

# POWERSCREEN® METROTRAK

JAW CRUSHER



TECHNICAL SPECIFICATION - REV 3. 01/02/2023





## METROTRAK



# OVERVIEW

## SPECIFICATION

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



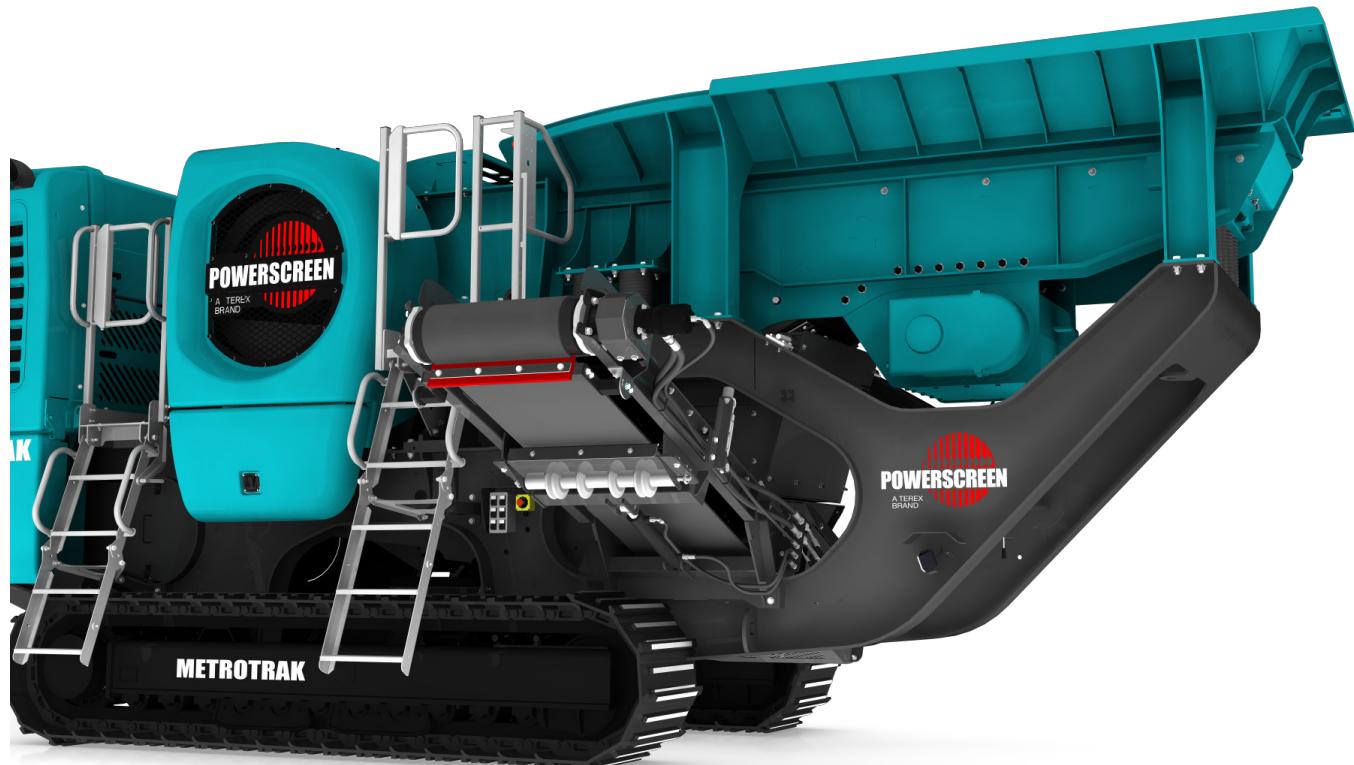


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## HOPPER

**Hopper type:** Fixed hopper  
**Hopper length:** 4m (13' 1")  
**Hopper width:** 1.8m (5' 10")  
**Hopper capacity:** Up to 3.6m<sup>3</sup> (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

**Vibrating unit:**

Twin heavy-duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end

**Length:**

3.8m (12' 6")

