-arrow GET's

Technical Data

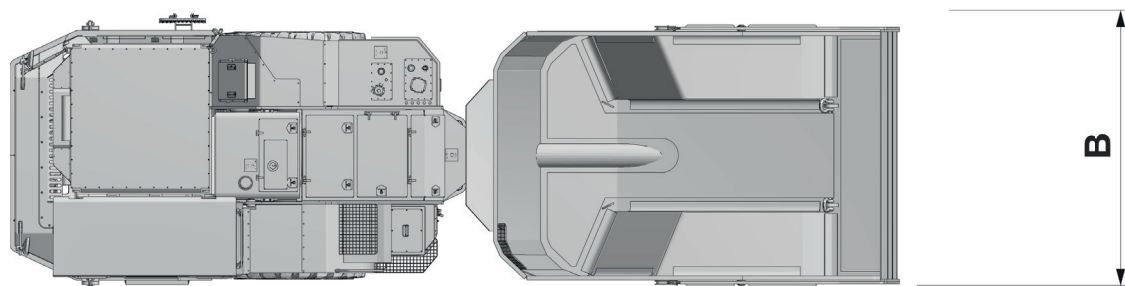
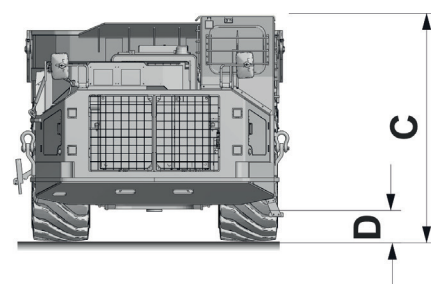
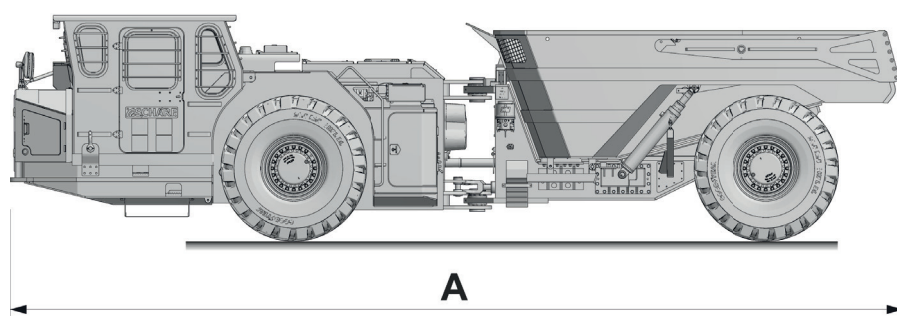
	Units	MuckMaster 3TD	MuckMaster 6TD	MuckMaster 11TD	MuckMaster 10TD LP
Dimensions					
Payload Capacity	kg	3000	6000	11000	10000
Bucket Volume	m³	1,4	2,6	4,5	4,2
Breakout Force	kN	67	126	196	180
Length (A)	mm	7300	9020	10000	9960
Width (B)	mm	1700	2055	2550	2800
Height (C)	mm	2050	2200	2350	1910
Weight	kg	12980	20600	28600	29100
Inner Turning Radius (E)	mm	2700	3890	3190	3080
Outer Turning Radius (F)	mm	4572	6250	7120	7260
Ground Clearance (D)	mm	210	320	330	280
Engine	Supplier	Deutz TCD 4.1 L4	Volvo TAD 571 VE	Volvo TAD 872 VE	Volvo TAD 872 VE
Power Output	kW	105	129	210	210
Torque	Nm	550	810	1237	1237
Transmission & Torque Converter	Supplier	Dana Spicer RT 20000 & C3000	Dana Spicer RT14000 & C3000	Dana Spicer 6000 & C9000	Dana Spicer 6000 & C9000
Axles	Supplier	Dana Spicer 113	Dana Spicer 17D	Dana Spicer 20D	Dana Spicer 20D
Wheels	Size	9.00 - 20.00 LS5	17.50 - 25.00 LS5	18.00 - 25.00 LS5	18.00 - 25.00 LS5
Fuel Tank Capacity	l	110	230	340	270

Standard Functionality integrated into all MuckMasters

Machine Safety	All machines compliant to ISO 19296:2018				
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes				
Hydraulic System	Reverse modulated, immersed multidisc service- and park brakes with wear indication				
Electrical System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting bucket tilt, boom hoist and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves				
Electronic System & Machine intelligence	24V Circuit, 4 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 1 x strobe/beacon light & 1 x working light, all LED, Reverse Alarm, Hooters, Door limit switch,				
Human Machine Interface	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.				
Documentation	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.				
Training	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.				
	On-site/Virtual Theoretical and Practical Training, Trainer Certification				

LOAD AND HAUL - HAULMASTER Battery

The high power and efficient electrical powertrain, tough truck bed operation and quick battery replacement procedure has been optimized to provide the user with fast haulage speeds and lower standing time than the diesel equivalent underground dump trucks. All battery –powered HaulMaster underground trucks have been carefully engineered to provide enhanced axle distribution under load, reduced operator fatigue and the lowest operating cost possible. The energy dense batteries can be optimized according to mine gradients and haulage distances to ensure the best ‘bang-for-back’ in terms of overall capital- and operating expenditure planning.



