Powerscreen® Premiertrak 400X & R400X Jaw Crusher

SPECIFICATION - Rev 0. 23/03/2017





SPECIFICATION Rev 0. 23/03/2017

Specification Premiertrak 400X

Total weight Tier 3: 46,300kg (102,274lbs) including side conveyor & magnet

Tier 4F: 46,500kg (102,514lbs) including side conveyor & magnet

Transport Length 15.02m (49' 3")

 Width
 2.8m (9' 2")

 Height
 3.4m (11' 2")

Working Length 14.66m (48' 1")

Width 4.33m (14' 2") with side conveyor

Height 4.13m (13' 6")

Crusher type: Single toggle jaw, feed opening 1100mm x 700mm (44"x 28")

Power unit: Caterpillar C9 ACERT 194kW (260hp) / Scania DC9 080A 202kW (275hp) /

Constant Speed: Scania DC09 071A 248kW (322hp)

Paint colour: Blue RAL 5021, Grey RAL 7024, Black RAL 9005

Features & Benefits

The Powerscreen® Premiertrak 400X range of high performance primary jaw crushing plants are designed for medium scale operators in quarrying, demolition, recycling & mining applications.

The range includes the Premiertrak 400X with hydraulic adjust & the Premiertrak R400X with hydraulic release. User benefits include track mobility for a quick set-up time, hydraulic crusher setting adjustment for total control of product size & crusher overload protection to prevent damage by un-crushable objects.

- Output potential up to 400tph (440 US tph)
- Hydraulic folding feed hopper with hydraulic wedge fixing system
- Heavy duty wear resistant feed hopper
- Stepped self-cleaning grizzly feeder with under feeder screen option
- Deep fines chute to reduce material blockages
- Aggressive crushing action with high swing jaw encouraging material entry into crushing chamber
- Hydraulic crusher setting adjustment
- Crusher Un-blocking system (Optional)
- Excellent under crusher access for removal of wire with hydraulic raise lower product conveyor
- Angle adjustable product conveyor, 3.5m discharge height, lowers for transport
- Low fuel consumption due to highly efficient direct drive system
- Easy access power unit canopy
- PLC control system with auto start facility
- Remote control via umbilical
- Dust suppression system
- Single Deck Post Screen offers added machine versatility for customer (Optional)

Aggregate Recycling Mining

Sand & gravel C&D waste Processed ores
Blasted rock Overburden Processed minerals
River rock Foundry waste



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Jaw Crusher

Crusher type: Single toggle Jaw with hydraulic

setting adjustment

Feed opening: 1100mm x 700mm (44" x 28")

Bearings: Self aligning spherical roller

Lubrication: Grease

Drive: V belts with screw tension adjustment

on engine

Pre-set: 75mm (3") closed side setting (CSS)

Minimum setting: 50mm (2") CSS recycling

75 mm (3") CSS quarry

All setting measured from root to tip & subject to suitability of feed material. This plant has been designed for both quarry & recycling applications where

appropriate

For maximum material strength of

390kN 10% Fines, 240MPa

Compressive Strength as per other

M-Series Jaws

If in doubt please contact your dealer

or Powerscreen

Maximum setting: 150mm (6") CSS standard jaws

Hydraulic adjustment: Hydraulically adjusted C.S.S set by

placing equal small shims into each

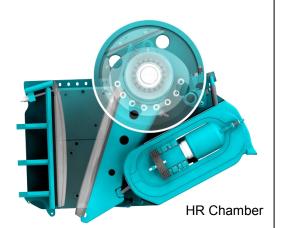
side of the crusher

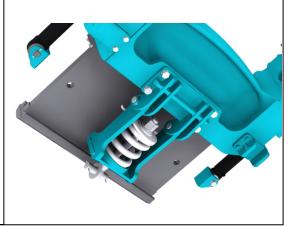
Chamber Features

- Quick & easy setting adjustment
- Drawback rod adjustments not required during setting changes
- Jawstock supported on both sides, even stress distribution
- Strong frame construction, no welding in critical areas
- Cylinders mounted in line with side plates
- Cartridge type bearings
- Overlap jaw protects tip of jawstock / pitman
- One piece fixed jaw support
- Proven manganese liner retention











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Hopper

Hopper type: Boltless hydraulic folding hopper,

with hydraulic wedge lock fixing

Hopper length: 4.94m (16' 2")

Hopper width: 2.49m (8' 2")

