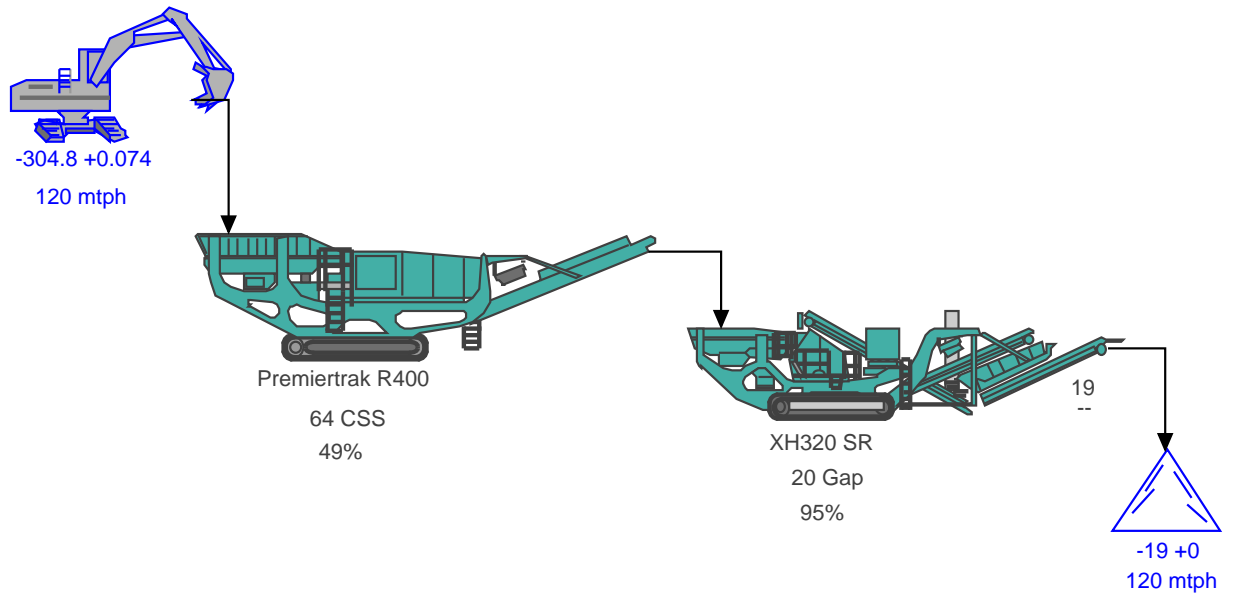




Appendix E: Proposed Plant Setup and Technical Specifications

Feed Material: C&D/Clean Demolition Concrete
Bulk Density: 2.3mt/m³
SG: 2.65



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

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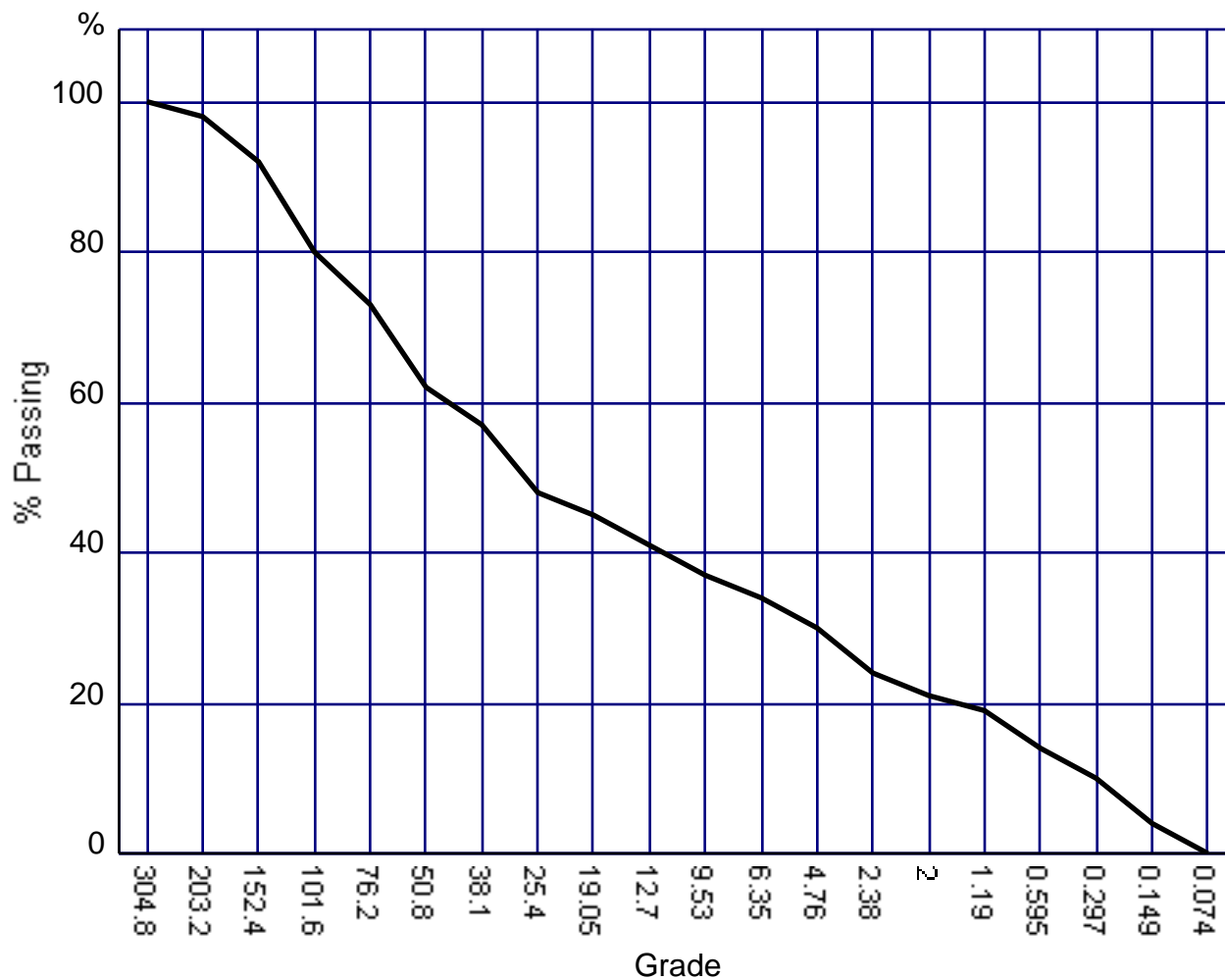
Plant Setup #1: Pa