Optional Offerings all HaulMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Bucket Automatic Mechanical Tailgates
- + Counterbalance Valves on Bucket Lift Cylinders (CE Requirement)



Optional Offerings all Battery Powered HM

- + Extra Batteries
- + High Speed DC Charger

Technical Data

	Units	HaulMaster 15 TEB	HaulMaster 20 TEB	HaulMaster 30 TEB
Dimensions				
Payload Capacity	kg	15000	20000	30000
Bucket Volume	m³	7,2	9,5	14
Length (A)	mm	7200	9135	10600
Width (B)	mm	2180	2460	3030
Height (C)	mm	2150	2300	2650
Weight	kg	18200	24120	33100
Inner Turning Radius	mm	3010	4400	6090
Outer Turning Radius	mm	7600	8100	9880
Ground Clearance (D)	mm	300	320	370
Electrical Motor	Supplier	Kessler Custom 169 kW	2 x Dana Sumo MD HV2200-3P	Dual Sumo MD HV2200-3P
Nominal Power	kW	130	2 x 120	2 x 145
Nominal Torque	Nm	1060	2 x 700	2 x 1275
Transmission/Transfer Case	Supplier	Kessler W4633	Dana Spicer ESP502	-
Axles	Supplier	Dana Spicer 113	Dana Spicer 20D	Dana Spicer 20D
Wheels	Size	12.00 - 20.00 E4	18.00 - 25.00 E4	26.50 - 25.00 E4
Battery Capacity	kWh	230	340	460
Battery Nominal Voltage	V	650	650	650
Estimated Battery Weight	kg	3600	5600	6900

Standard Functionality integrated into all HaulMasters

Machine Safety	All machines compliant to ISO 19296:2018		
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	Reverse modulated, immersed multidisc service- and park brakes with wear indication	
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double-acting bucket lift and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves		
Electrical System	24V Circuit, 4 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 1 x strobe/beacon light & 1 x working light, all LED, Reverse Alarm, Hooters, Door limit switch,		
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, motor, inverter and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.		
Human Machine Interface	7” Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.		
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.		
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification		

LOAD AND HAUL - HAULMASTER Diesel

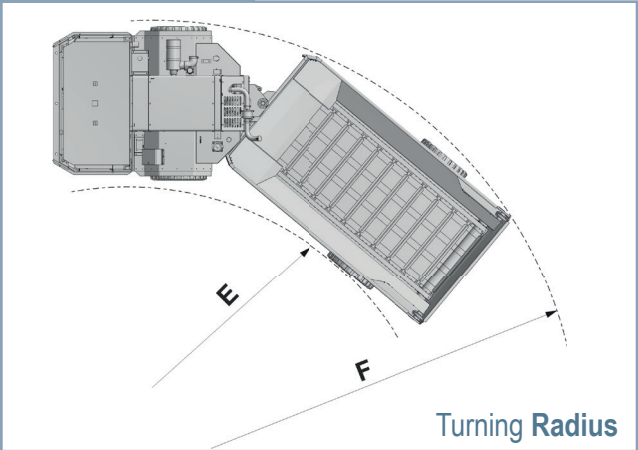
The dependable HaulMaster diesel platform offer users well-tested underground trucks for all haulage, seam and vein proportions to ensure a safety-first approach for maximum productivity. The high-payload buckets are matched with good power/weight engines and compact machine envelopes. HaulMaster drivetrains ensure safe and fully compliant braking, while ensuring the valuable payload is timeously delivered to the tipping points. Smart monitoring and interlocks provide detailed information to the operator to maximise efficiency in a controlled and safe manner.



	Units	HaulMaster 12TD	HaulMaster 15TD	HaulMaster 20TD	HaulMaster 30TD	HaulMaster 7TD-LPC
Dimensions						
Payload Capacity	kg	12000	15000	20000	30000	6600
Bucket Volume	m³	5,8	7,2	9,5	14	6,3
Length (A)	mm	6650	6950	10086	10070	7900
Width (B)	mm	2000	2150	2275	2620	2290
Height (C)	mm	2020	2150	2300	2450	1710
Weight	kg	12120	16200	23302	30700	13562
Inner Turning Radius (E)	mm	3620	3090	6450	5330	4722
Outer Turning Radius (F)	mm	6150	6580	7860	9150	7905
Ground Clearance (D)	mm	280	300	320	340	220

Optional Offerings on all HaulMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Bucket Automatic Mechanical Tailgates
- + Counterbalance Valves on Bucket Lift Cylinders (CE Requirement)



