



MST

642 PLUS

644 PLUS



	642 PLUS	644 PLUS
ENGINE	904J-E36TA (Diesel Engine)	904J-E36TA (Diesel Engine)
NET ENGINE POWER	100 HP (74,4 kW) @2400 RPM	100 HP (74,4 kW) @2400 RPM
OPERATING WEIGHT	9000 kg	9.375 kg
LOADER BUCKET CAPACITY	1.1 m ³	1.1 m ³





Efficient and Economic Engine

The 100 HP PERKINS diesel engine has been specifically designed for backhoe loader applications and has a volume of 3.6 liters. Its turbocharger and aftercooler mean that high torque can be achieved even at low rpm, allowing the engine to run with increased power and efficiency. This highly efficient, economical engine is also environmentally friendly as it meets all the Vehicle Emission Standards. The result? Maximum efficiency without damaging the environment

Excellent Compatibility with the Engine

The Auto PowerShift transmission is one of the main components which provide the MST 6 Series with its incredible power. The heavy-duty gearbox includes 4 forward and 4 reverse gears, and has Autoshift capability. The transmission and engine work together in perfect harmony, which means fuel consumption is kept to a minimum. The gearbox performs seamless automatic gear changes and offers a 4-wheel drive feature while on the job. This feature is automatically disabled in 3rd and 4th gear to maximize fuel economy.



HYDRAULIC SYSTEM

A powerful and efficient hydraulic system with high flow capacity achieves top performance, especially when under heavy loads. New MST 6 Series backhoe loaders with the optional hydraulic piston pump feature use a load-sensitive system to provide the operator with all the hydraulic power required, guaranteeing precise control and efficiency at every engine speed. In machines with closed centered and variable displacement pumped hydraulic systems, when hydraulic power is not required it's simply not produced, reducing unnecessary power loss. This means more power can be sent to the drivetrain, resulting in better performance when loading and driving. This highly efficient closed-center piston pump hydraulic system means the pump always provides exactly the right amount of hydraulic power required, cutting down on unnecessary fuel consumption. With the flow sharing valves which accompany with the piston pump, operator limitations are eliminated and multiple parts (boom, arm and bucket) can be moved simultaneously for maximum control, not limited by the operators' capabilities. Anti-cavitation valves integrated into the system prevent inertia load damage to the hydraulic system, and allow the boom and arm to move faster.

AXLES

The heavy-duty axles used in the MST 6 Series provide high load-carrying capability and are integral to the machine's robust, sturdy construction.

The LSD (limited slip differential) on the rear axle is able to deliver different levels of torque to the left and right wheels, which reduces the risk of skidding and provides maximum traction, even on challenging worksites and slippery surfaces with this unique function not only tires' lifetime are being extended but also fuel efficiency and work cycle times are being improved.





- Loader Joystick Control



- Radio-MP3 Player
- ISO Pattern Shifter (Optional)
- Hydraulic Boom Lock



- Ergonomic Steering Wheel
- Front Instrumental Panel



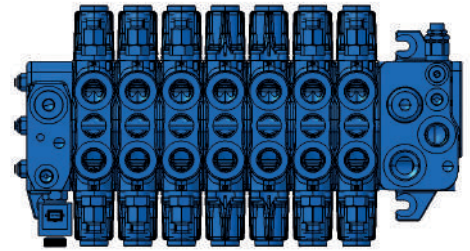
- Extra Storage Area on the roof for operator comfort.



- Improved Air Conditioning System (Optional) and Ventilation System
- Cool-box compartment for beverages (Available with Air Conditioner)



- Operator Seat with anti-fatigue with air-suspension for heavy-duty use over extended periods.



High-efficiency, closed-center hydraulic system with variable-flow piston pump is presented as optional and provides hydraulic power in an amount required by the user and operates with an efficiency

of up to 95% with precise control independent from engine speeds. A substantial fuel economy is obtained during operation with the load sensing system in variable flow piston pump.





Durable boom design ensuring maximum performance even in the most challenging works with its special design and reinforced structure.