Project #: 10790 Version #: - Date: 3/November/2014

Feed Grading

Material: C&D/Clean Demolition Concrete

Grading	% Pass	% Ret.	TPH
304.8	100.0	0	0
203.2	98.0	2.0	2.4
152.4	92.0	6.0	7.2
101.6	80.0	12.0	14.4
76.2	73.0	7.0	8.4
50.8	62.0	11.0	13.2
38.1	57.0	5.0	6.0
25.4	48.0	9.0	10.8
19.05	45.0	3.0	3.6
12.7	41.0	4.0	4.8
9.53	37.0	4.0	4.8
6.35	34.0	3.0	3.6
4.76	30.0	4.0	4.8
2.38	24.0	6.0	7.2
2	21.0	3.0	3.6
1.19	19.0	2.0	2.4
0.595	14.0	5.0	6.0
0.297	10.0	4.0	4.8
0.149	4.0	6.0	7.2
0.074	0.0	4.0	4.8
Total	--	100.0	120



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All calculations performed by AggFlow. <http://www.AggFlow.com>

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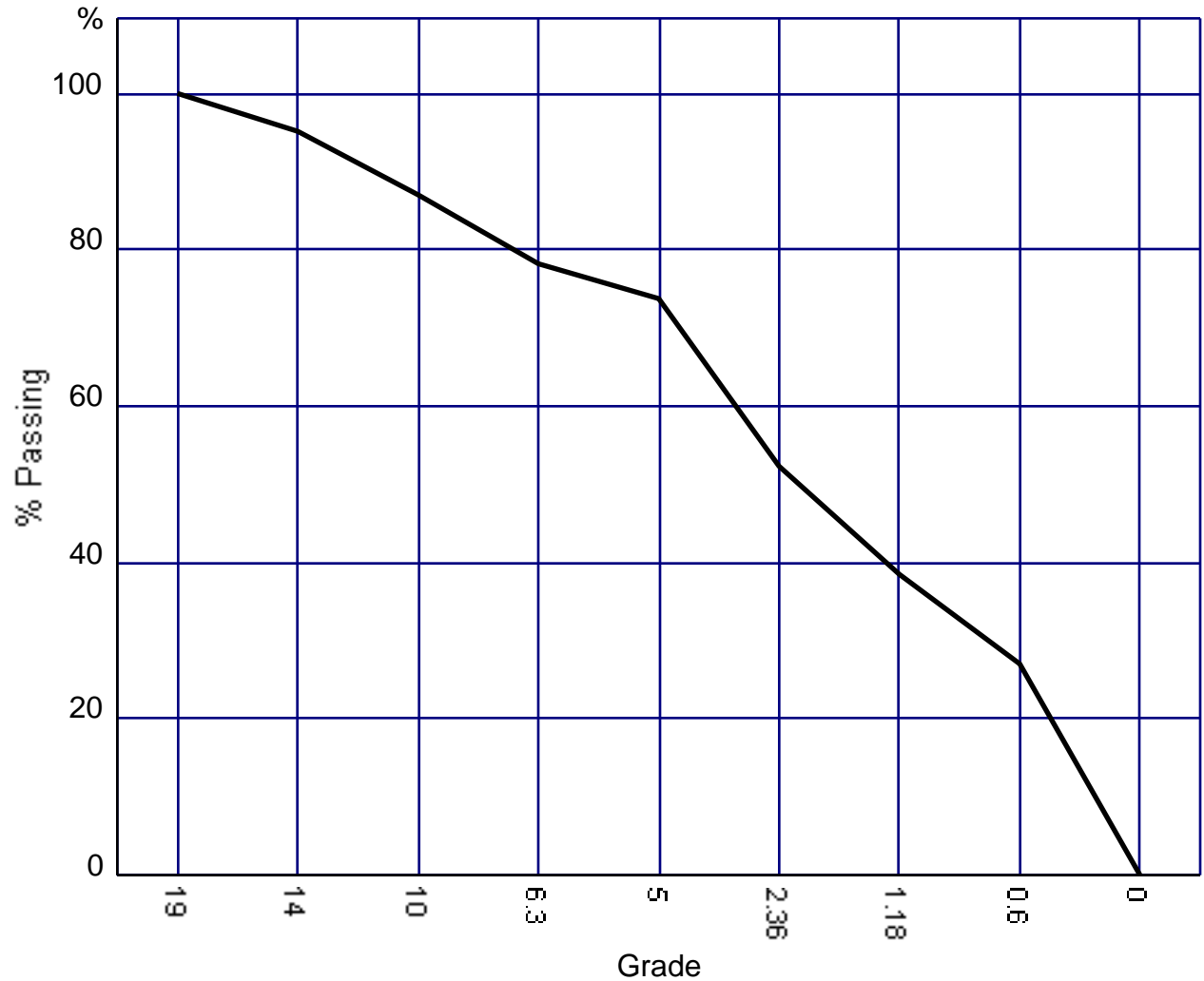
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Plant Setup #1: Page #1

Project #: 10790 Version #: - Date: 3/November/2014

-19mm Roadbase

Grading	% Pass	% Ret.	TPH
19	100.0	0	0
14	95.2	4.8	5.8
10	87.0	8.1	9.7
6.3	78.2	8.8	10.6
5	73.8	4.5	5.4
2.36	52.3	21.4	25.7
1.18	38.5	13.8	16.6
0.6	27.0	11.5	13.7
0	0.0	27.0	32.4
Total	- -	100.0	120



Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

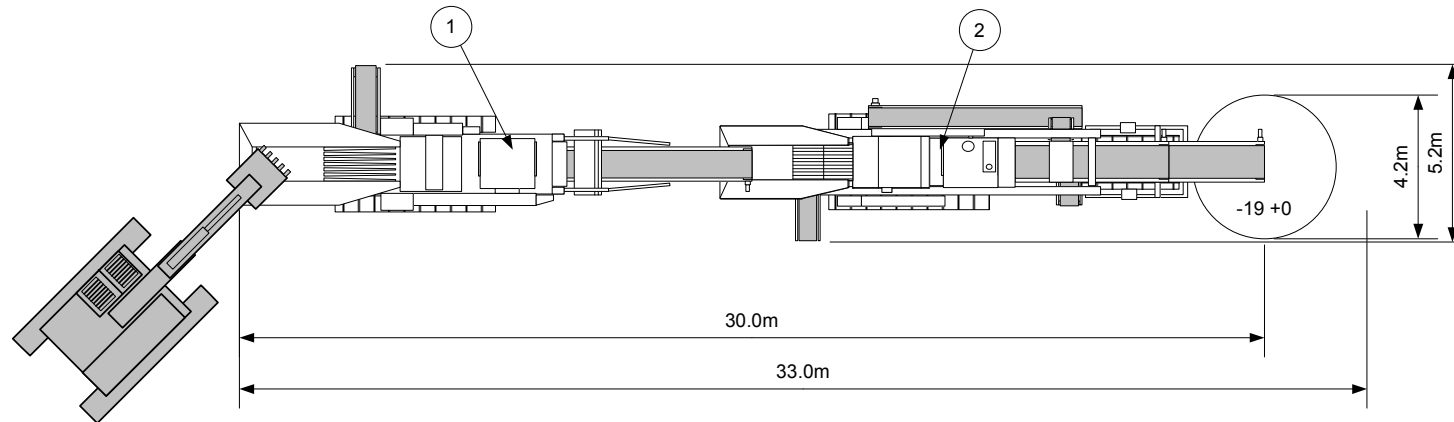
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Plant Setup #1: Page #1

Project #: 10790 Version #: - Date: 3/November/2014



SCALE: 1:200

Key to Figure	
1	Premiertrak 400S
2	XH320SR

Drawing Title		
Dowsing Concrete Recyclers Plant Setup #1		
Drawn By	Date	Drawing Nos.
A.Cabrera	03/10/2014	LPE301150

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 Lincom Equipment Services Pty Ltd
 Lincom Pty Ltd
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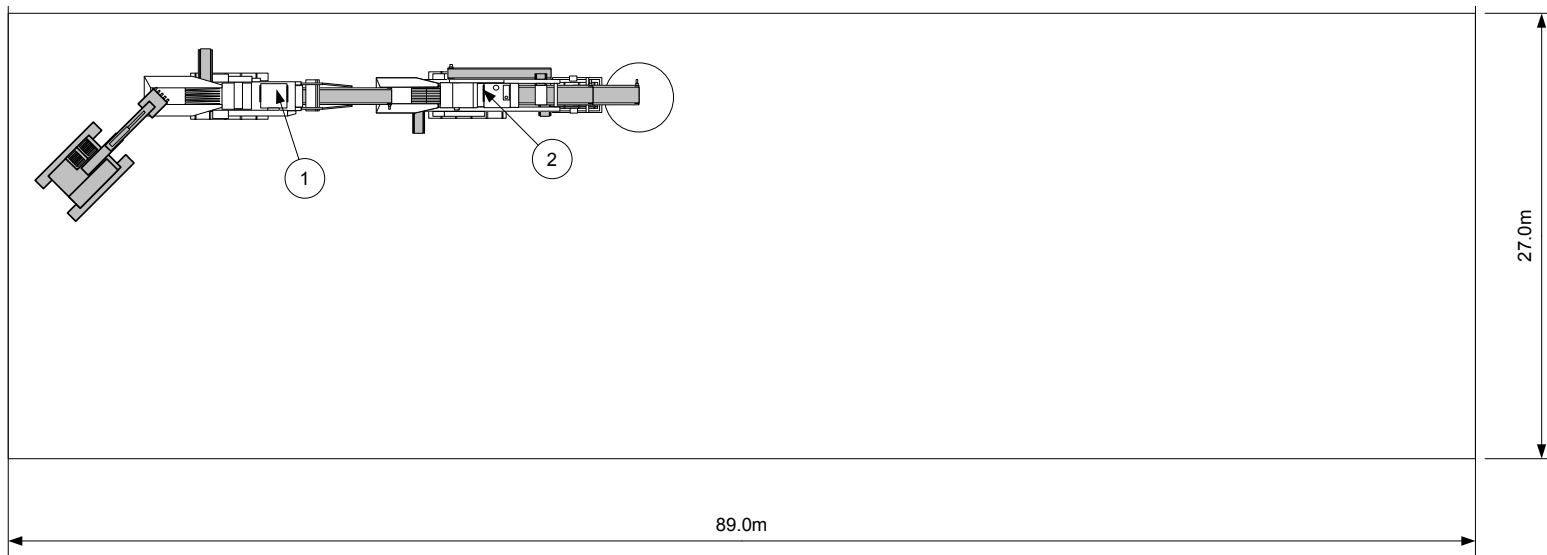


SCALE: 1:1500

Drawing Title		
Dosing Concrete Recyclers Plant Setup #1 – Full Site Plan		
Drawn By	Date	Drawing Nos.
A.Cabrera	03/10/2014	LPE301150



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Key to Figure	
1	Premiertrak 400S
2	XH320SR

Drawing Title		
Dowsing Concrete Recyclers Plant Setup #1 – Recycle Plant Plan		
Drawn By	Date	Drawing Nos.
A.Cabrera	03/10/2014	LPE301150

SCALE: 1:400



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Powerscreen® XH320X

Horizontal Impactor

SPECIFICATION - Rev 0. 01-06-2012





Specification	XH320X
Total weight	36,540kg (80,469lbs)*
Transport	
Length	14.4m (47' 3") *
Width	2.55m (8' 5") *
Height	3.4m (11' 2") *
Working	
Length	16.15m (53' 0") *
Width	8.60m (28' 3") with side conveyor deployed
Height	4.56m (15' 0")
	* = c/w Tier 4 Engine with Pan Feeder & Pre-screen, Hopper, Dirt and Product Conveyor extensions, Magnet
Crusher type:	Twin apron 4 bar impact crusher, feed opening 1130 x 800mm (44.5" x 31.5")
Powerunit:	Caterpillar C9 ACERT 242 kW (325hp) or Scania DC9 070A 257 kW (350hp)
Paint colour:	RAL 5021

Features & Benefits

The Powerscreen® XH320X Horizontal Shaft Impactor is a highly compact tracked crusher designed to offers both excellent reduction & high consistency of product yield.