Technical Data

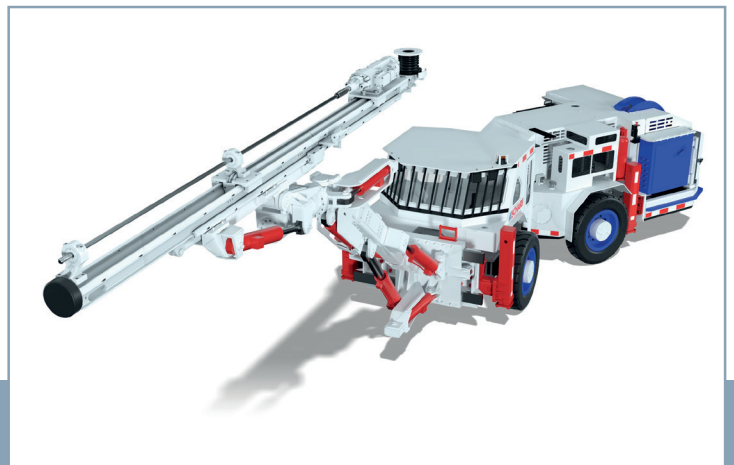
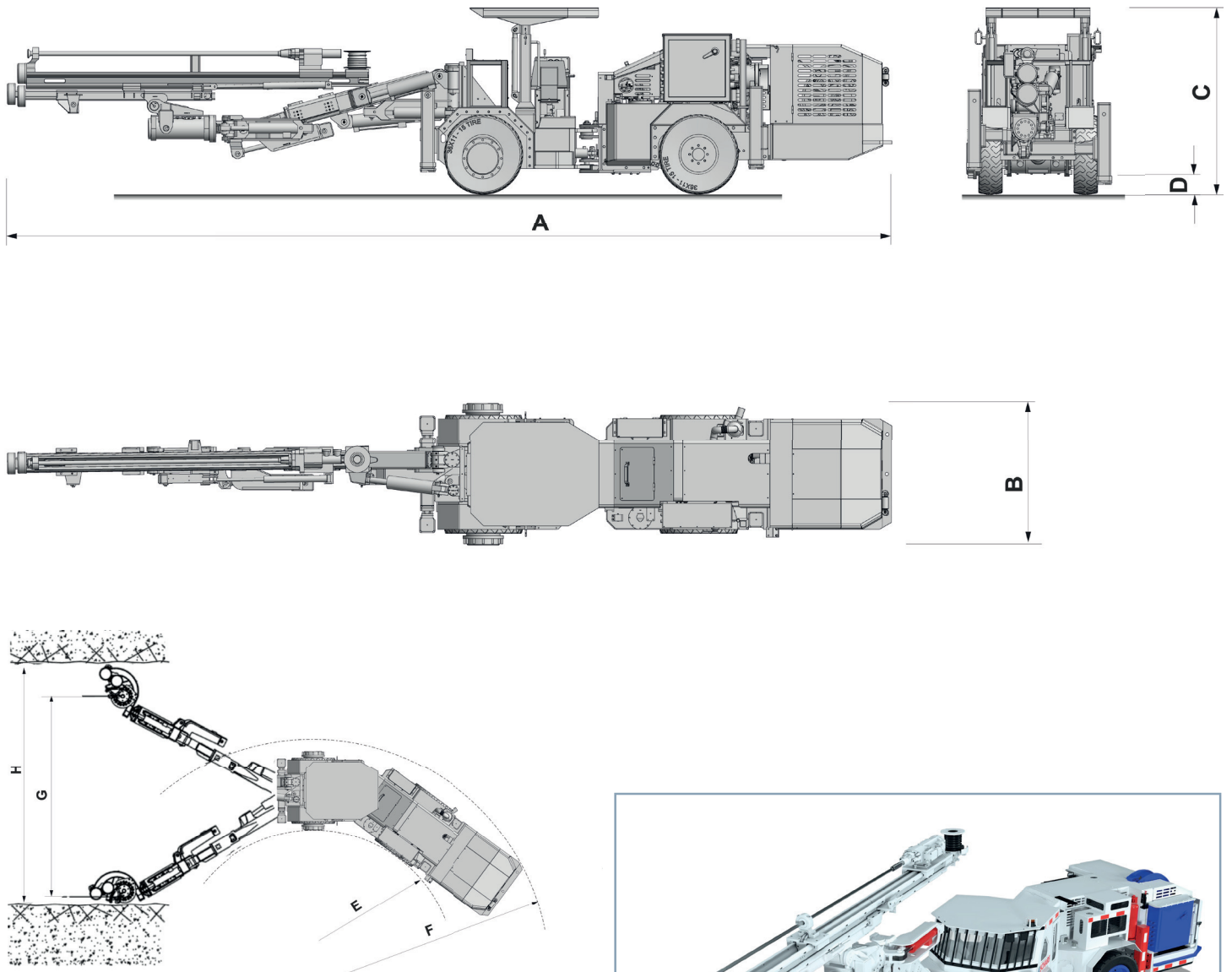
	Units	HaulMaster 12TD	HaulMaster 15TD	HaulMaster 20TD	HaulMaster 30TD	HaulMaster 7TD-LPC
Engine	Supplier	Deutz TCD 4.1 L4	Volvo TAD 571 VE	Volvo TAD 872 VE	Volvo TAD 1371 VE	Deutz TCD 4.1 L4
Power Output	kW	105	129	210	285	105
Torque	Nm	550	810	1237	1965	550
Transmission & Torque Converter	Supplier	Dana Spicer HR 20000	Dana Spicer HR 24000	Dana Spicer 6000 & C8000	Dana Spicer 6000 & C8000	Dana Spicer HR 20000
Axles	Supplier	Dana Spicer 113	Dana Spicer 113	Dana Spicer 20D	Dana Spicer 20D	Dana Spicer 113
Wheels	Size	10.00 - 20.00 E4	12.00 - 20.00 E4	18.00 - 25.00 E4	26.50 - 25.00 E4	10.00 - 20.00 E4
Fuel Tank Capacity	l	130	180	320	380	95

Standard Functionality integrated into all HaulMasters

Machine Safety	All machines compliant to ISO 19296:2018				
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	Reverse modulated, immersed multidisc service- and park brakes with wear indication	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes	
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double-acting bucket lift and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves			Dual Motor actuated conveyor system. Double-acting steering cylinders and tail-gate operation with proportional control. Single-stage chain/conveyor tensioning cylinders.	
Electrical System	24V Circuit, 4 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 1 x strobe/beacon light & 1 x working light, all LED, Reverse Alarm, Hooters, Door limit switch,				
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.				
Human Machine Interface	7” Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.				
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.				
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification				

DRILLMASTER Diesel-Electric

The durable SMT Scharf DrillMaster collection provides large coverage, precise drilling and comfortable operator interfaces into safe and reliable drilling rigs. These electro-hydraulic drilling machines offer heavy duty telescopic booms, solid stabilization and variety of rod handling options to ensure high productivity levels at a fraction of other OEM equipment costs.