**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)

**Underscreen:**

Removable rubber blanking mat, replaceable with optional wire meshes

**Control:**

Variable speed (500—915 rpm) control through proportional flow control valve

**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





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# PRODUCT CONVEYOR

<b>Conveyor type:</b>	Troughed belt conveyor with fixed tail end
<b>Belt type:</b>	EP500/3 with 5mm top & 1.5mm bottom heavy-duty rubber covers
<b>Belt width:</b>	800mm (32")
<b>Discharge height:</b>	2.9m (9' 6")
<b>Stockpile volume:</b>	39m <sup>3</sup> (51 cu. yd.)
<b>Drive:</b>	Direct drive hydraulic motor
<b>Feedboot:</b>	Impact bars & wear resistant liners at feed point
<b>Skirting:</b>	Wear resistant rubber skirting along the length of the product conveyor up to the magnet
<b>Belt adjustment:</b>	Aluminium
<b>Belt covers:</b>	Canvas type removable dust covers are fitted at the head end
<b>Belt scraper:</b>	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

<b>Tier 3 Equivalent:</b>	John Deere 4045 –126kW (169hp)
<b>Operating conditions:</b>	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.
<b>Operating rpm:</b>	1800 rpm
<b>Plant drive:</b>	High quality pumps driven via engine PTO's
<b>Fuel tank capacity:</b>	400 L (106 US Gal)
<b>Hydraulic tank capacity:</b>	280 L (74 US Gal)
<b>Clutch type:</b>	High efficiency self-adjusting HPTO 12 dry plate clutch with electric hydraulic control
<b>Tier 4 / Stage V:</b>	Caterpillar C4.4, 129 kW (173hp)
<b>Operating conditions:</b>	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.
<b>Operating rpm range:</b>	1800rpm—2000rpm
<b>Emission control technique:</b>	Diesel Exhaust Fluid injection (DEF) & Diesel Particulate Filter (DPF)
<b>Plant drive:</b>	High quality pumps driven via engine PTO's
<b>Fuel tank capacity:</b>	400 L (106 US Gal)
<b>Hydraulic tank capacity:</b>	280 L (74 US Gal)
<b>Clutch type:</b>	High efficiency self-adjusting HPTO 12 dry plate clutch with electric hydraulic control
<b>Crusher drive:</b>	Direct drive via wedge belts, Clutch pulley diameter 180mm (7 $\frac{1}{4}$ ") Crusher pulley diameter 1220mm (47 $\frac{3}{4}$ ")
<b>Tensioning:</b>	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

## PLATFORMS

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

## 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 (1/2") steel plate 25mm (1") abrasion resistant wear plate on base.

Bypass chute : Fabricated from 6mm (1/4") plate with 8mm (5/16") wear plates (removable)

## 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

## 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



## METROTRAK



# 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")



## BYPASS CONVEYOR

Conveyor type: Troughed belt conveyor, hydraulically folding

Width: 600mm (24')

Discharge height: 1.93m (6' 4")

Stockpile volume: 11m<sup>3</sup> (14 cu. yd.)

Drive: Direct drive hydraulic motor

Position: LHS standard. RHS Optional

## 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

## 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



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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

### 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)

### 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

- Hydraulic water pump for dust suppression
- 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

A screenshot of a computer monitor and a tablet displaying the Powerscreen Pulse software interface. The interface shows a map of the world with various locations marked, and a table of fleet status data. The table includes columns for Asset ID / Serial, Owner, Type, Make / Model, Last Comm. Time, and Location. It lists several assets, including Powerscreen 1100, Powerscreen Test Dealer, Powerscreen 1 - Blank, and Powerscreen PT800, with their respective details.

Asset ID / Serial	Owner	Type	Make / Model	Last Comm. Time	Location
1100	Texx Powerscreen	Powerscreen 1100	Powerscreen 1100, T4	08/04/2015 02:30:34 AM	1.5km ESE of Upperton, A
2095	Powerscreen Test Dealer	Powerscreen 1 - Blank	Powerscreen 1 - Blank	09/05/2014 07:48:11 AM	4.8km SW of Buxton, GB
3095	Texx Powerscreen	Powerscreen PT800	Powerscreen / PT800, T	12/07/2014 05:57:57 PM	6.3km SW of Glastonbury, Glastonbury, BA1 9JL, United Kingdom