Standard: 10m³ (13 cu. yd.) Hopper capacity:

Hopper body: 12mm thick wear resistant steel

plate, mild steel reinforcing ribs 15mm Thick option (Extended only)

Control: Variable speed control through a

proportional flow control valve



Vibrating Grizzly Feeder

Spring mounted vibrating pan & Type:

grizzly feeder

Vibrating Unit: Twin heavy-duty cast eccentric

shafts running in spherical roller bearings, gear coupled at drive end

Drive: Flange mounted hydraulic motor

4.20m (13' 9") Feeder length: Feeder width: 1.06m (3' 6")

Grizzly: 2 replaceable 1.6m long stepped car-

tridge type grizzlies 50mm nominal

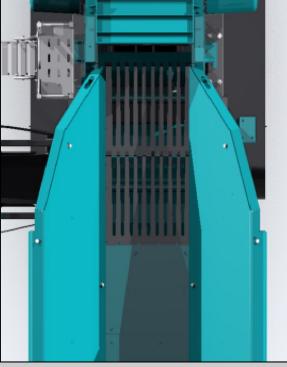
aperture, self cleaning

Grizzly length: 2.12m (7')

Under-screen: Rubber blanking mat fitted as stand-

ard. Can be substituted for optional wire meshes, use in conjunction with

optional side conveyor.



Plant Chute-work

Crusher feed chute: One piece fabrication with 15mm

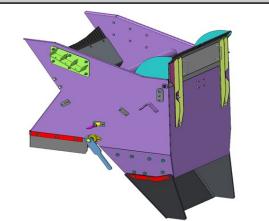
thick mild steel plate sides with

20mm thick bottom plate

Grizzly fines/ bypass Standard 2 way position, all material

directed to product conveyor or material passing VGF is directed to product conveyor and material through mesh to Side Conveyor. Option: Divert all material to Side

Conveyor





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Product Conveyor

Conveyor type: Troughed belt conveyor

Design: Hydraulic raise & lower facility to aid

rebar removal & transportation. Fully lowers for maintenance. Fully removable modular unit to aid access &

maintenance

Belt type: EP500/3 with 8mm top & 2mm

bottom cover, vulcanised

Belt width: 1000mm (39")

Discharge height: 3.5m (11' 5")

Stockpile volume: 79m³ (104 cu. yd.)

Max. clearance: 634mm (jaw to belt - working)

Drive: Direct drive hydraulic motor

Tunnel: Improved tunnel & side covers to

minimise rebar snagging

Feedboot: Mild steel plate with abrasion

resistant steel liners at feed point

Belt adjustment: Screw adjusters at head & tail drum

Belt covers: Aluminium removable dust covers

fitted to head section beyond magnet

Belt scraper: SCS high performance scraper as

standard

Lubrication: Remote head drum grease points

located under shedder plate

(reversible)

Skirting: Wear resistant rubber skirts to mag-

net, slider pads after magnet.

Dust Suppression System

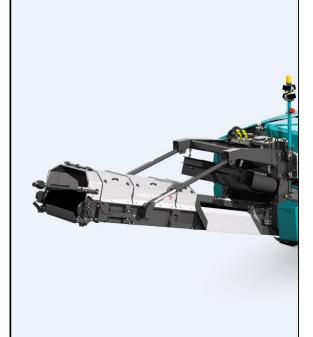
Sprays bars with atomiser nozzles mounted over crusher mouth, product conveyor feed & discharge points. Piped to an inlet manifold for client's pressured water supply

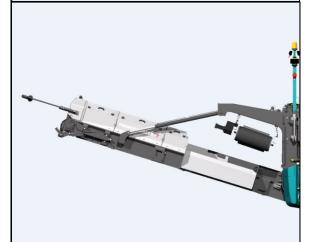
Type: Clean water multi atomising nozzles Inlet: Single filtered inlet point on chassis

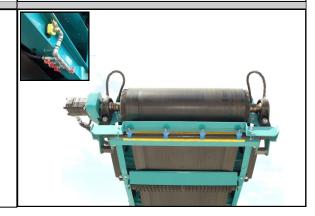
Pressure: 2.8 bar (42 psi)

Frost protection: Via system drain valves

Pump: Optional extra









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Power unit

EU Stage IIIA / US Tier 3: Caterpillar C9 ACERT, 6 cylinder, direct

injection 194kW (260hp) at 1600rpm *

Operating conditions: Ambient temp. +30°C & -5°C (86°F & 23°F)

altitudes up to 1000m (3281ft) above sea level

Operating rpm range: 1600-1700rpm

Plant drive: High quality pumps driven via engine

Fuel tank capacity: 456 L (120 US G) - sufficient for a 12 hour shift

Hydraulic tank capacity: 355 L (94 US G)