Optional Offerings all DrillMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Radio Remote Control for machine movement and boom operation.

Technical Data

	Units	DrillMaster 100	DrillMaster 100 LH	DrillMaster 200	DrillMaster 150 LP
Dimensions					
Length (A)	mm	11106	10244	11883	11373
Width (B)	mm	1530	1550	2260	2560
Height (tramming) (C)	mm	2164	2164	2200	1800
Height (working)	mm	2600	2600	2825	1800
Weight	kg	12837	12204	22350	13144
Auto Parallel Coverage	mm x mm	6096 x 4640	-	7470 x 5050	6602 x 4025
Boom Extension	mm	1000	1000	1000	1000
Drifter/Drill	Supplier	Montabert HC 50	Montabert HC 109	Montabert HC 50	Montabert HC 50
Inner Turning Radius (E)	mm	3210	2960	3670	2560
Outer Turning Radius (F)	mm	5120	5200	6383	5310
Engine	Supplier	Deutz TCD 4.1 L4	Deutz TCD 4.1 L4	Deutz TCD 4.1 L4	Deutz TCD 4.1 L4
Power Output	kW	105	105	105	105
Torque	Nm	550	550	550	550
Transmission & Torque Converter	Supplier	Dana Spicer HR 20000	Dana Spicer HR 20000	Dana Spicer HR 20000	Dana Spicer HR 20000
Axles	Supplier	Dana Spicer 113	Dana Spicer 113	Dana Spicer 113	Dana Spicer 113
Wheels	Size	10.00 - 20.00 E4	10.00 - 20.00 E4	10.00 - 20.00 E4	10.00 - 20.00 E4
Fuel Tank Capacity	l	96	102	220	170
Ground Clearance (D)	mm	240	240	240	240
Standard Functionality integrated into all DrillMasters					
Machine Safety	All machines compliant to ISO 19296:2018				
Drilling System	Montabert Drifters/Drills & Timberrock Feeding Systems. Accu-Drill control system, anti-jamming incorporated and semi-automatic collaring. Onboard air compressor, water pump, 50 m hose reel and cable.				
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes				
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting boom, stabilizers and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves				
Electrical System	24V Circuit, 4 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 1 x strobe/beacon light & 2 x working light, all LED, Reverse Alarm, Hooters, Door limit switch,				
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.				
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and boom hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals. Mechanical Manual Drill Functions				
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.				
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification				

LIFTMASTER Scissor Lifts - Diesel & Battery

SMT Scharf has vast experience with underground elevated working platforms and have continuously refined the machines to be able to offer the LiftMaster fleet of underground scissor lifts with utmost confidence. All SMT Scharf LiftMasters are equipped with broad safety features and are compliant to standards to ensure personnel can safely perform installation and maintenance tasks up to heights of 6.0 m. Remote control operation, pipe-installers, automatic stabilization and mine-air integrations are options that can be incorporated to improve elevated workings.

	Units	LiftMaster 500 N	LiftMaster 600 D	LiftMaster 600 EB
Dimensions				
Platform Capacity	kg	2000	3000	3000
Platform Area	mm x mm	2947 x 1580	3600 x 2180	3600 x 2180
Platform Floor Height	mm	3300	4000	4000
Length	mm	6990	8220	8400
Width	mm	1980	2300	2300
Height Shipping	mm	2092	2250	2350
Height Trimming	mm	2590	2570	2570
Weight	kg	13050	16350	17800
Inner Turning Radius	mm	3598	4500	4500
Outer Turning Radius	mm	5968	7000	7000
Ground Clearance	mm	290	300	300

Optional Offerings on all LiftMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Radio Remote Control (Driving Functions)
- + Mine-Air Pneumatic-Hydraulic System
- + Custom platform flooring options (Wood Sleepers, non-slip pattern, steel grating)
- + Platform Modifications (Pipe-Handlers, Cranes, Fold-Down Sides options)



Optional Offerings on LiftMaster 600 EB

- + Extra Batteries
- + High Speed DC Charger
- + Work + Charge System (On-the-fly charging and Hose reel)