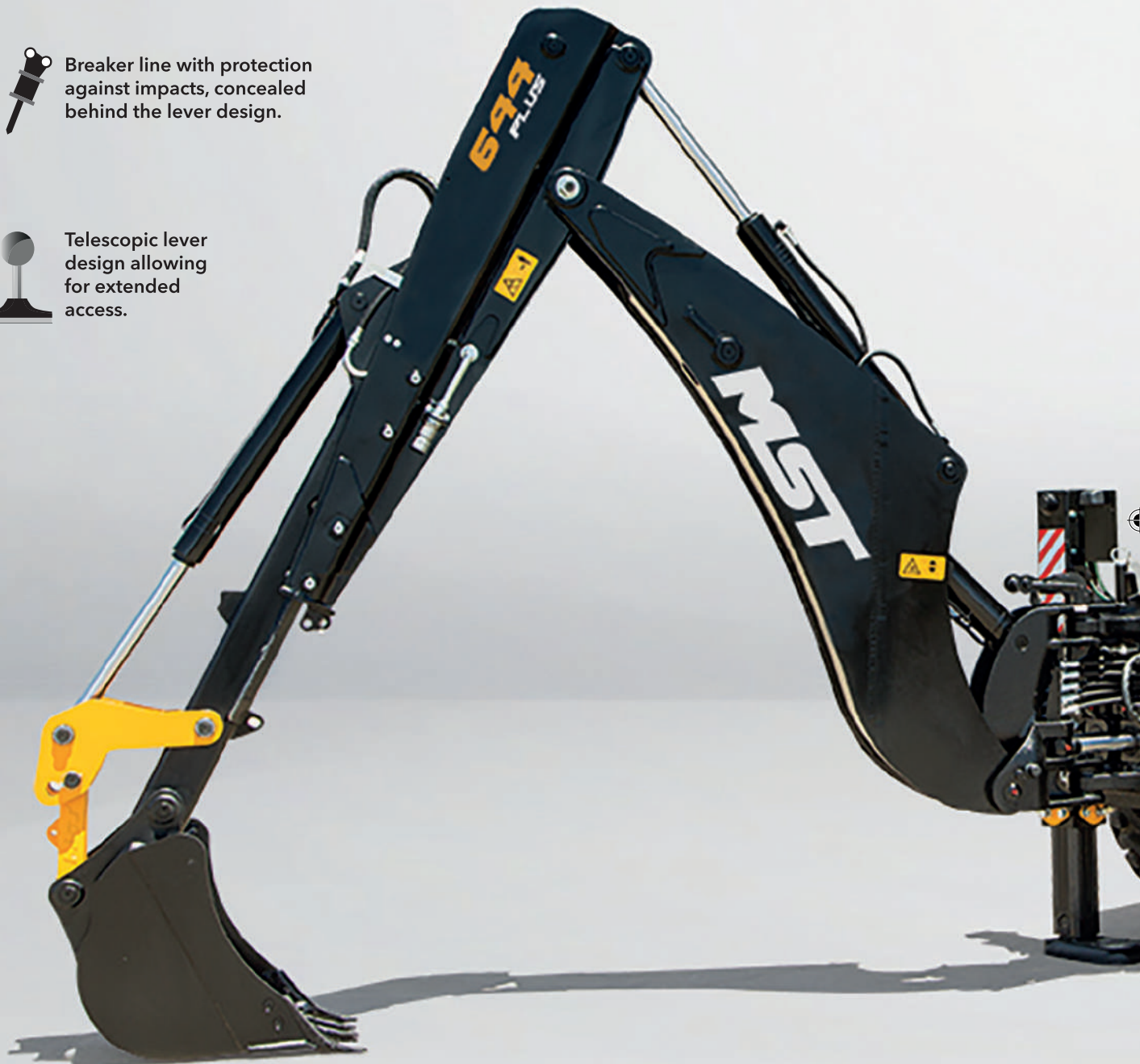
Hydraulic boom lock that can be controlled within the cab.



Breaker line with protection against impacts, concealed behind the lever design.



Telescopic lever design allowing for extended access.



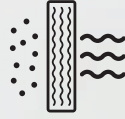
Heavy-duty type excavator backhoe in various capacities suitable for excavation, loading, and lifting works.