The Powerscreen® XH320X is designed to give optimum performance in both quarry & recycling applications & is an ideal mid size contractors machine due to it's compact design & mobility.

- Output potential up to 320 tph (353 US tph)
- Double deck grizzly feeder with under screen
- Load management system to control feeder speed
- Suitable for a variety of feed materials
- Proven Terex Impact Crusher with hydraulic overload protection, 4 bar rotor & twin apron design
- Crusher speed variation through user friendly PLC control system
- Fully independent under crusher vibrating pan feeder
- Modular conveyor with raise/lower facility to aid clearance of rebar
- Powerful overband magnet (optional)
- Designed to give optimum performance in both quarry, demolition & mining applications
- Latest generation powerunits that meet EU Stage IIIB / US Tier 4i & EU Stage IIIA / US Tier 3 emissions legislation
- Hydraulically operated clutch & highly fuel efficient direct drive system
- SR X configuration optional with 2 deck 3.3m x 1.5m (11' x 5') post screen with detachable 2 deck post screen and fines conveyor

Application

Aggregate

- Blasted rock
- River rock

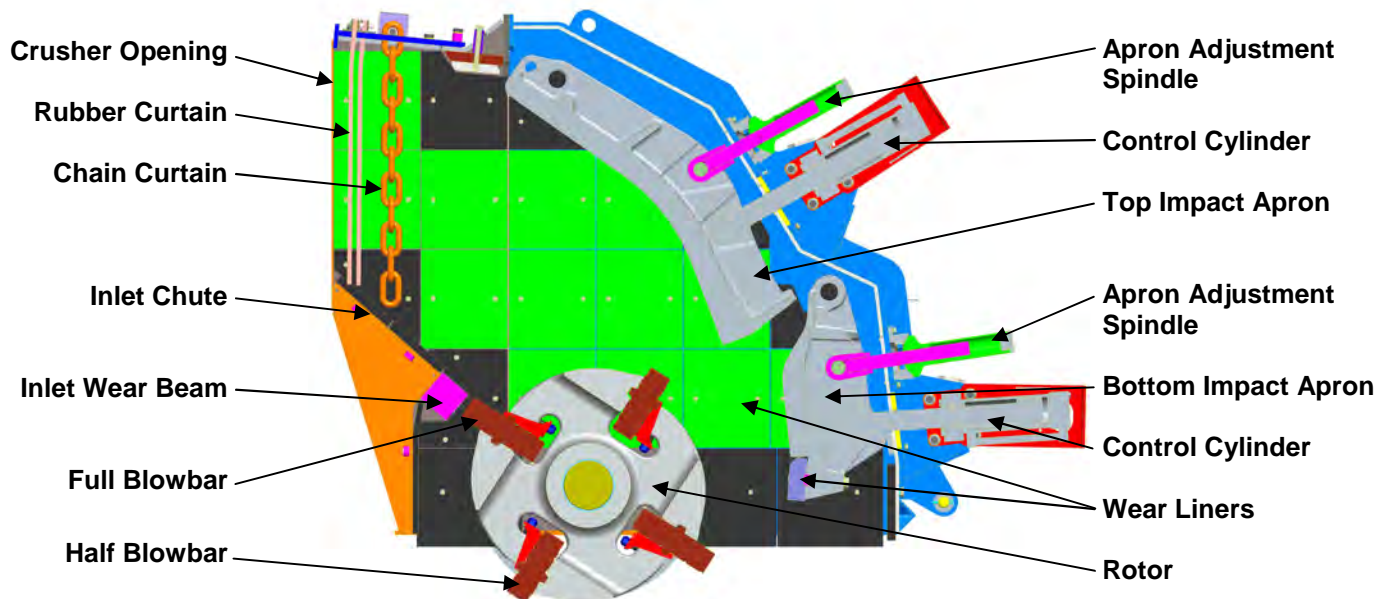
Recycling

- C & D waste
- Foundry waste

Mining

- Processed ores
- Processed minerals

Principal components of the Powerscreen® XH320X Impact Crusher



Principles of Operation

Material enters via crusher opening & slides down the inlet chute where it is struck by the blowbars fixed within the rotor. This initial impact breaks the material which is then accelerated towards the top apron where more reduction takes place on impact. This material then falls back onto the blowbars & the cycle is repeated until the material is small enough to pass between the top apron & blowbar. Further reduction occurs on the bottom apron until the material can again pass through the gap & discharge from the underside of the crusher.

Should an un-crushable object enter the chamber, the overload cylinders will relieve & allow the object to pass. The cylinders will then return to the pre-set crushing position. The pre-set gap is adjusted by turning the adjustment spindle whilst the weight of the apron is held on the cylinder (hydraulic assist).