Tier 4F / Stage IV: Scania DC9 84A 5 cylinder, turbo, 202kW

(275hp) at 1600rpm

Operating conditions: Ambient temperature +30°C & -5°C (86°F

& 23°F) at altitudes up to 1000m (3281ft)

above sea level #

Operating rpm range: 1400-1650rpm

Emission control technique: Selective Catalytic Reduction (SCR)

Reductant tank size: 60 L (16 US G)

Plant drive: High quality pumps driven via engine PTO's

Fuel tank capacity: 456 L (120 US G) - sufficient for a 12 hour shift

Hydraulic tank capacity: 355 L (94 US G)

Stage 3A Constant Speed: Scania DC09 248kW (322hp) (Optional)

Clutch type: Highly efficient, self-adjusting HPTO 12 dry plate

clutch with electro hydraulic operation

Crusher drive: Direct drive via wedge belts,

Tier 3: Clutch pulley diameter 200mm (8.3")
Tier 4F: Clutch pulley diameter 212mm (8.3")

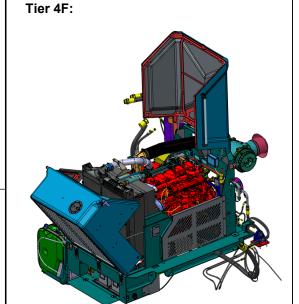
Constant Speed: Clutch pulley diameter 224mm (8.3")

Crusher pulley diameter 1260mm (4' 2")

Drive tensioning: Manual screw tensioners located beside power unit

For applications outside this range please consult with Powerscreen

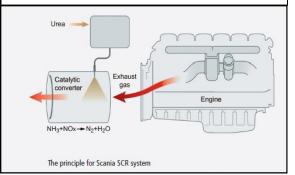
Tier 3:



Scania Stage IV / Tier 4 Final Technology

Scania industrial engines meet the requirements of Stage IV and Tier 4 Final without the need for a particulate filter. With only EGR and SCR technology, the installation will be unaffected. Scania-developed systems for engine management and emission control ensure an attractive blend of performance and operating economy.

The function of the SCR system is based on the injection of a urea solution (AdBlue or DEF, Diesel Exhaust Fluid) into the after-treatment system. With EGR, a small amount of exhaust gases is returned to the intake of the engine, diluting the intake air and reducing the oxygen concentration. This will reduce the combustion temperature and further reduce emissions.





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Crawler Tracks

Type: Heavy-duty tracks

Longitudinal centers: 3715mm

Track width: 500 mm
Climbing grade: 25° maximum
Speed: 0.9kph (0.56mph)
Drive: Hydraulic motors

Tensioning: Hydraulic adjuster, grease

tensioner



Guarding

GRP guards are provided for all drives, flywheels, pulleys & couplings

The guards provided are designed & manufactured to meet CE & ANSI standards

Hinged access guards are provided on the top, side & both ends of the engine



Platforms

Incline ladders with double handles and platforms provide access to both sides of power unit and one side of feeder.





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Plant Controls

Full PLC control panel

Full system diagnostics

Controls fitted to the plant include:

Sequential start up

- Engine (start/stop/speed)
- Crusher (start/stop)
- Optional side conveyor (start/stop)
- Product conveyor (start/stop & raise/lower)
- Feeder (start/stop/speed) controls, located on the side of the plant





Umbilical Control

An umbilical control unit is also supplied as standard with the plant

Controls tracking function & has a stop button for the plant.



Chassis

Heavy duty I-section welded construction, provides maximum strength & accessibility



Optional Extras

- Extended hopper
- Wire mesh for underscreen
- Super tooth or multi tooth jaw plates
- Chamber unblocking system
- Deflector plate under crusher
- Side conveyor
- Extended Side Conveyor
- Magnet prepared

- Single pole overband magnetic separator
- Twin pole overband magnetic separator
- Belt weigher
- Electric refuelling pump
- Hydraulic water pump
- Radio remote control
- Powerscreen Pulse
- Extended Product Conveyor
- Single Deck Post-Screen
- Pre-Screen



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Hopper Extensions

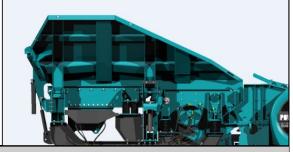
Hopper type: Hydraulic folding extended hopper with

hydraulic wedge-lock system

Hopper Capacity: 12m³ (14.4 cu. yd.)