Technical Data

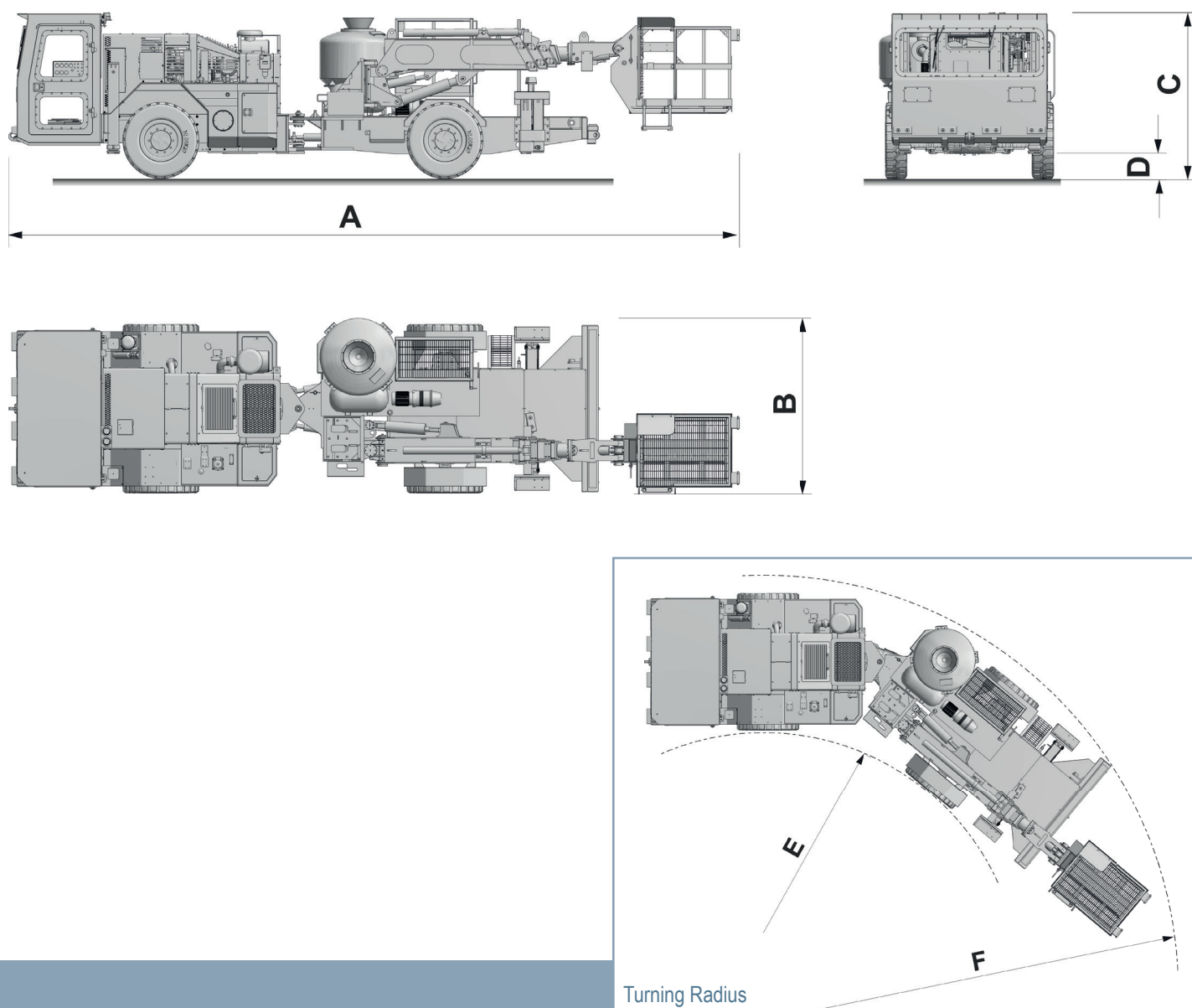
	Units	LiftMaster 500 N	LiftMaster 600 D	LiftMaster 600 EB
Diesel Unit Specifications				
Engine	Supplier	CAT C 4.4 Tier 3	Volvo TAD 571 VE	-
Power Output	kW	104	129	-
Torque	Nm	558	810	-
Transmission & Torque Converter	Supplier	Dana Spicer HR 20000	Dana Spicer HR 14000	-
Axles	Supplier	Dana Spicer 113	Dana Spicer 113	-
Wheels	Size	10.00 - 20.00 E4	12.00 - 20.00 E4	-
Fuel Tank Capacity	l	135	210	-

Battery Unit Specifications				
Electrical Motor	Supplier	-	-	Kessler Custom
Nominal Power	kW	-	-	130
Nominal Torque	Nm	-	-	1060
Transmission/Transfer Case	Supplier	-	-	Kessler W4633
Axles	Supplier	-	-	Dana Spicer 113
Wheels	Size	-	-	12.00 - 20.00 E4
Battery Capacity	kWh	-	-	130
Battery Nominal Voltage	V	-	-	650
Estimated Battery Weight	kg	-	-	2600

Standard Functionality integrated into all LiftMasters	
Machine Safety	All machines compliant to ISO 19296:2018
Lifting System	Dual cylinder scissor mechanism with side-ways shift functionality. Drop-down sides for reduced tramming height, Telescopic ladder, spring loaded doors, inclination-, articulation and overloading interlocks as standard.
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting scissor-mechanism, stabilizers and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves
Electrical System	24V Circuit, 2 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 2 x strobe/beacon light & 2 x working lights, all LED, Reverse Alarm, Hooters, Door limit switch
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine/electrical drive, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals. Panel or remote control platform operation.
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification

CHARGE MASTER Charging Units - Diesel & Battery

SMT Scharf ChargeMasters are high productivity focused explosive charging machines. Accommodating both ANFO prills and emulsion explosive options, this machine is designed to ensure large payload capacity and large charging coverage. Dedicated places for detonators, primers and flushing systems ensure the ChargeMaster has all features on-board to guarantee a one-stop-shop for an entire shift's charging needs.



Optional Offerings all ChargeMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Radio Remote Control (Driving Functions)
- + Hydraulic Operated hose reels.