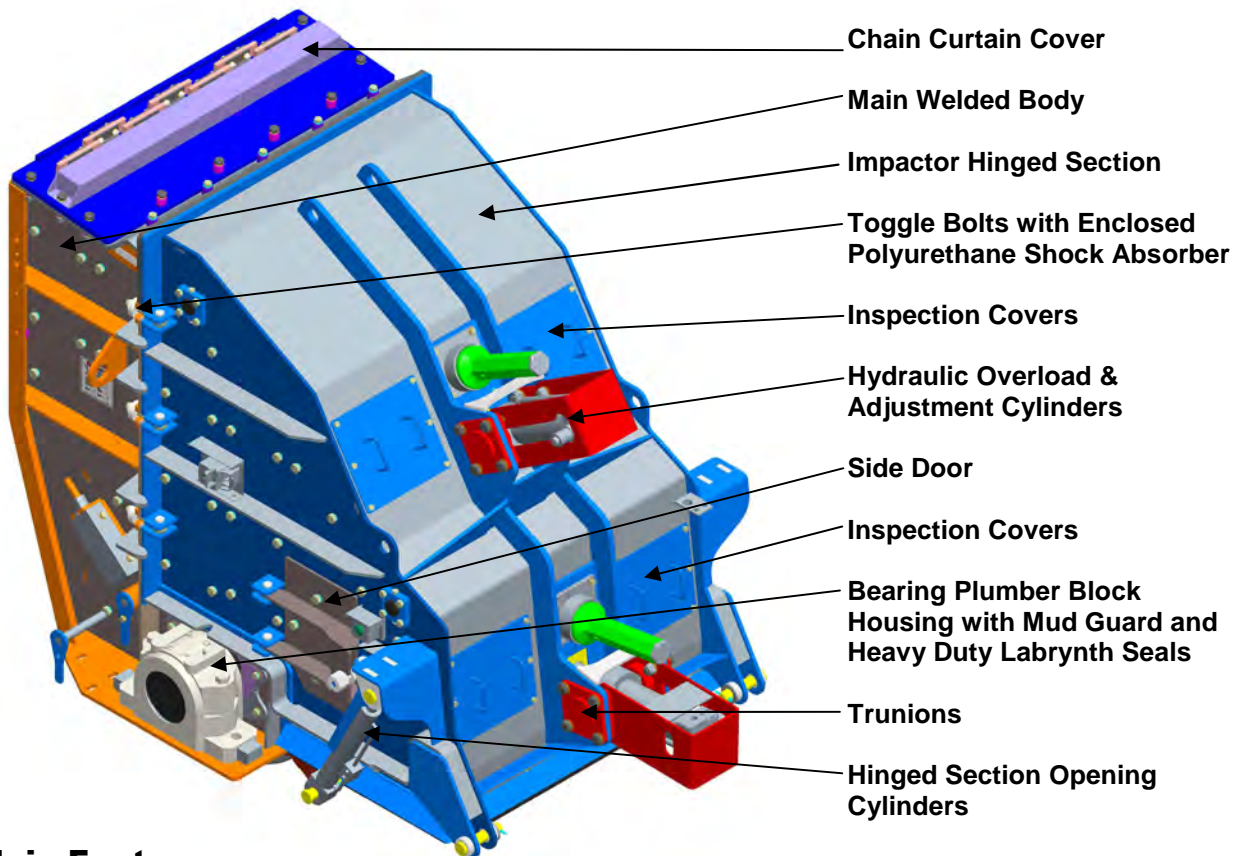
The hydraulic cylinders are pre-loaded to minimise apron bounce & wear on the cylinders. This arrangement also greatly reduces the oversize produced & is Patent Pending GB2455203

Crusher Specification

- Feed opening: 1130mm x 800mm (44.5" x 31.5")
- Maximum piece size* 450mm³ (18in³) / 780mm (31") diagonally / 800x500x250mm (31x20x10") slab
- * depending on material & blowbar spec
- Rotor width: 1100mm (43.3")
- Rotor diameter: 1040mm (41")
- Number of aprons: 2
- Maximum Clearance: 180mm (7") on both aprons
- Maximum OSS setting: 150mm (6") upper apron, 75mm (3") lower apron
- Minimum CSS setting: 50mm (2.4") upper apron, 20mm (0.75") lower apron
- Number of blowbars: 4
- Blowbar removal: Vertically
- Blowbar configuration: 2 full & 2 half (Optional 4 full)
- Setting adjustment: Hydraulic assist
- Overload protection: Hydraulic
- Rotor speeds: 606 - 740rpm (33 - 42 m/s) (108 - 137 ft/s)
- Applications: Demolition/Recycling/Quarry
- Crusher weight: 8500kg (18,740lbs)
- Full Blowbar weight: 220kg (485lbs)
- Side liners: 20mm (0.75") thick, abrasive resistant steel

All specifications subject to change without prior notice

Powerscreen® XH320X - Impact Crusher



Main Features

- Crusher body:** Precision Fabricated from structural steel plate & fully lined with replaceable 500 HB abrasion resistant liner plates. Hinged side door allows access to apron tips & rotor for gap measurements & inspection. Complete hinged section opens hydraulically to allow blowbar removal & replacement, apron & liner replacement or major maintenance
- Rotor:** Structural steel & fitted with four reversible, replaceable & fully clamped blowbars
- Bearings:** Double row self aligning spherical roller bearing fitted each end of rotor
- Aprons:** Cast manganese steel with replaceable 500 HB abrasion resistant wear plate on tip of bottom apron
- Drive:** Direct through wedge belts with tensioning system on powerunit
- Lubrication:** Grease lubricated rotor bearings fitted with inner & outer independently lubricated heavy duty labyrinth seals
- Blowbars:** Martensitic steel come as standard, High chrome & Ceramic Blowbars optional

This plant is designed for both demolition & quarrying applications. When fitted with Martensitic or Ceramic Blowbars the crusher will tolerate small quantities of steel reinforcing bar in the feed. However, the machine is not designed to accept large pieces of steel or other un-crushable objects, & the feed material should be assessed / inspected for suitability prior to crushing. It is vitally important that large pieces of steel or similar un-crushable objects are not allowed to enter the crushing chamber as severe damage & injury may occur. When high chrome bars are fitted *all* steel should be removed from the feed material. The machine should only be used on quarry applications or clean materials such as asphalt.