Hopper body: 12mm or 15mm wear resistant plate, steel

ribs

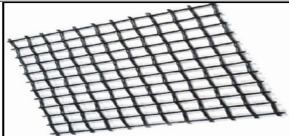


Feeder Underscreen Mesh

Position: Removable wire meshes fitted in lieu of the

standard rubber blanking mat, use in conjunction with optional side conveyor

Width: 1075mm (3' 6") Length: 1250mm (4' 1")



Jaw Profiles

A choice of jaw profiles are available to maximise performance across all applications. All jaw profiles supplied in 18% Manganese as standard. This is the proven material for quarry & recycling applications with an initial hardness of around 230BHN (Brinell Hardness)

Premium Jaws (Standard offering)

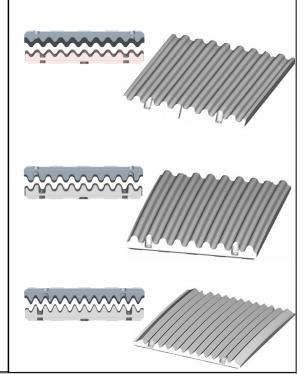
Premium jaws are fitted as standard in all Premiertrak 400 and R400 jaw crushers. They are suitable for most quarry & recycling applications & give an excellent cost per tonne crusher

Super Tooth Jaws

For extended life across most quarrying applications. Super tooth has a significantly increased wear life using a deeper profile without comprising strength or product shape

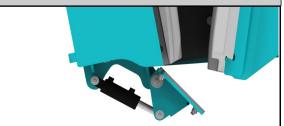
Multi Tooth Jaws

The industry choice for many recycling applications. The "sharper" profile makes the Multi tooth ideal for most recycling applications, particularly those involving concrete. It is also more tolerant when recycling asphalt. Wear life will be reduced on abrasive applications



Under Crusher Deflector Plate

A hydraulic adjustable deflector plate, increases belt protection on recycling applications. Situated immediately below the crusher outlet point & is fitted with a 15mm thick wear resistant plate. Deflector plate working angle can be adjusted from the PLC control system





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Pan Feeder & Live Pre-Screen

Vibrating pan feeder with double deck live pre-screen

Spring mounted vibrating pan Pan type:

Vibrating unit: Twin heavy duty cast eccentric shafts

> running in spherical roller bearings, gear coupled at drive end, flange

mounted hydraulic motor

Length: 2.32m (7' 7") Width: 1.04m (3' 5") **Dimensions:**

Pan: 12mm thick fully welded base plate

with 12mm thick abrasion resistant

liners

Pan: Variable speed control though con-

trol panel & (radio remote optional)

Pre-screen: Spring mounted vibrating unit

9mm throw, 1000rpm screen speed

Vibrating unit: Single shaft, out of balance weights,

flange mounted hydraulic motor

Top deck: 2 piece cartridge with 2.08m (6' 10")

long self cleaning fingers 75mm (3")

nominal spacing

Length: 2.08m (6' 10") Width: 1.03m (3' 4")

Bottom deck: 16° Incline with 38mm (1 1/2") mesh

> Length: 1.25m (4' 2") Width: 1m (3' 4")

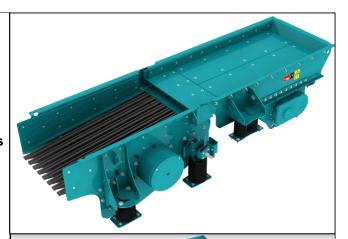
Chute: Bypass chute with internal 2 way flap

door fitted, to control direction of fines, either forward onto the product belt or onto the optional side convey-

or (if blanking mat is fitted)

Modular section: Hopper & feeder mounted on remova-

ble modular sub frame









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Side Conveyor

Conveyor type: Troughed belt conveyor, folds

hydraulically for transport

Width: 650mm (25")

Discharge height: 2.25m (7' 4")

Stockpile volume: 17m³ (22.2 cu. yd.)

