

POWERSCREEN[®] METROTRAK

JAW CRUSHER



TECHNICAL SPECIFICATION - REV 1. 01/01/2019





METROTRAK



OVERVIEW

SPECIFICATION

Total Weight	Tier 3 : 28,200kg (62,170lbs) - VGF, bypass conveyor, twin pole magnet Tier 4F : 28,000kg (61,729lbs) - VGF, bypass conveyor, twin pole magnet
Transport	Length 12.4m (40' 8") Height 3.2m (10' 6") Width 2.4m (7' 10")
Working	Length 12.4m (40' 8") Height 3.2m (10' 6") Width 3.8m (12' 6")
Crusher Type:	Single toggle jaw, feed opening 900mm x 600mm (35" x 24")
Power Unit	Tier 3 John Deere 4045 126kW (169hp) Constant Speed John Deere 4045 126kW (169hp) Tier 4F Caterpillar C4.4 129kW (173hp)
Plant Colour	RAL 5021, RAL 7024, RAL 9005

FEATURES & BENEFITS

The Powerscreen® Metrotrak is a compact, high performance track mobile jaw crushing plant featuring the "M" series single toggle jaw crusher. With an aggressive crushing action & a high output even at tight settings, the Metrotrak is ideally suited for operators on the mining, quarrying and recycling industries, especially those working in urban locations or where space is restricted. The new Metrotrak builds on the features of the Powerscreen Metrotrak HA by improving access for chamber wedge removal, fully tunnelled product conveyor, easy access product conveyor tail drum adjust, new compact design bypass chute with improved internal clearances & the option to fully lower product conveyor to clear blockages & aid maintenance.

- Output potential of up to 200tph / 220 US tph - depending on material type & crusher settings
- Heavy duty fabricated chassis & track frame
- Heavy duty wear resistant feed hopper
- Stepped self cleaning grizzly feeder
- Hydraulic setting adjustment
- Fully skirted up to magnet
- Grizzly bypass & fines chute
- Fixed hopper as standard
- Dust suppression system
- Uncomplicated design with simple operation
- Efficient direct drive
- Remote control via umbilical
- Easily set up
- Chamber unblocking system (optional)
- Powerscreen Pulse telemetry system as standard

APPLICATIONS



Aggregate

Sand & gravel
Blasted rock
River rock



Recycling

C&D waste
Overburden
Foundry waste



Mining

Processed ores
Processed minerals



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JAW CRUSHER

Crusher type:	'M' Series single toggle jaw with hydraulic setting
Feed opening:	900mm x 600mm (35" x 24")
Bearings:	Self aligning spherical rollers
Lubrication:	Grease lubrication via lubrication points on crusher body
Drive:	Through V belts with screw tension adjustment on engine
Factory pre-set:	50mm (2") closed side setting (CSS)
Minimum setting:	40mm (1½") closed side on concrete. 50mm (2") CSS on natural rock not exceeding a 10% fines value of 390kN. Settings measured from root to tip of opposite tooth. For maximum material strength of 390kN 10% Fines, 240MPa compressive strength, as per other M-Series Jaws. For applications outside this range, please consult Powerscreen.
Maximum setting:	130mm (5¼") CSS (subject to feed grading)
Adjustment:	Full range CSS can be achieved hydraulically. CSS range: Quarry 50mm (2") - 130mm (5¼") Recycling 40mm (1½") - 130mm (5¼")

CRUSHER FEATURES

- Unrestricted feed opening
- Excellent crushing geometry
- "Live" crushing section with replaceable wear plate at the top of the jaw
- High reduction ratio
- Hydraulic adjustment system for quick & easy setting changes
- Optional deflector plate