Available Options for Powerscreen® XH320X - Impact Crusher

Blowbar Jib Crane

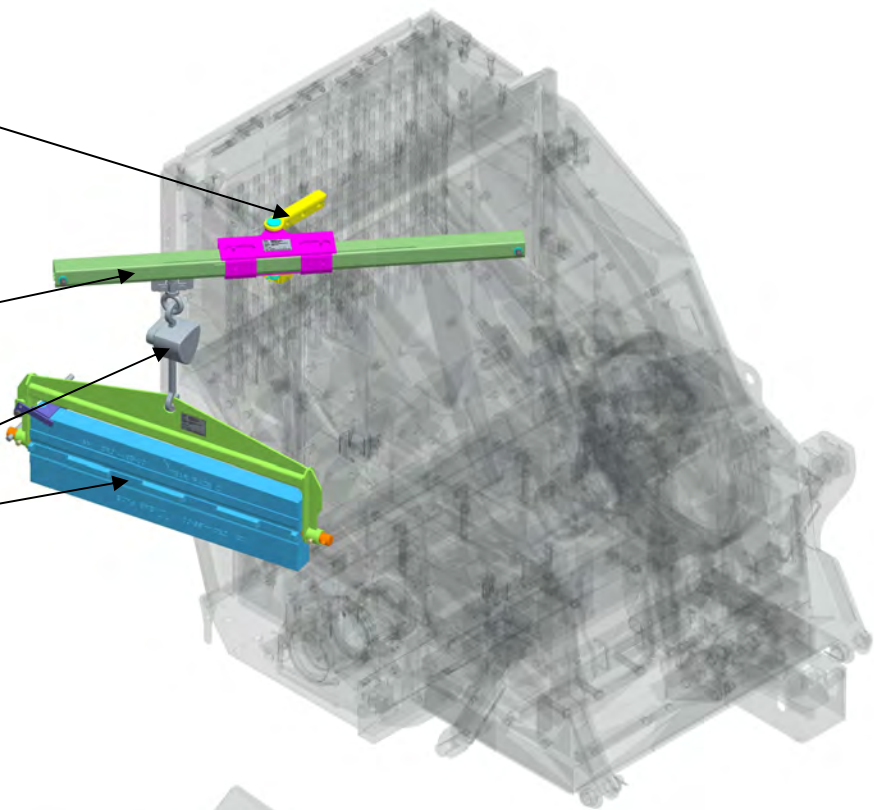
Part No. CR014-054-601

Fixes to pre-existing allocated mounting points on chamber fixed body- Kit provides all necessary parts with no rework required

Pivot and track facilitates full access to blowbar and swings clear of body during operation with minimal footprint

500 kg s.w.l. pulley block

Designed to work with chamber blowbar cradle



Grinding Path

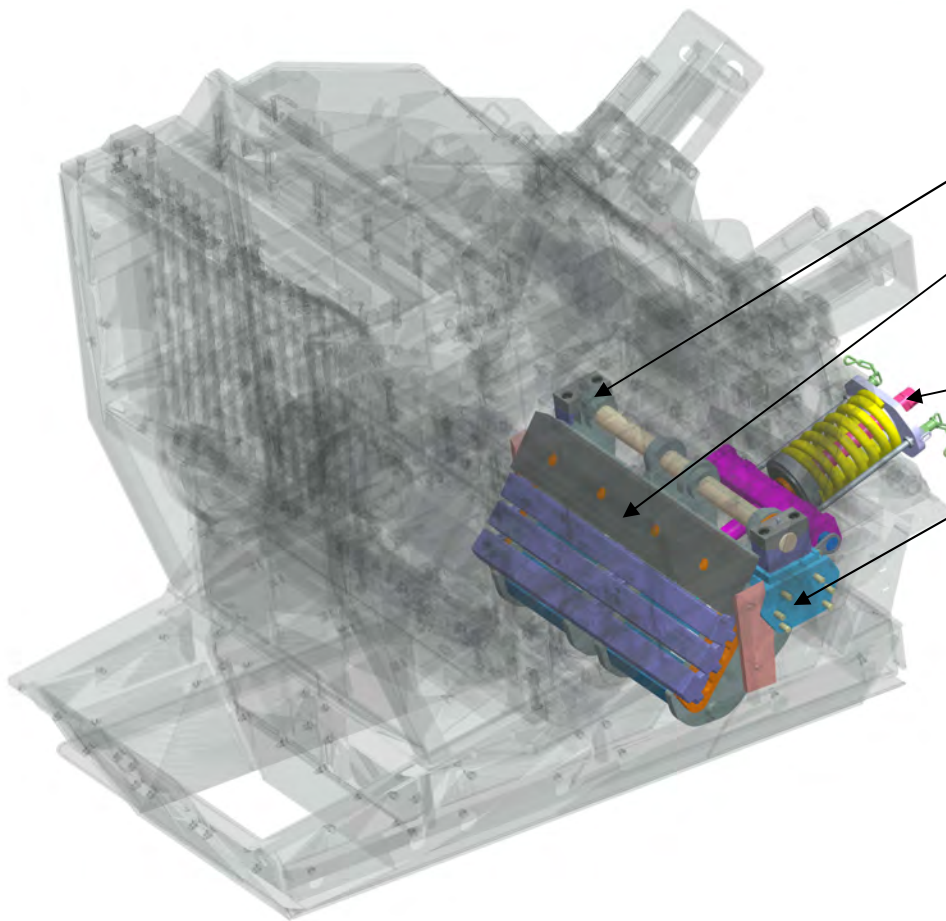
Part No. CR014-193-601

Lubricated split pivot blocks for ease of maintenance

Self retained manganese steel grinding rails with AR steel top plate

Lubricated adjusting spindle with provision to fit socket for ease of adjustment

Kit provides all necessary parts to retrofit to existing feedboot with no rework required



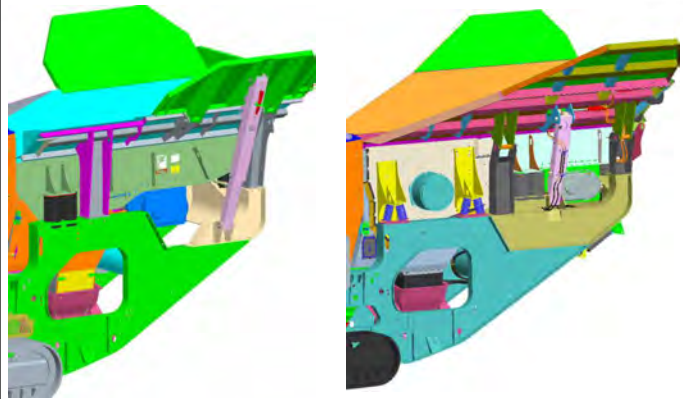
All specifications subject to change without prior notice



Hopper

Low profile hopper as standard, rigid hopper sides, no setup required, mounted directly to chassis.