- + Platform Modifications (Up-hole hose pushers, detonator boxes, canopy)

Optional Offerings on ChargeMaster 600 EB

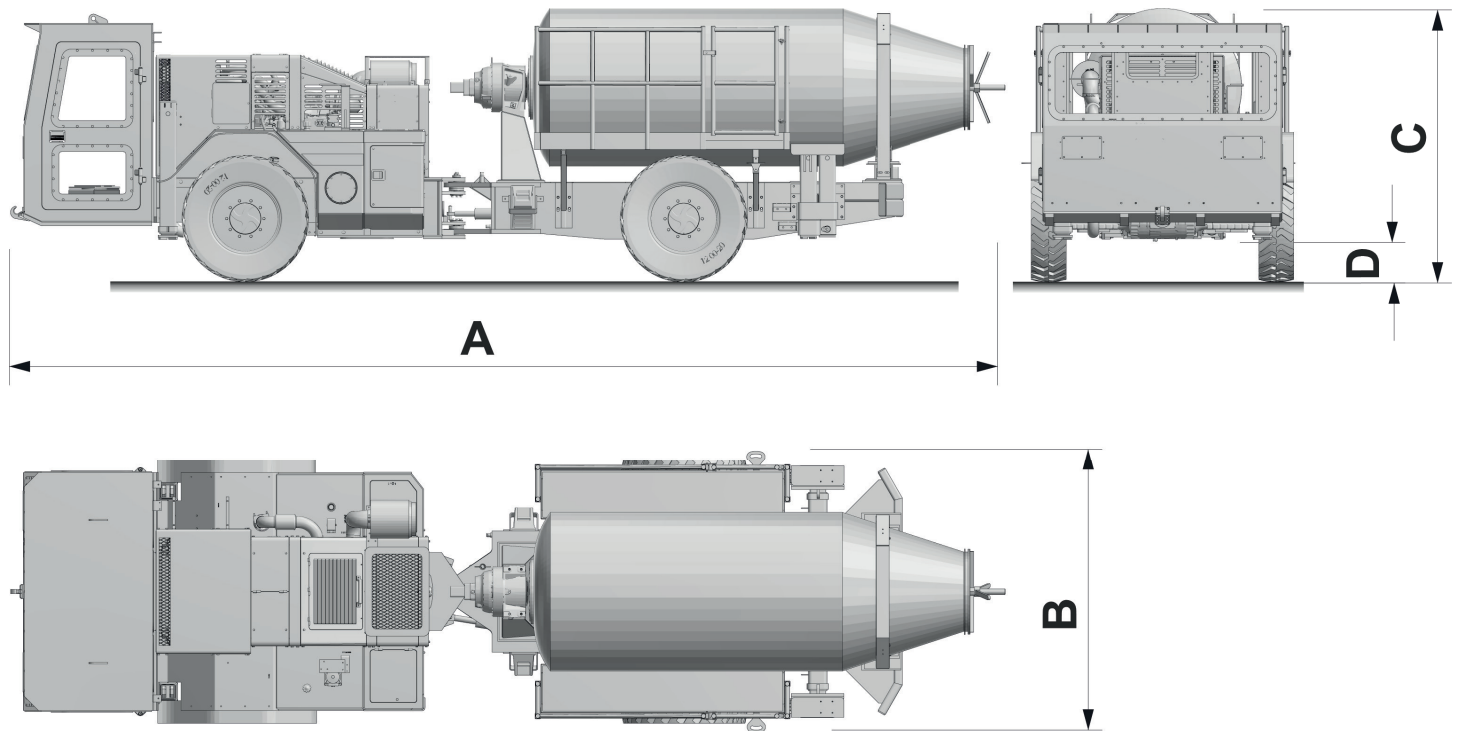
- + Extra Batteries
- + High Speed DC Charger
- + Work + Charge System (On-the-fly charging and Hose reel)

Technical Data

	Units	ChargeMaster 500 N	ChargeMaster 600 D	ChargeMaster 600 EB
Dimensions				
Charging Coverage	mm x mm	6112 x 7000	7850 x 7000	7850 x 7000
Emulsion Carrier Capacity	kg	900	3400	3400
ANFO Carrier Capacity	kg	450	450	450
Platform Capacity	kg	150	250	250
Length	mm	9200	10090	10090
Width	mm	2000	2400	2400
Height	mm	2250	2400	2400
Weight	kg	13200	16850	18150
Inner Turning Radius	mm	2750	4900	4900
Outer Turning Radius	mm	5500	7700	7700
Ground Clearance	mm	290	300	300
Diesel Unit Specifications				
Engine	Supplier	CAT C 4.4 Tier 3	Volvo TAD 571 VE	-
Power Output	kW	104	129	-
Torque	Nm	558	810	-
Transmission & Torque Converter	Supplier	Dana Spicer HR 20000	Dana Spicer HR 14000	-
Axles	Supplier	Dana Spicer 113	Dana Spicer 113	-
Wheels	Size	10.00 - 20.00 E4	12.00 - 20.00 E4	-
Fuel Tank Capacity	l	135	210	-
Battery Unit Specifications				
Electrical Motor	Supplier	-	-	Kessler Custom
Nominal Power	kW	-	-	130
Nominal Torque	Nm	-	-	1060
Transmission/Transfer Case	Supplier	-	-	Kessler W4633
Axles	Supplier	-	-	Dana Spicer 113
Wheels	Size	-	-	12.00 - 20.00 E4
Battery Capacity	kWh	-	-	130
Battery Nominal Voltage	V	-	-	650
Estimated Battery Weight	kg	-	-	2600
Standard Functionality integrated into all ChargeMasters				
Machine Safety	All machines compliant to ISO 19296:2018			
Emulsion Charging System	Hydraulic or electro-hydraulic emulsion charging, stainless steel emulsion-, water- and additive tanks. Digital monitoring and logging capability. Ability to integrate into all existing emulsion supplier units.			
ANFO Charging system	On-board pneumatic supply for ANFO prills, stainless steel tanks and digital monitoring.			
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes			
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting boom lift, -slew, -extend, stabilizers and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves. 90l/min, 220 bar load sense hydraulic supply for charging systems.			
Electrical System	24V Circuit, 2 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 2 x strobe/beacon light & 4 x working lights, all LED, Reverse Alarm, Hooters, Door limit switch			
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine/electrical drive, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.			
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals. Panel or remote control boom/platform operation.			
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.			
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification			

CRETEMASTER Concrete Transport - Diesel & Battery

The CreteMaster platform are compact concrete transport utility machines to ensure safe and effective operation. All CreteMasters are equipped with speed-variable rotating drums with internal flights, secure and easily accessible filling hatches and adjustable discharging heights. Various options for form-oil tanks, accelerator systems and washings systems can be included to improve productivity.