New and larger cast stabilizers.



Ergonomic operator's cab with ROPS and FOPS certification in compliance with international standards.



Clean air suction outlet and cabin air filter.



Strong and durable preloader backhoe with a capacity of 1.1 m³

PP

Since non-metallic polypropylene (PP) fuel tanks offered as standard components are not exposed to corrosion, pollution of the fuel system by corrosion of the fuel tank is prevented.
(The bottom of the tank is protected by sheet)



Long-lasting LED back stop tail lamps with high lighting power.



Limited-Slip Differential (LSD) on rear axles, allowing for maximum traction on slippery surfaces.

ENGINE

Emissions Class	Stage V
Model	904J-E36TA Diesel Engine
Number of Cylinders	4 in line
Diameter x Stroke	98 x 120 mm
Displacement	3,6 l
Max. Power	100 HP (74,4 kW) @2400 rpm
Max. Torque	430 Nm @1500 rpm

- A reliable, fuel-efficient, low-maintenance diesel engine which uses the latest technology. Features high power and torque output, water cooling, a turbocharger and intercooling
 - Complies with EU Stage V and U.S. EPA & CARB Tier 4 Final Emission Regulations

HYDRAULIC SYSTEM

High-efficiency, closed center hydraulic system with variable-flow piston pump, renewable flowsharing and regeneration featured (Flowcharging) valves.

Main Pump	2200 rpm
Flow	158,4 l/min @2200 rpm
Pressure	240 bar

- Anti-shock and anti-cavitation valves
 - Axial piston pump for MST 6 Series Backhoe Loaders is used as standard equipment provides hydraulic power in an amount required by the user and operates with an efficiency of up to 95% with precise control independent from engine speeds.
 - A substantial fuel economy is obtained during operation with the load sensing system in variable flow piston pumps
 - With the flow sharing valves which accompany with the piston pump, operator limitations are eliminated and multiple parts (boom, arm and bucket) can be moved simultaneously for maximum control, not limited by the operators' capabilities even in low engine speeds.
 - Pilot-controlled front hydraulic joystick allows the operator to use the machine using less power
 - Ergonomically positioned, pilot-controlled joystick-type Beko controls designed to control the backhoe group with minimal operator effort
 - Safety system to disable the hydraulic joysticks while driving
 - 10 micron oil filter

ELECTRICAL SYSTEM

Voltage	12 V
Battery	135 amp/h (heavy duty)
Alternator	120 A

BRAKES

Service Brake	Oil bath, hydraulically operated, self-adjusting disc brakes located within the rear axle, with separate brake pedals for the left and right wheel.
Parking Brake	Hand lever-controlled mechanical brake, effective on the rear axle differential.

STEERING

Hydraulic steering system
 Steering column's height, depth and angle can be adjusted
 Soft-Touch steering wheel

TRANSMISSION

Heavy-duty Auto PowerShift transmission
 4 forward and 4 reverse gears
 2 or 4-wheel drive switch
 2.64 / 1 stall ratio converter
 Safety system to prevent engine start while in gear for safe operation
 Transmission lubricant cooling

FILLING CAPACITY

Engine Oil	10,5 lt
Engine Cooling System	17 lt
Fuel tank	140 lt
Hydraulic Oil Tank	62 lt
Total Hydraulic System Volume	145 lt
DEF Tank	18 lt
Transmission Lubrication	22 lt
Front Axle Differential	7,5 lt
Front Axle Heads	2 x 0,80 lt
Rear Axle Differential	16 lt
Rear Axle Heads	2 x 1,5 lt

LOADER PERFORMANCE

Loader Bucket Capacity	1.1 m ³
Bucket Breakout Force	7734 kgf
Arm Breakout Force	5905 kgf
Maximum Lifting Capacity	3200 kgf

BACKHOE PERFORMANCE

	TB Extended	TB Retacted
Rear Bucket Capacity	0,17 m ³	0,17 m ³
Bucket Breakout Force	6424 kgf	6424 kgf
Arm Breakout Force	2506 kgf	3461 kgf
Max. Lifting Capacity (Telescopic Boom)	750 kg	1250 kg