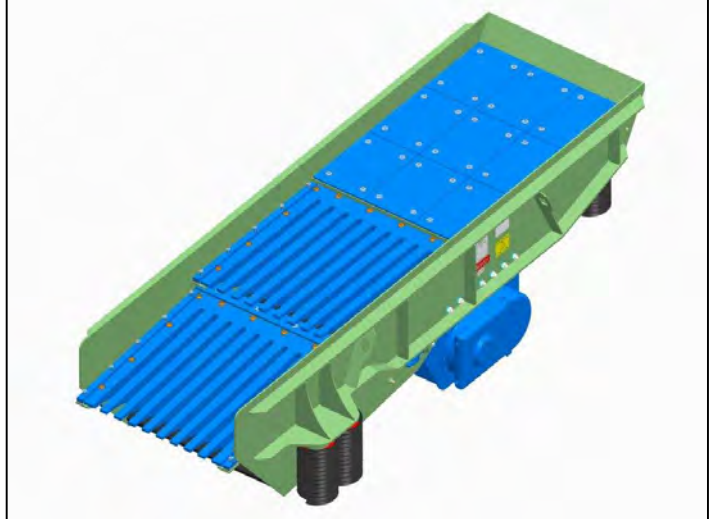
- Hopper length: 4.04 m (13' 3")
- Hopper width: 2.1 m (83")
- Hopper capacity: 3.6m³ (4.7 cu. yd.) level
- Hopper body: 8mm (0.31") thick abrasion resistant steel plate



Grizzly Feeder

Vibrating grizzly feeder pan with efficient, self cleaning integral two stage grizzly section.

- Type: Fully sprung vibrating pan
- Length: 3.87m (12' 8")
- Width: 1080mm (42.5")
- Pan: 10mm (0.4") thick abrasion resistant base plate
- Drive unit: Twin heavy duty cast eccentric shafts, running in spherical roller bearings, gear coupled at drive end
- Drive: Flange mounted hydraulic motor
- Grizzly: Two stepped bolt in cartridge sections with 950mm (37.4") long self cleaning fingers set at 42mm (1.65") nominal spacing. Optional Grizzly cartridges 30mm & 60mm, Optional Punch Plate Cartridges 30mm, 45mm & 60mm.
- Screen: Removable rubber blanking mat fitted as standard, mesh screens optional
- Control: Variable speed control via control panel & on optional radio remote where specified
- Chute: Plant features bypass chute with internal two way flap door that controls the direction of fines, either forward onto product belt or down onto optional side conveyor where specified





Product Conveyor

Common features:	Conveyor is shallow troughed with rollers at the lower end & a stainless steel tray design below magnet discharge area, fully tunnelled with minimal snag areas
Belt specification:	EP630/4 with 6mm top & 2mm bottom heavy duty rubber covers, vulcanised joint
Belt width:	1000mm (40")
Feedboot:	Fabricated steel with abrasion resistant steel liners
Impact area:	Low friction impact bars (Under crusher pan feeder optional)
Skirting:	Fully skirted in wear resistant rubber up to magnet discharge area
Drive:	Hydraulic motor direct to head drum
Lubrication:	Centralised greasing bank, for shaft bearing lubrication
Dust covers:	Aluminium removable dust covers are fitted over the exposed section of the conveyor. Optional head drum hood available
Belt adjustment:	Belt tensioning using screw adjusters at head drum
Pressure sensor:	Designed to stop plant feed if the discharge conveyor slows or stops

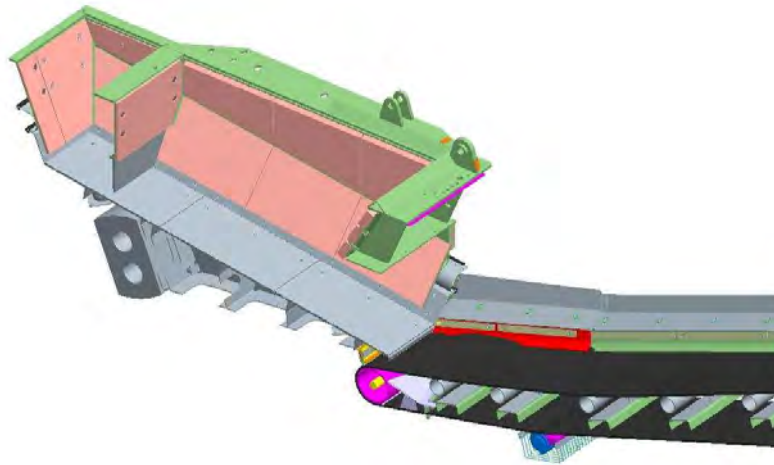
Product Conveyor Standard Configuration

Conveyor features:	Fully removable modular unit Hydraulic raise & lower facility to increase clearance & aid rebar removal Hydraulic raise & lower facility can be operated whilst crushing
Discharge height:	3.45m (11' 4") in fully raised position
Stockpile volume:	61m ³ (80 cu. yd.)
Discharge height:	4.0m (13' 2") in fully raised position (extended conveyor)
Stockpile volume:	61m ³ (80 cu. yd.)

Product Conveyor SR X Configuration

Conveyor features:	Fully removable modular unit Manual hydraulic raise & lower facility
---------------------------	---

Product Conveyor & Pan Feeder Interface



Vibrating Pan Feeder

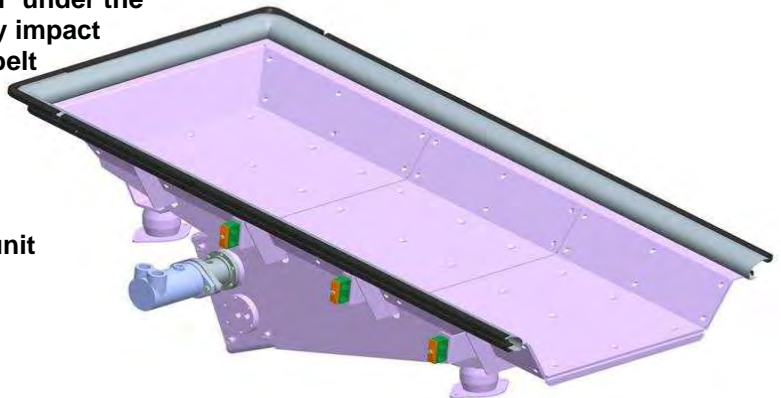
Type: Steel bodied vibrating feeder fitted with abrasion resistant liners, mounted under the crusher & designed to prevent any impact damage to the product conveyor belt

Width: 990mm (39")