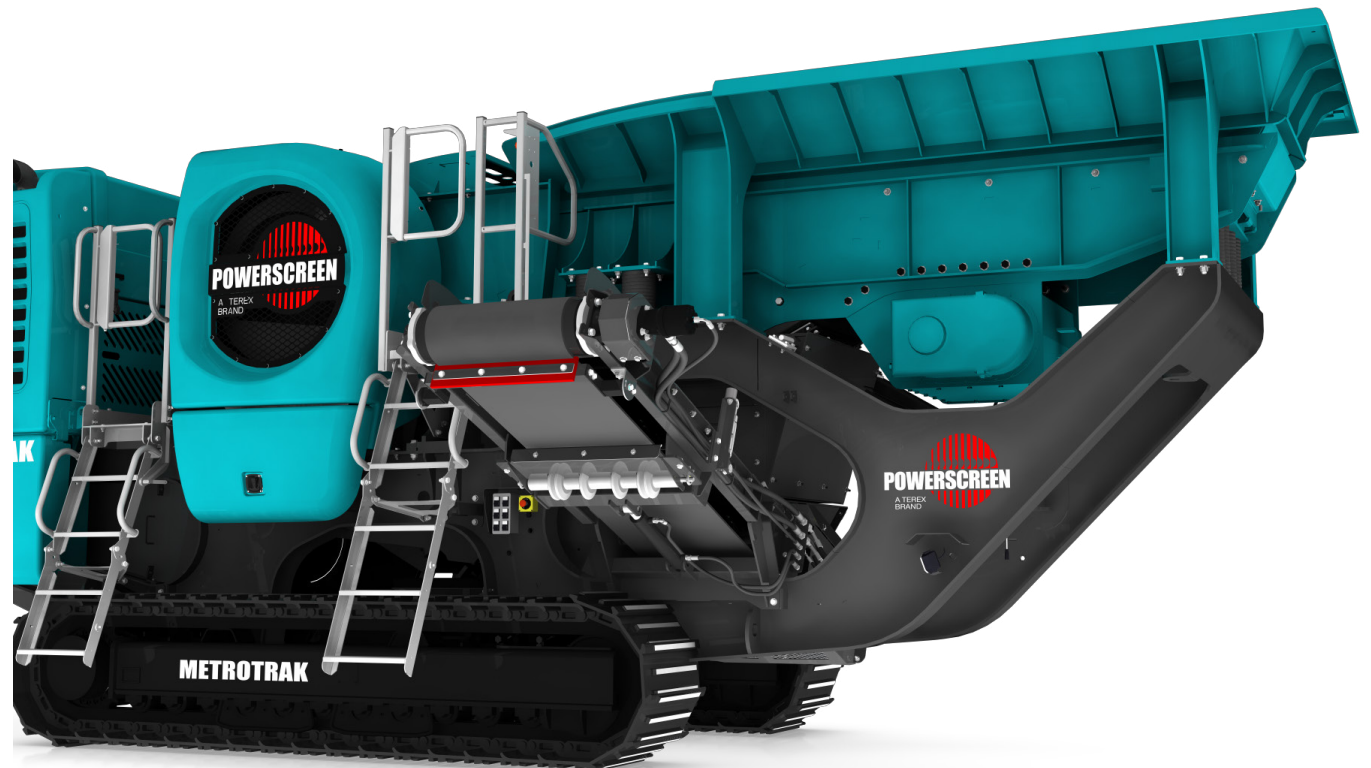


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HOPPER

Hopper type:	Fixed hopper
Hopper length:	4m (13' 1")
Hopper width:	1.8m (5' 10")
Hopper capacity:	Up to 3.6m ³ (4.7 cu. yd.)
Hopper body:	8mm (1/3") thick, wear resistant steel plate