DRIVE SPEED

Max Speed On Road	40 km/h
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AXLES

Heavy-duty axles
 16° front axle rocking
 Outboard planetary reduction
 Differential Lock on rear axle

TURNING DIAMETER DEFINITION

Turning Diameter Definition (braked)	8075 mm
Turning Diameter Definition (unbraked)	10000 mm

TIRES

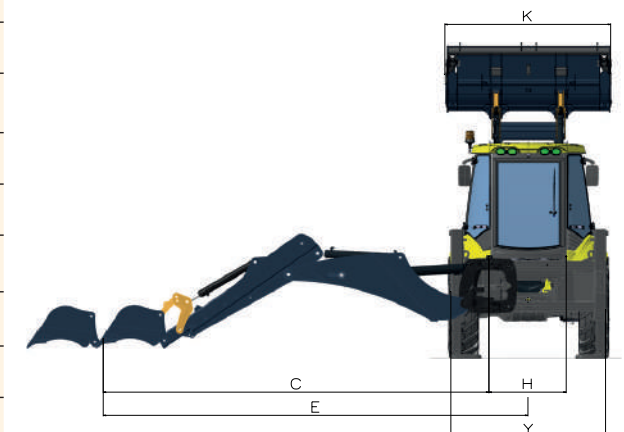
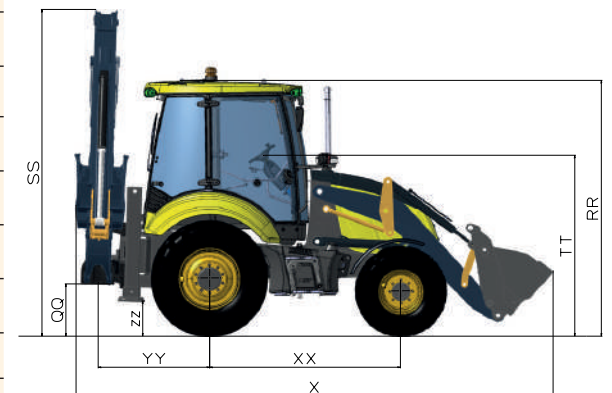
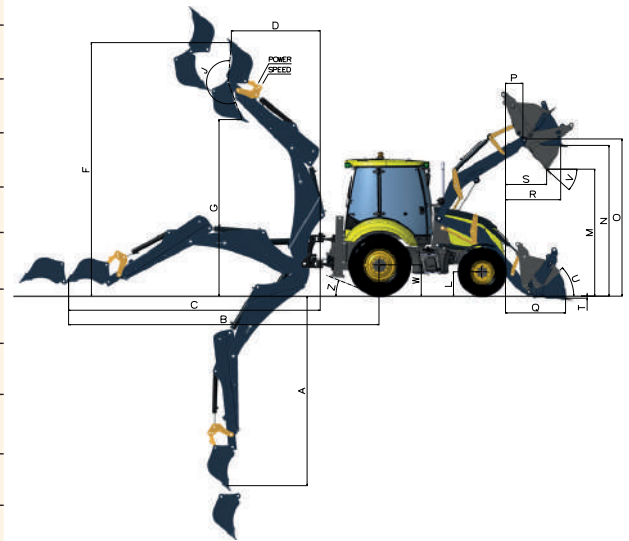
Front Tires	405/70 - 20" (12 Layers)
Rear Tires	16.9 - 28 (14 Layers)

WEIGHT

Standard Machine Operating Weight-Fixed Dipper	9000 kg
Standard Machine Operating Weight-Extended Dipper	8720 kg