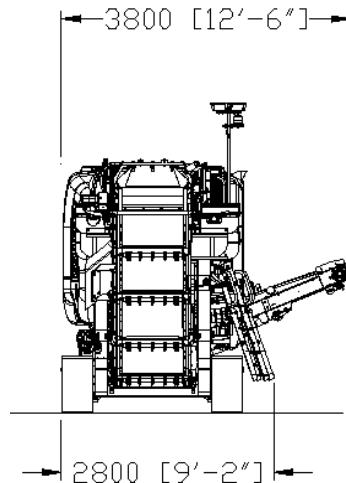
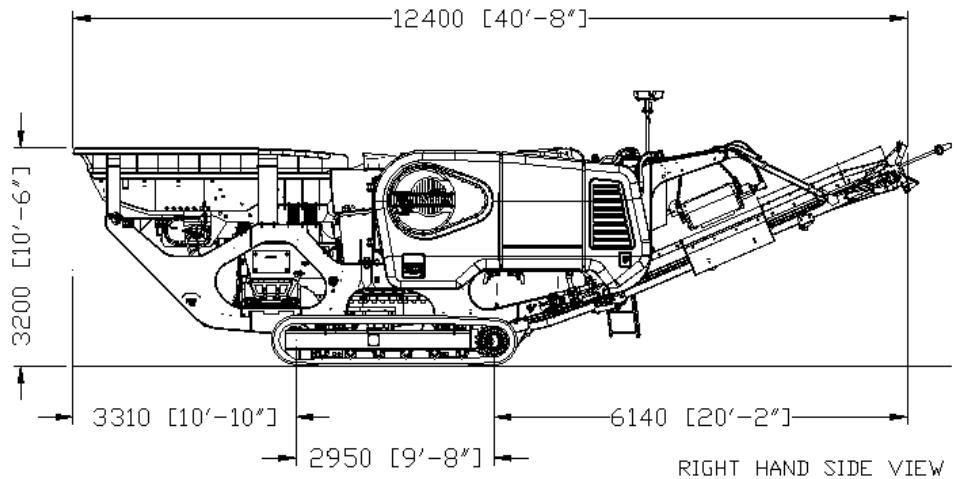


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# DIMENSIONS

Figure 1: Metrotrak  
Working Position



MORE DIMENSIONS OVERLEAF

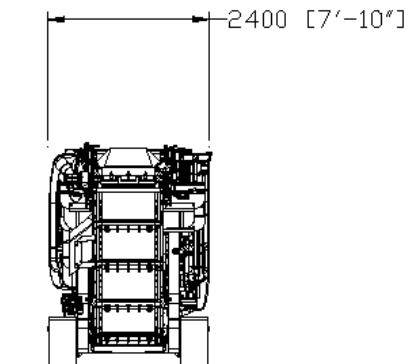
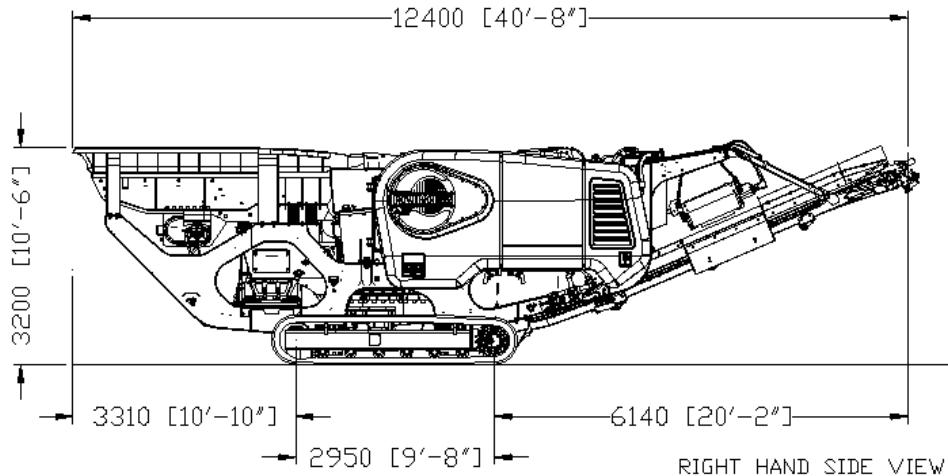