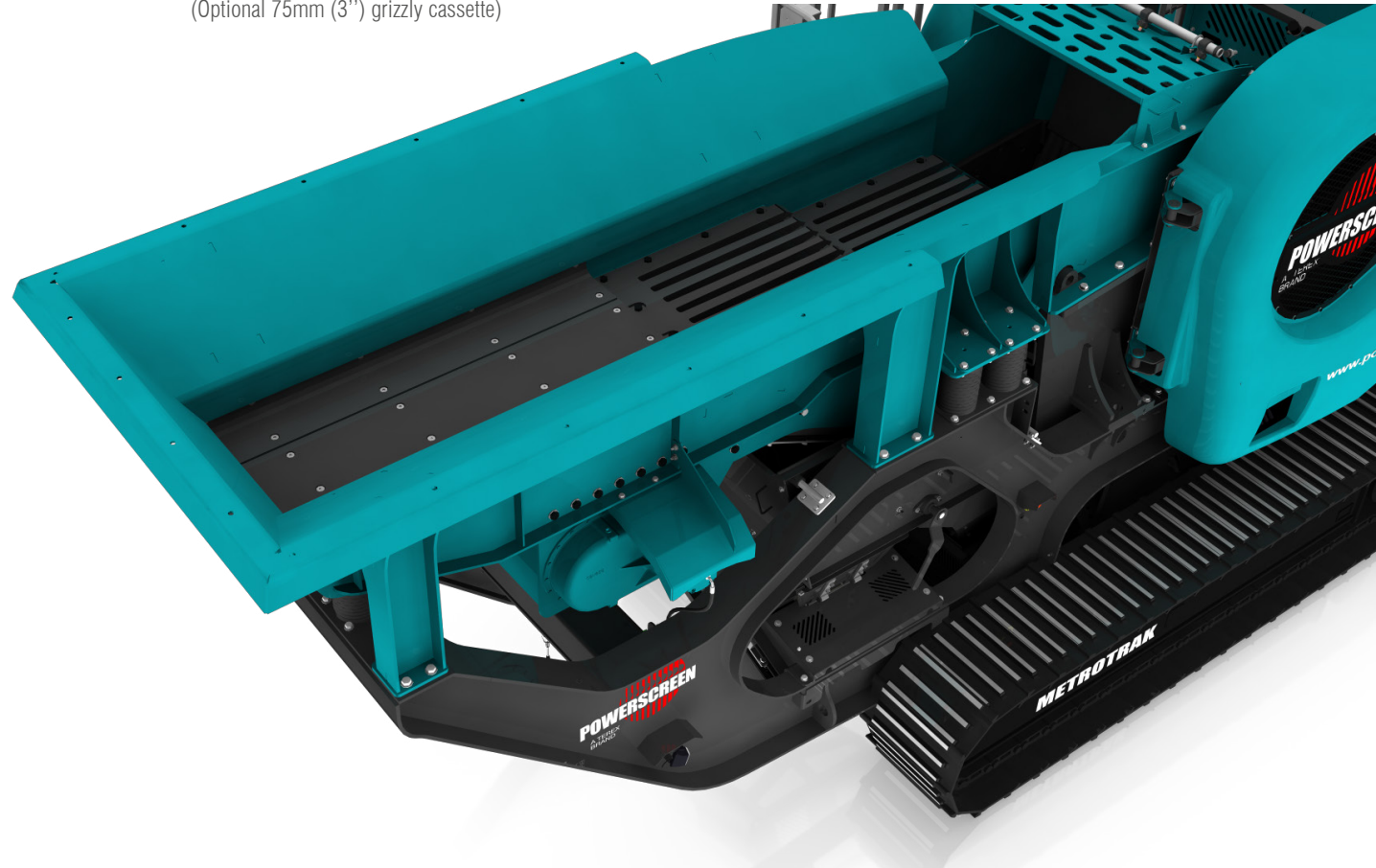


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VIBRATING GRIZZLY FEEDER

Type:	Spring mounted vibrating pan	Underscreen:	Removable rubber blanking mat, replaceable with optional wire meshes
Vibrating unit:	Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end	Control:	Variable speed (500—915 rpm) control through proportional flow control valve
Length:	3.8m (12' 6")	Chute:	Bypass chute with internal two way flap door for controlling direction of fines, either forward onto product belt (if blanking mat fitted) or down onto optional bypass conveyor where specified
Width:	800mm (2' 7")		
Drive:	Flange mounted hydraulic motor		
Grizzly:	1.95m (6' 5") long fixed bars at nominal 50mm (2") aperture tapered from front to back, with step & bolted into feeder body (Optional 75mm (3") grizzly cassette)		