DIMENSIONS

	Fixed dipper	TB Extended	TB Retacted
A SAE Maximum dig depth (mm)	4075	5350	4255
A Maximum dig depth (mm)	4575	5850	4755
B Reach - ground level to rear wheel centre (mm)	6866	8027	7026
C Reach - ground level to slew centre (mm)	5480	6641	5640
D Reach - at full high to slew centre (mm)	1727	2776	1936
E Side reach -to centre line of machine (mm)	6005	7149	6147
F SAE operating height (mm)	5509	6347	5653
G Max loadover height (mm)	3764	4623	3912
J Bucket Rotation (O)	205		
K Shovel Width (mm)	2350		
Y Rear frame width (mm)	2250		
SS Total travel clearance (mm)	3838		
QQ Kingpost clearance (mm)	542		
Z Departure angle (O)	19		
ZZ Stabilizer feet clearance (mm)	338		
YY Slew centre to rear axle centre distance (mm)	1388		
XX Axle centreline distance (mm)	2237		
X Total travel length (mm)	5740		
TT Steering wheel centre height (mm)	2057		
RR Cab roof height (mm)	3071		
P Pin forward reach (mm)	377		
S Reach at full height fully dumped (mm)	900		
R Max. reach at full height (mm)	1124		
V Dump angle (O)	43		
M Dump height (mm)	2800		
N Load over height (mm)	3328		
O Loader hinge pin height	3481		
U Roll back at ground (O)	44		
T Dig depth (mm)	124		
Q Reach at ground (toe plate horizontal) (mm)	1317		
H Total kingpost travel (mm)	1125		
W Rear wheel centre to ground (mm)	643		
L Front wheel centre to ground (mm)	496		



ENGINE

Emissions Class	Stage V
Model	904J-E36TA Diesel Engine
Number of Cylinders	4 in line
Diameter x Stroke	98 x 120 mm
Displacement	3,6 l
Max. Power	100 HP (74,4 kW) @2400 rpm
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ELECTRICAL SYSTEM

Voltage	12 V
Battery	135 amp/h (heavy duty)
Alternator	120 A

BRAKES

Service Brake Oil bath, hydraulically operated, self-adjusting disc brakes located within the rear axle, with separate brake pedals for the left and right wheel.

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TRANSMISSION

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 4 forward and 4 reverse gears
 2 or 4-wheel drive switch
 2.64 / 1 stall ratio converter
 Safety system to prevent engine start while in gear for safe operation
 Transmission lubricant cooling

FILLING CAPACITY

Engine Oil	10,5 lt
Engine Cooling System	17 lt
Fuel tank	140 lt
Hydraulic Oil Tank	62 lt
Total Hydraulic System Volume	145 lt
DEF Tank	18 lt
Transmission Lubrication	22 lt
Front Axle Differential	8,5 lt
Front Axle Heads	2 x 1,3 lt
Rear Axle Differential	9 lt
Rear Axle Heads	2 x 1,5 lt

LOADER PERFORMANCE

Loader Bucket Capacity	1.1 m ³
Bucket Breakout Force	7734 kgf
Arm Breakout Force	5905 kgf
Maximum Lifting Capacity	3200 kgf

BACKHOE PERFORMANCE

	TB Extended	TB Retacted
Rear Bucket Capacity	0,17 m ³	0,17 m ³
Bucket Breakout Force	6424 kgf	6424 kgf
Arm Breakout Force	2506 kgf	3461 kgf
Max. Lifting Capacity (Telescopic Boom)	750 kg	1250 kg

DRIVE SPEED

Max Speed On Road	40 km/h
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AXLES

Heavy-duty axles
 16° front axle rocking
 Outboard planetary reduction
 LSD (Limited Slip Differential)

TURNING DIAMETER DEFINITION

Turning Diameter Definition (braked)	7900 m
Turning Diameter Definition (unbraked)	8800 m