	Units	CreteMaster 500 N	CreteMaster 600 D	CreteMaster 600 EB
Dimensions				
Drum Size	m ³	4,4	5,8	5,8
Rotation Speed	rpm	0-13	0-13	0-13
Length (A)	mm	8100	9200	8900
Width (B)	mm	2200	2350	2350
Height (C)	mm	2400	2600	2600
Weight	kg	15200	16150	17260
Inner Turning Radius	mm	4600	4330	4330
Outer Turning Radius	mm	6960	7150	7140
Ground Clearance (D)	mm	290	300	300

Optional Offerings all CreteMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit

- + High pressure washer with tank
- + Admixture system with tank
- + Drum Chute

Optional Offerings CreteMaster 600 EB

- + Extra Batteries
- + High Speed DC Charger

Technical Data

	Units	CreteMaster 500 N	CreteMaster 600 D	CreteMaster 600 EB
Diesel Unit Specifications				
Engine	Supplier	CAT C 4.4 Tier 3	Volvo TAD 571 VE	-
Power Output	kW	104	129	-
Torque	Nm	558	810	-
Transmission & Torque Converter	Supplier	Dana Spicer HR 20000	Dana Spicer HR 14000	-
Axles	Supplier	Dana Spicer 113	Dana Spicer 113	-
Wheels	Size	10.00 - 20.00 E4	12.00 - 20.00 E4	-
Fuel Tank Capacity	l	135	210	-

Battery Unit Specifications				
Electrical Motor	Supplier	-	-	Kessler Custom
Nominal Power	kW	-	-	130
Nominal Torque	Nm	-	-	1060
Transmission/Transfer Case	Supplier	-	-	Kessler W4633
Axles	Supplier	-	-	Dana Spicer 113
Wheels	Size	-	-	12.00 - 20.00 E4
Battery Capacity	kWh	-	-	130
Battery Nominal Voltage	V	-	-	650
Estimated Battery Weight	kg	-	-	2600

Standard Functionality integrated into all CreteMasters	
Machine Safety	All machines compliant to ISO 19296:2018
Concrete Mixer	ZF concrete mixer drive units, Danfoss closed-loop pump, adjustable speed and bi-directional movement. Drums equipped with internal flights, 2x access covers and manual screw-type discharge cover. Drum equipped with safety sling. Safe working platform with handrails along drum.
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting drum lift and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves. Closed loop hydraulic circuit for drum drive, bi-directional system.
Electrical System	24V Circuit, 2 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 2 x strobe/beacon light & 2 x working lights, all LED, Reverse Alarm, Hooters, Door limit switch
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine/ electrical drive, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification

UTILITYMASTER Utility Machines - Diesel & Battery

The SMT Scharf UtilityMaster platform encompasses all 'utility' machines, based on the vigorous requirement of underground mining operations. The proven diesel and battery powered front-carrier section of the machine can accommodate rear frame features for the entire spectrum of functions, starting from personnel transport through material handling up to complex client specific cranes and booms. Experienced and proficient SMT Scharf engineers are always at the ready to assist clients with unique inquiries and client-specific constraints.



Optional Offerings all UtilityMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Fully customizable rear frames, PTO functionality, custom structures and client specific features.

Optional Offerings on UtilityMaster 600 EB

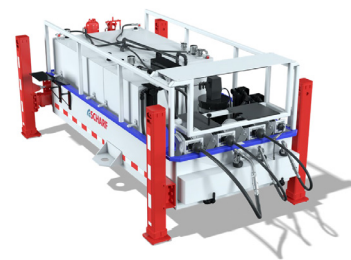
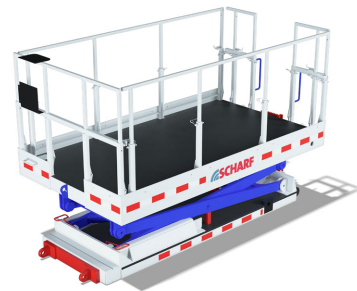
- + Extra Batteries
- + High Speed DC Charger
- + Work + Charge System (On-the-fly charging and Hose reel)

Technical Data

	Units	UtilityMaster 600 D	UtilityMaster 600 EB
Dimensions			
Length	mm	7500-9500	7500-9500
Width	mm	2300	2300
Height	mm	2250	2250
Weight	kg	13500 - 18200	13500-18200
Inner Turning Radius	mm	4330	4330
Outer Turning Radius	mm	6800-7200	6800-7200
Ground Clearance	mm	300	300
Diesel Unit Specifications			
Engine	Supplier	Volvo TAD 571 VE	-
Power Output	kW	129	-
Torque	Nm	810	-
Transmission & Torque Converter	Supplier	Dana Spicer HR 14000	-
Axles	Supplier	Dana Spicer 113	-
Wheels	Size	12.00 - 20.00 E4	-
Fuel Tank Capacity	l	210	-
Battery Unit Specifications			
Electrical Motor	Supplier	-	Kessler Custom
Nominal Power	kW	-	130
Nominal Torque	Nm	-	1060
Transmission/Transfer Case	Supplier	-	Kessler W4633
Axles	Supplier	-	Dana Spicer 113
Wheels	Size	-	12.00 - 20.00 E4
Battery Capacity	kWh	-	130
Battery Nominal Voltage	V	-	650
Estimated Battery Weight	kg	-	2600
Standard Functionality integrated into all UtilityMasters			
Machine Safety	All machines compliant to ISO 19296:2018		
Functionality	The UtilityMaster fleet consists of a comprehensive range of underground mining functions; material transport, lubrication systems, tankers, personnel transport, workshop units and civil units.		
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes		
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting drum lift and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves. 90 l/min @ 180 bar load sense PTO functionality		
Electrical System	24V Circuit, 2 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 2 x strobe/beacon light & 2 x working lights, all LED, Reverse Alarm, Hooters, Door limit switch		
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine/ electrical drive, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request.		
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.		
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.		
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification		