Drive: Direct drive hydraulic motor

Position: Discharge on RHS of plant

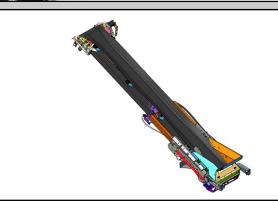


Extended Side Conveyor

Width: 650mm (25")

Discharge height: 3.07m (10' 1")

Stockpile volume: 46m³ (60.4 cu. yd.)



Magnet

Options: Magnet prepared

Terex CP020—100 single pole (S.P.) Terex TP020—100 twin pole (T.P.)

Belt width: 750mm (30") Centres: 1700mm (67")

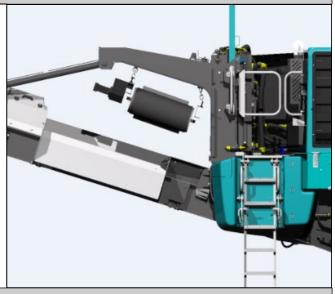
Drive / Control: Direct drive hydraulic motor,

pre-set variable speed

Discharge: LHS via stainless shedder plate

Weight: S.P. 1000kg (2204lbs)

T.P. 1500kg (3306lbs)



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:

Feeder (start/stop)





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Extended Product Conveyor

Conveyor type: Troughed belt conveyor

Design: Hydraulic raise & lower facility

to aid rebar removal & transportation. Fully lowers for maintenance. Fully removable modular unit to aid access &

maintenance

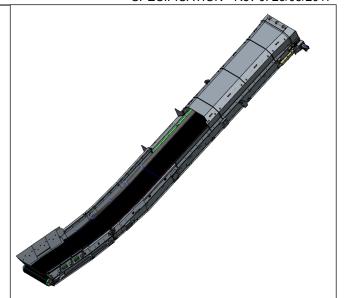
Belt type: EP500/3 with 8mm top & 2mm

bottom cover, vulcanised

Belt width: 1000mm (39")

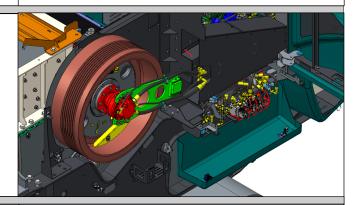
Discharge height: 4.1m (13' 5")

Stockpile volume: 127m³ (166 cu. yd.)



Chamber Un-blocking 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.



Single Deck Post-Screen

Screen Area: 2.44m x 1.52m (8' x 5')

Tensioning: Side Tensioned

Drive: Hydraulic with heavy duty

bearing

Screen Angle: 23°

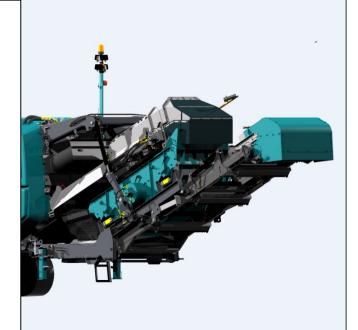
Oversize Conveyor: 650mm (26")

Discharge Height: 2.8m (9' 2")

Fines Conveyor: 1400mm (55")

Discharge Height: 2.8m (9' 2")

*Both hydraulically fold for transport





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Hot/Cold Climate Oils

Cold climate oils - (Recommended for ambient temperatures between -20 to +30°C

Hot climate oils - (Recommended for ambient temperatures between +15 to +50°C



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.

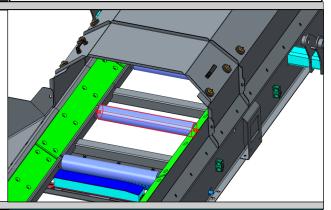


Belt Weigher

Type: Roller scale & display unit

Accuracy: $\pm 1.0 + 0.5\%$

Display: Separate read out near control panel



Powerscreen Pulse

Powerscreen Pulse is a system which allows the machine to relay performance and production data via phone networks, or by satellite when there's no cellular signal, to any device with a web browser, such as a PC, tablet or Smartphone.