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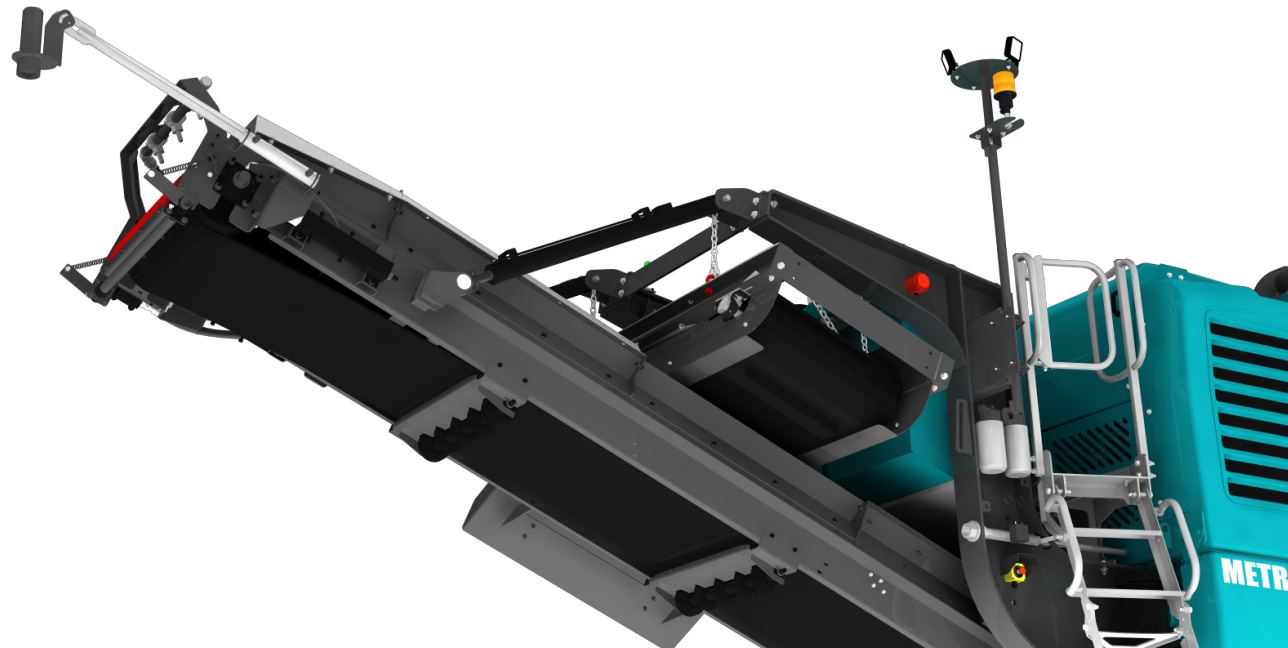
PRODUCT CONVEYOR

Conveyor type:	Troughed belt conveyor with fixed tail end
Belt type:	EP500/3 with 5mm top & 1.5mm bottom heavy-duty rubber covers
Belt width:	800mm (2' 7")
Discharge height:	2.9m (9' 6")
Stockpile volume:	39m ³ (51 cu. yd.)
Drive:	Direct drive hydraulic motor
Feedboot:	Impact bars & wear resistant liners at feed point
Skirting:	Wear resistant rubber skirting along the length of the product conveyor up to the magnet
Belt adjustment:	Aluminium
Belt covers:	Canvas type removable dust covers are fitted at the head end
Belt scraper:	Polyurethane scraper fitted as standard

DUST SUPPRESSION SYSTEM

Spray bars with atomiser nozzles mounted over crusher mouth, product conveyor feed & discharge points. Piped to an inlet manifold for customer's pressured water supply.