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## DIMENSIONS

Figure 2: Metrotrak  
Transport Position



**MORE DIMENSIONS OVERLEAF**

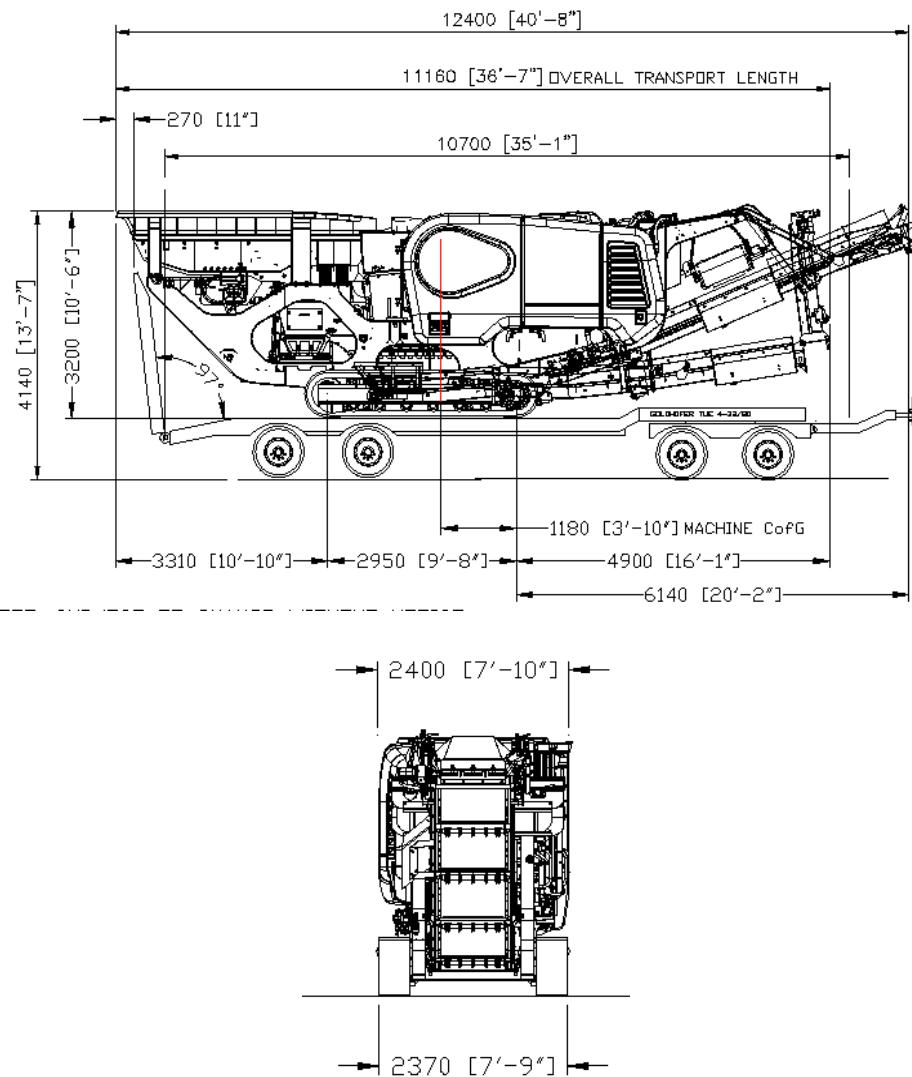


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# DIMENSIONS

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.

## GET IN TOUCH

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# APPENDIX 1 - ENGINE OPTIONS - Powerunit options that may be fitted in place of technical specification offering subject to availability

## Crushers – Tier 2

**CAT C9.3 242kW (325hp) as per 1000 Maxtrak and CAT C9.3 250kW (335hp) as per Trakpactor 320**

Option 1.) Scania DC09 074A 257kW (350hp)

## Crushers – Stage V

**CAT C4.4 129kW (173hp) as per Metrotrak**

Option 1.) Volvo D5 129kW (173hp)

**CAT C7.1 205kW (275hp) as per Premiertrak 330**

Option 1.) Volvo D8 210kW (282hp)