TIRES

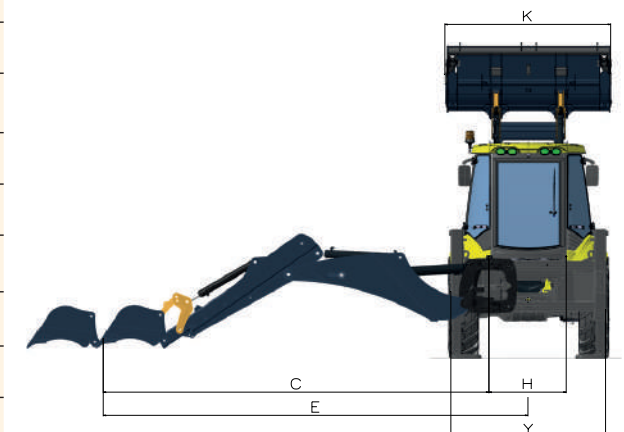
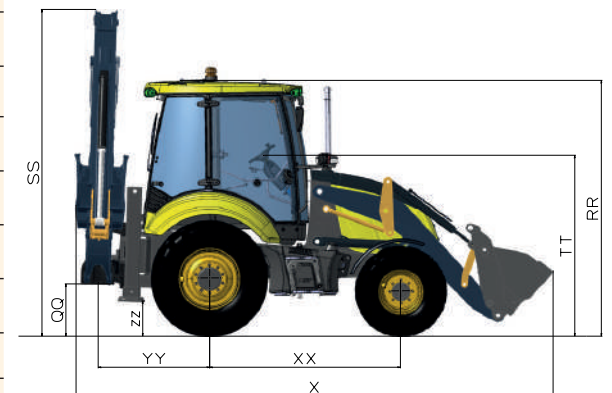
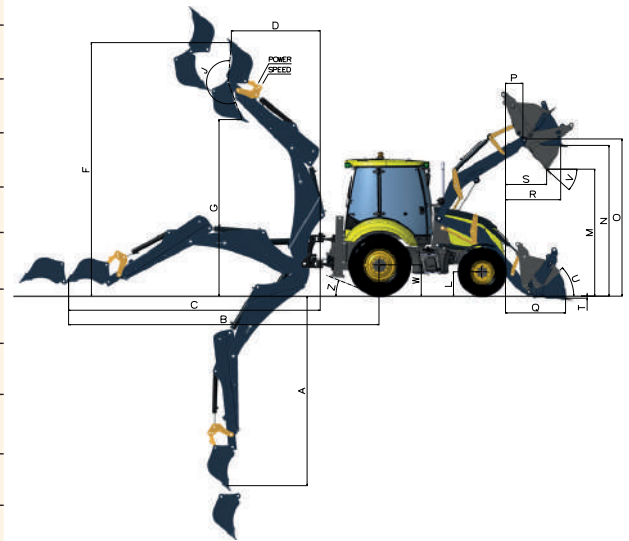
Front Tires	16,9 - 28" (14 Layers)
Rear Tires	16,9 - 28" (14 Layers)

WEIGHT

Standard Machine Operating Weight-Fixed Dipper	9375 kg
Standard Machine Operating Weight-Extended Dipper	9095 kg

DIMENSIONS

	Fixed dipper	TB Extended	TB Retacted
A SAE Maximum dig depth (mm)	4020	5310	4215
A Maximum dig depth (mm)	4520	5810	4715
B Reach - ground level to rear wheel centre (mm)	6830	7990	6990
C Reach - ground level to slew centre (mm)	5480	6641	5640
D Reach - at full high to slew centre (mm)	1724	2776	1936
E Side reach -to centre line of machine (mm)	6005	7149	6147
F SAE operating height (mm)	5568	6406	5696
G Max loadover height (mm)	3824	4680	3971
J Bucket Rotation (O)	205		
K Shovel Width (mm)	2350		
Y Rear frame width (mm)	2250		
SS Total travel clearance (mm)	3864		
QQ Kingpost clearance (mm)	591		
Z Departure angle (O)	21		
ZZ Stabilizer feet clearance (mm)	363		
YY Slew centre to rear axle centre distance (mm)	1380		
XX Axle centreline distance (mm)	2300		
X Total travel length (mm)	5740		
TT Steering wheel centre height (mm)	2148		
RR Cab roof height (mm)	3093		
P Pin forward reach (mm)	413		
S Reach at full height fully dumped (mm)	935		
R Max. reach at full height (mm)	1260		
V Dump angle (O)	43		
M Dump height (mm)	2810		
N Load over height (mm)	3338		
O Loader hinge pin height	3491		
U Roll back at ground (O)	44		
T Dig depth (mm)	115		
Q Reach at ground (toe plate horizontal) (mm)	1340		
H Total kingpost travel (mm)	1125		
W Rear wheel centre to ground (mm)	643		
L Front wheel centre to ground (mm)	643		





MST



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