CASSETTEMASTER Utility Cassette Carrier Machines - Diesel & Battery

SMT Scharf's CassetteMaster pairs a robust four-wheel drive carriage unit with a variety of functional modular 'cassettes'. This allows one machine to perform various underground purposes, using the carriage's powerful hydraulic and electric power take-offs. Cassettes are easily disconnected and can still be used as standalone working stations. A true secondary support machine, the CassetteMaster is a valuable asset for all facets of underground mining operations.



Optional Offerings all CassetteMasters

- + Enclosed Cabin and Air Conditioning
- + 24V Hydraulic Oil Transfer Pump
- + Reverse Camera and Additional Screen
- + Lincoln Automatic Grease Lubrication System
- + Ansul A101/LVS Fire Suppression System
- + Remote Emergency Brake Release Kit
- + Fully customizable cassettes, PTO functionality, custom structures and client specific features.

Technical Data

	Units	CassetteMaster 600 D	CassetteMaster 600 EB
Dimensions			
Cassette Payload Capacity	kg	7600	7600
Cassette Envelope Size	mm x mm	3000 x 1700	3000 x 1700
Length	mm	7500-9500	7500-9500
Width	mm	2300	2300
Height	mm	2250	2250
Weight	kg	13500 - 18200	13500-18200
Inner Turning Radius	mm	4330	4330
Outer Turning Radius	mm	6800-7200	6800-7200
Ground Clearance	mm	300	300
Diesel Unit Specifications			
Engine	Supplier	Volvo TAD 571 VE	-
Power Output	kW	129	-
Torque	Nm	810	-
Transmission & Torque Converter	Supplier	Dana Spicer HR 14000	-
Axles	Supplier	Dana Spicer 113	-
Wheels	Size	12.00 - 20.00 E4	-
Fuel Tank Capacity	l	210	-
Battery Unit Specifications			
Electrical Motor	Supplier	-	Kessler Custom
Nominal Power	kW	-	130
Nominal Torque	Nm	-	1060
Transmission/Transfer Case	Supplier	-	Kessler W4633
Axles	Supplier	-	Dana Spicer 113
Wheels	Size	-	12.00 - 20.00 E4
Battery Capacity	kWh	-	130
Battery Nominal Voltage	V	-	650
Estimated Battery Weight	kg	-	2600
Standard Functionality integrated into all UtilityMasters			
Machine Safety	All machines compliant to ISO 19296:2018		
Functionality	The CassetteMaster fleet consists of a robust carrier capable of loading and unloading a comprehensive range of modular multifunctional cassettes; Lubrication cassettes, scissorlift cassettes, workshop cassettes, tanker cassettes and dump-body cassettes.		
Braking System	Hydraulic actuated, immersed multidisc service brakes with wear indication, SAHR Fail-to-Safe Park Brakes		
Hydraulic System	Load-Sense Hydraulic Circuit with suction, high pressure and return filtration. Complete condition monitoring. Double acting drum lift and steering cylinders with proportional control. 240 bar minimum isobaric hydraulic pressure hoses. All functions are equipped with relief and shock valves. 90 l/min @ 180 bar load sense PTO functionality		
Electrical System	24V Circuit, 2 x head lights, 2 x tail lights, 2 x brake lights, 4 x marker lights, 2 x strobe/beacon light & 2 x working lights, all LED, Reverse Alarm, Hooters, Door limit switch		
Electronic System & Machine intelligence	On-board Danfoss Controllers. Monitors and controls hydraulic system, brake system, engine/electrical drive, transmission and 24V circuit via analogue and Canbus sensors for pressures, temperatures, speeds and fluid levels. Various programmable interlocks as per client request		
Human Machine Interface	7" Display Computer with drive screen, engineering capabilities, diagnostic interface and data-logging capabilities. Electronic steering- and hydraulic functions joystick, electronic E-Stop, electronic brake- and acceleration pedals.		
Documentation	Operators Manual, Service and Maintenance Manual, Illustrated Parts Catalogue, Supplementary Component Data Sheets and Manuals.		
Training	On-site/Virtual Theoretical and Practical Training, Trainer Certification		

SMT SCHARF Group

The SMT Scharf Group is the global technology leader for derailment-proof monorails and floor mounted Duorail-vehicles in underground mining and tunneling. Our portfolio expansions and organic growth in the area of tunnel logistics and rubber-tired vehicles have given us an even broader position as a comprehensive solutions provider, enabling us to offer our global customers individual solutions.

The Scharf brand has been known for high machine quality and reliability for over 70 years. Our solutions are the first choice when it comes to maintaining high safety standards in particularly challenging geological environments.

Hidden champion, world leader in the niche!

With our worldwide network of subsidiaries and commercial agencies, we ensure optimum support for our globally active customers. No matter in which time zone and in which national language, our specialists are locally available for you.



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