Type:	Clean water multi-atomising nozzles
Inlet:	Single point
Pressure:	2.8 bar (42 psi)
Water supply:	7 L/min
Frost protection:	Via system drain valves
Pump:	Optional extra





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POWER UNIT & HYDRAULICS

Tier 3 Equivalent:	John Deere 4045 –126kW (169hp)
Operating conditions:	Ambient temperature +30°C & –5°C (86°F & 23°F) altitudes up to 2000m (6562ft) above sea level - For applications outside this range please consult with Powerscreen as the plant performance / reliability may be affected.
Operating rpm:	1800 rpm
Plant drive:	High quality pumps driven via engine PTO's
Fuel tank capacity:	400 L (106 US Gal)
Hydraulic tank capacity:	280 L (74 US Gal)
Clutch type:	High efficiency self-adjusting HPTO 12 dry plate clutch with electric hydraulic control
Tier 4 / Stage IV:	Caterpillar C4.4, 129 kW (173hp)
Operating conditions:	Ambient temperature +30°C & –5°C (86°F & 23°F) altitudes up to 2000m (6562ft) above sea level - For applications outside this range please consult with Powerscreen as the plant performance / reliability may be affected.
Operating rpm range:	1800rpm—2000rpm
Constant Speed Stage IIIA:	John Deere 4045 –126kW (169hp)@1800rpm.
Emission control technique:	Diesel Exhaust Fluid injection (DEF) & Diesel Particulate Filter (DPF)
Plant drive:	High quality pumps driven via engine PTO's
Fuel tank capacity:	400 L (106 US Gal)
Hydraulic tank capacity:	280 L (74 US Gal)
Clutch type:	High efficiency self-adjusting HPTO 12 dry plate clutch with electric hydraulic control
Crusher drive:	Direct drive via wedge belts, Clutch pulley diameter 180mm (7¼ ") Crusher pulley diameter 1220mm (47¾")
Tensioning:	Manually adjustable screw tensioners under power unit





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TRACKS

Type:	Heavy duty tracks fitted as standard
Track width:	400mm (1' 4")
Sprocket centres:	2.95m (9' 8")
Gradeability:	30° maximum
High speed:	1.5kph (0.93mph)
Drive:	Hydraulic
Tensioning:	Hydraulic adjuster, grease tensioned





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PLANT CONTROLS & OTHER

CHASSIS

Heavy duty fabricated I section of welded construction.

GUARDS

GRP guards are provided for all drives, flywheels, pulleys & couplings. The guards provided are designed & manufactured to CE & ANSI standards.

UMBILICAL CONTROL

An umbilical control unit is also supplied with the plant. This is fitted with controls for the track motion & a stop button for the plant.

TOOLBOX

A plant mounted lockable toolbox is provided containing operators manual, grease gun, tool kit & flogging spanners.

PLANT CHUTEWORK

Fabricated 10mm (½") steel plate 25mm (1") abrasion resistant wear plate on base.

Bypass chute : Fabricated from 6mm (¼") plate with 8mm (5/16") wear plates (removable)

PLATFORMS

Maintenance platforms are provided on each side of the engine & on one side of the crusher feed chute with access ladder.

PLANT CONTROLS

Advanced CANBUS compliant system - large display screen. Five simple operating modes with menu driven graphic user interface:

- Track mode — for moving machine
- Automatic mode — for automatically starting the machine in pre-determined sequence
- Configuration mode — for testing/setting individual components
- User friendly incremental selection of feeder and crusher speed enables the operator to achieve the optimal throughput
- Detachable umbilical control for tracking
- Radio remote control (optional)
Integrated machine and engine control panel
- Auto regulating feeder selectable for improved throughput control
- Seven emergency stops



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OPTIONS

MAGNET

Type:	Suspended self cleaning overband magnet with endless belt
Magnet width:	750mm (2' 6")
Magnet length:	836mm (33")
Drive:	Hydraulic motor
Control:	Variable speed
Discharge chute:	Via stainless shedder plate
Power:	600 Gauss at 200mm (8") 480 Gauss at 250mm (10")