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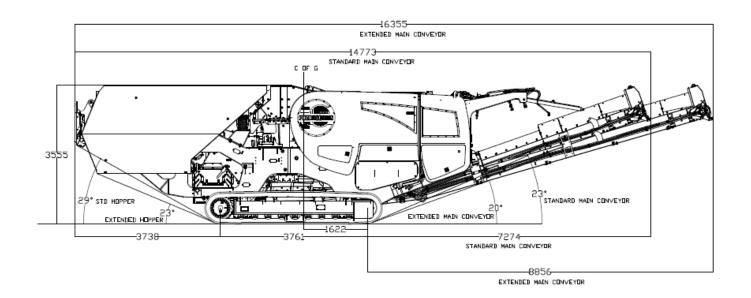
Approximate Plant Weight & Dimensions

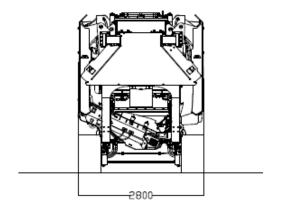
Transport length: 15.02m (49' 3")
Transport width: 2.8m (9' 2")
Transport height: 3.4m (11' 2")

Total plant weight: Tier 3: 46,300kg (102,274lbs) including magnet & side conveyor

Tier 4F: 46,500kg (102,514lbs) including magnet & side conveyor

Premiertrak 400X & R400X Transport Dimensions







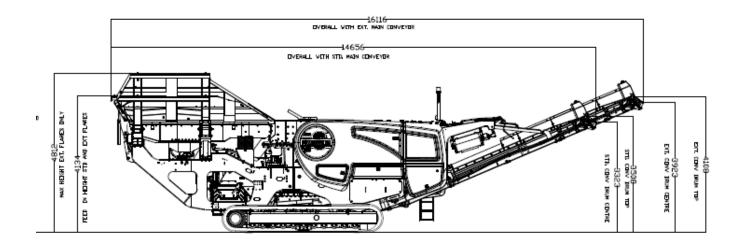
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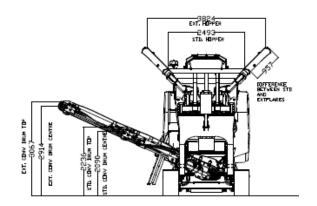
Approximate Plant Weight & Dimensions

Working length: 14.66m (48' 1") Working height: 4.13m (13' 6") Working width: 2.8m (9' 2")

4.33m (14' 2") including side conveyor

Premiertrak 400X & R400X Working Dimensions







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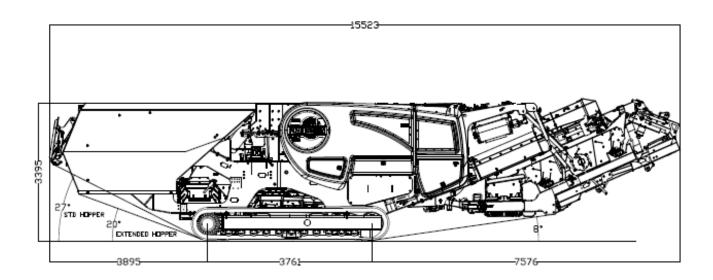
Approximate Plant Weight & Dimensions

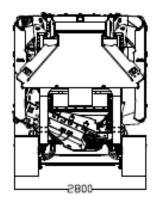
Transport length: 15.52m (50' 11")
Transport height: 3.4m (11' 2")
Transport width: 2.8m (9' 2")

Total plant weight: Tier 3: 52,300kg (115,301lbs) including magnet & side conveyor

Tier 4F: 52,500kg (115,742lbs) including magnet & side conveyor

Premiertrak 400X & R400X Post-Screen Transport Dimensions







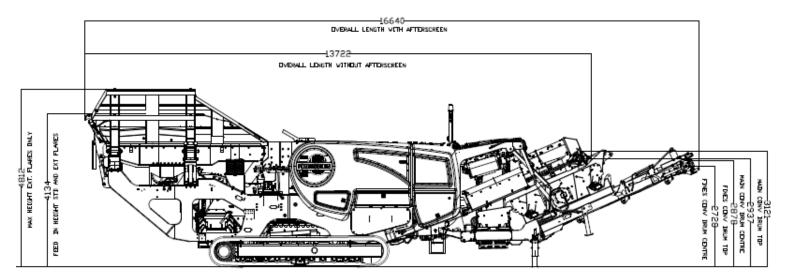
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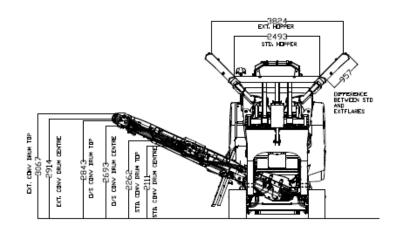
Approximate Plant Weight & Dimensions

Working length: 16.64m (54' 7") Working height: 4.13m (13' 6") Working width: 2.8m (9' 2")

4.33m (14' 2") including side conveyor

Premiertrak 400X & R400X Post-Screen Working Dimensions







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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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