BELT WEIGHER

Type:	Modular scale with stainless load cells, single idler speed wheel & display unit
Accuracy:	+ 1.0 + 0.5%
Load cells:	Two temperature compensated parallelogram-style, stainless steel
Display:	Separate read out in toolbox



BYPASS CONVEYOR

Conveyor type:	Troughed belt conveyor, hydraulically folding
Width:	600mm (2')
Discharge height:	1.93m (6' 4")
Stockpile volume:	11m ³ (14 cu. yd.)
Drive:	Direct drive hydraulic motor
Position:	LHS standard. RHS Optional



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OPTIONS 2

UNDERSCREEN MEDIA

Position: Replaces standard blanking mat, used in conjunction with optional bypass conveyor
Apertures 10mm, 20mm, 30mm, 40mm or 50mm

CHAMBER UNBLOCKING SYSTEM

Uses a motor mounted on the flywheel to cycle the chamber back/forward to crush blocked material
Note: Machine cannot be run in reverse continually

ELECTRIC REFUELLING PUMP

24 volt refuelling pump, allows fuel to be drawn from a remote source. Fuel transfer rate 50 L/min (13 US Gal/min)

RADIO REMOTE CONTROL

Complete with integrated tracking functions & plant stop button. NB - Only available in certain countries where type approval has been obtained. Remote can also be used to:
Start/Stop feeder
Control feeder speed

CONTROL PANEL POSITIVE PRESSURISATION

An additional unit designed to reduce dust particles within the Control Panel. A continuous flow of clean air is passed through the cabinet whilst the unit simultaneously filters out any particulate laden air.

HOT/COLD CLIMATE OILS

Cold climate oils - (recommended for ambient temperatures between -20 to +30°C)
- Hydraulic & lubrication oils only. Other component modifications may be required for low temperature operations. Please contact the Powerscreen sales & applications department with any queries.
Hot climate oils - (recommended for ambient temperatures between +15 to +50°C)



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OPTIONS 3

OPTIONAL EXTRAS

- Bypass conveyor
- Wire mesh for VGF underscreen
- Super tooth or multi tooth liners in lieu of premium jaw plates
- Magnet prepared
- Single pole overband magnet
- Twin pole overband magnet
- Jaw level sensor
- Stockpile level sensor
- Hydraulic raise / lower magnet
- Lighting mast
- Belt weigher
- Electric refuelling pump
- Hydraulic water pump for dust suppression
- Radio remote control
- Product conveyor hydraulic raise/lower
- Hydraulically folding product conveyor
- Blanking mat
- Aluminium dust covers
- Hydraulic deflector plate
- Crusher unblock system
- Feeder control station





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POWERSCREEN PULSE

RECORD, DISPLAY AND ANALYSE DATA:

HIGH EFFICIENCY THROUGH PRECISE INFORMATION

Available online anywhere and at any time: comprehensive information on the GPS location, start and stop times, fuel consumption, tonnages, cone settings, wear ratings, operating hours, maintenance status, and much more.




**AVAILABLE
ANYWHERE
AND AT ANY TIME**


**DASHBOARD
DISPLAY**


**FLEET
OVERVIEW**


**WEEKLY REPORT
DIRECT TO YOUR
INBOX**


**GPS: MACHINE
TRACKING**


**REPORTING
UTILISATION, PERFORMANCE
& PART SPECIFIC**



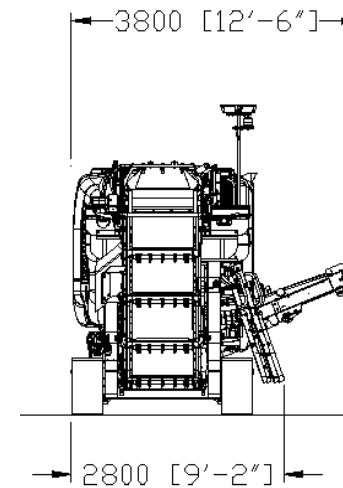
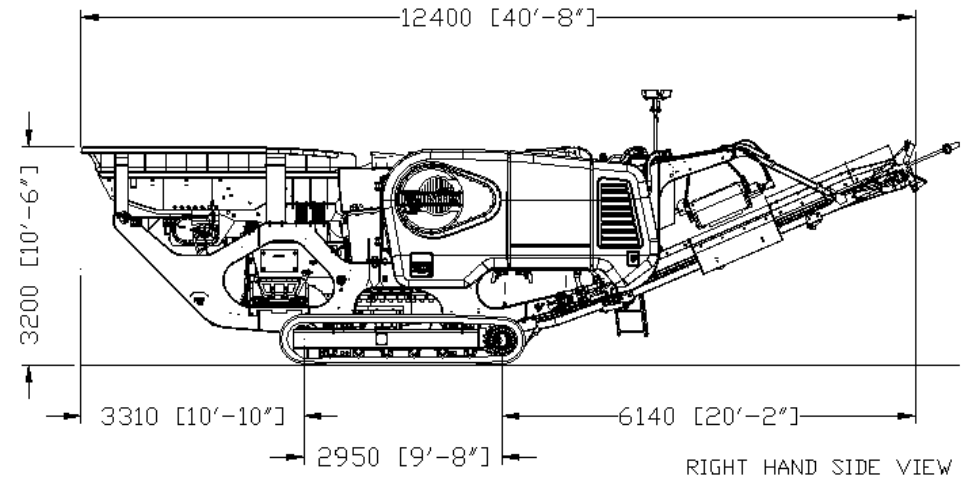


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DIMENSIONS

Figure 1: Metrotrak
Working Position



MORE DIMENSIONS OVERLEAF

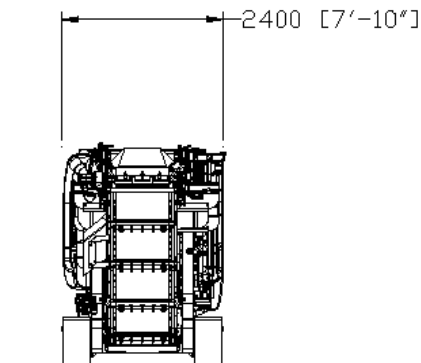
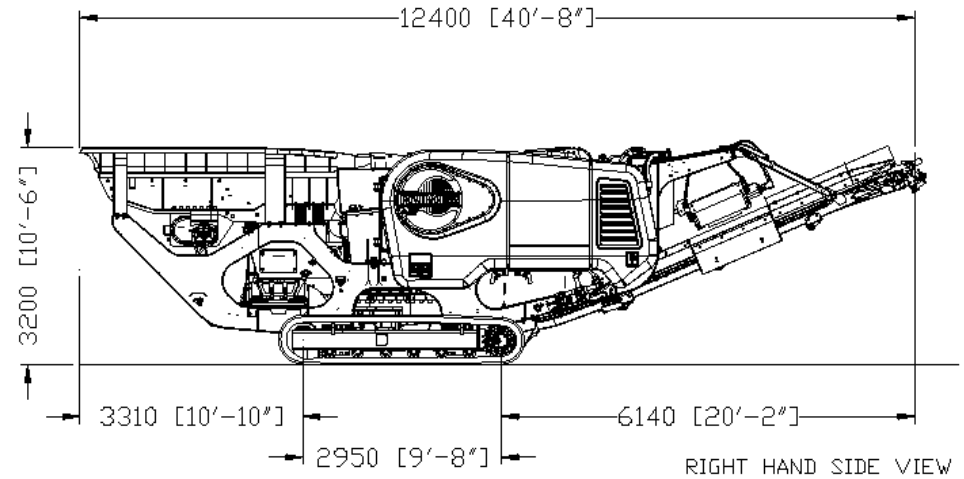


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DIMENSIONS

Figure 2: Metrotrak
Transport Position



MORE DIMENSIONS OVERLEAF

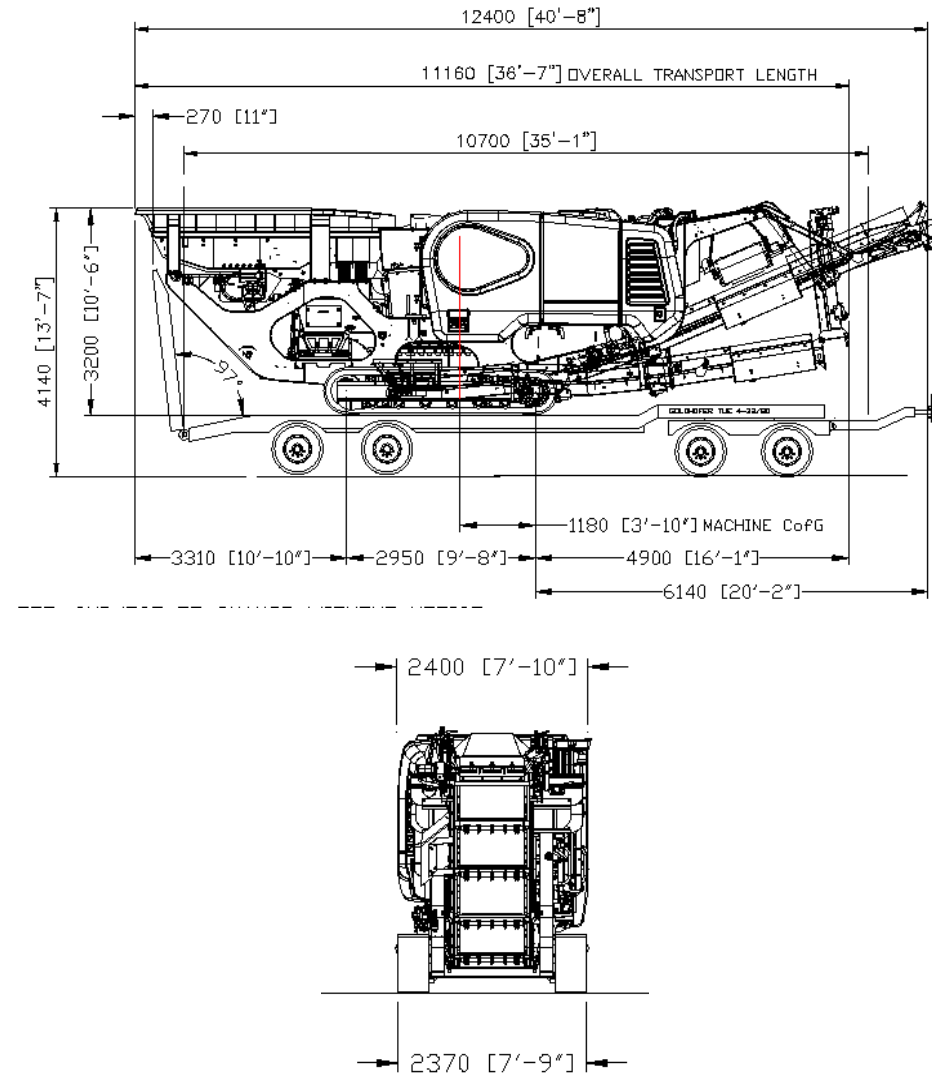


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DIMENSIONS

Figure 3: Metrotrak
Transport Position
Folding Product Conveyor





Powerscreen equipment complies with CE requirements.

Please consult Powerscreen if you have any other specific requirements in respect of guarding, noise or vibration levels, dust emissions, or any other factors relevant to health and safety measures or environmental protection needs. On receipt of specific requests, we will endeavour to ascertain the need for additional equipment and, if appropriate, quote extra to contract prices.

All reasonable steps have been taken to ensure the accuracy of this publication, however due to a policy of continual product development we reserve the right to change specifications without notice.

It is the importers' responsibility to check that all equipment supplied complies with local legislation regulatory requirements.

Plant performance figures given in this brochure are for illustration purposes only and will vary depending upon various factors, including feed material gradings and characteristics. Information relating to capacity or performance contained within this publication is not intended to be, nor will be, legally binding.

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