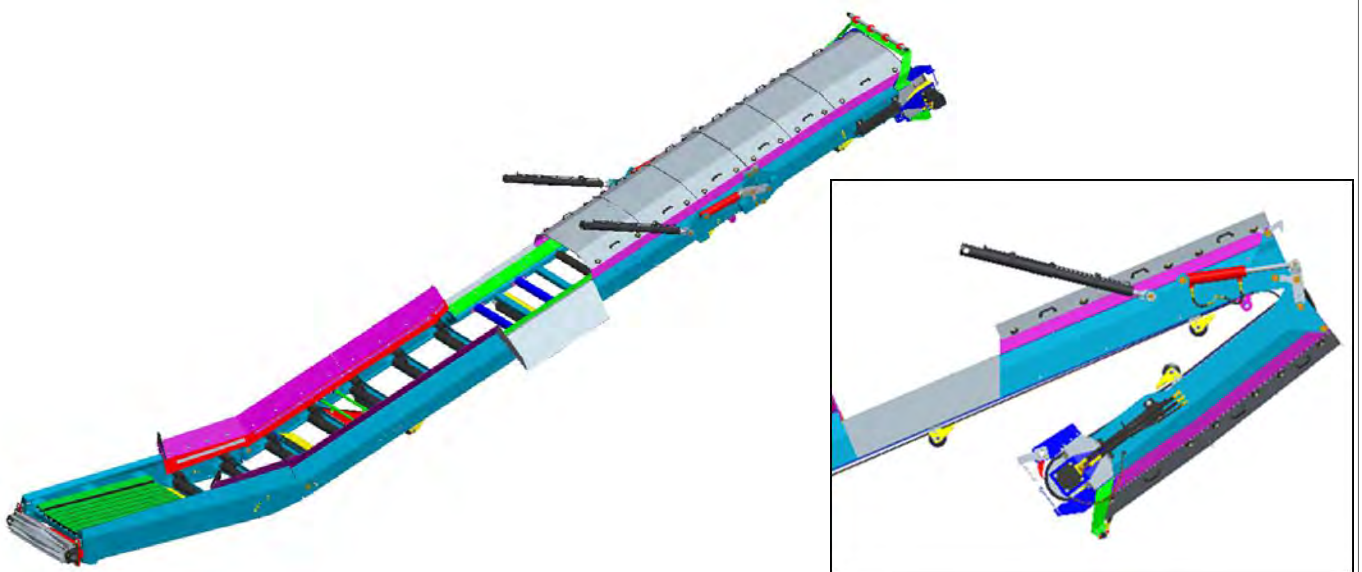
Length: 2.44m (8')

Drive: Hydraulic, out of balance exciter unit

Speed: 1150 - 1200rpm fixed



Full Length Product Conveyor



Crawler Tracks

Type:	Heavy duty, 2 speed, bolt on
Track centres:	XH320: 3300mm (10' 10") XH320SR: 3840mm (12' 7")
Shoe width :	400mm (16")
Gradient:	30° maximum
High speed :	1.0kph (0.62 mph)
Low speed :	0.3kph (0.2 mph)
Drive :	Hydraulic
Tensioning:	Hydraulic adjuster, grease tensioned



Guarding

Wire mesh or sheet metal guards are provided on all drives, flywheels, pulleys & couplings

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



Platforms

Platforms are provided for maintenance on one side of the feeder & Impactor. These are fitted with double row handrails & access ladders

Platforms are also provided to gain access to the rear of the crusher & the powerunit
Galvanised walkways as standard



Dust Suppression System

Spray bars with atomiser nozzles are mounted over the product conveyor feed & discharge points, piped to an inlet manifold for customer water supply or optional pump

Type:	Clean water multi atomising nozzles
Inlet:	Single point
Inlet pressure:	3 Bar (44 psi)
Water supply:	24 L/min (6.34 G/min) minimum
Frost protection:	Via system main valves
Pump:	Optional

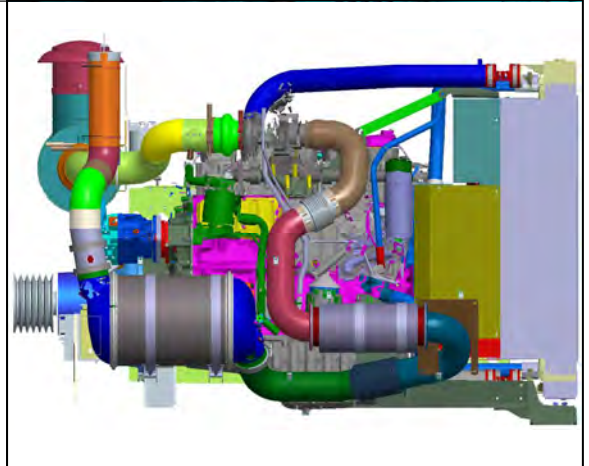


Powerunit

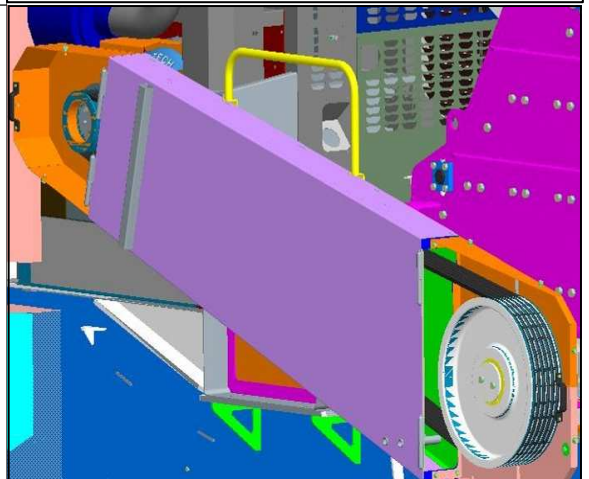
EU Stage IIIA / US Tier 3:	Caterpillar C9 ACERT , 6 cylinder, direct injection 242 kW (325hp) at 2000rpm *
Operating Conditions:	Ambient temp. +40°C & -12°C (104°F & 10°F) altitudes up to 1000m (3281ft) above sea level. #
Operating rpm range:	1700 - 2100rpm
Typical fuel consumption:	38 L/hr (10 G/hr) Up to 6.5 tonnes tons of crushed product per litre of fuel consumed (25 tons/G)
Plant drive:	High quality pumps driven via belts from engine
Fuel tank capacity:	500L (132 US G) - Sufficient to run a 12 hour shift



EU Stage IIIB / US Tier 4i :	Scania DC09 083A 5 cylinder, turbo, 257 kW (350hp) at 2100rpm,
Operating Conditions:	Ambient temp.+40°C & -12°C (104°F & 10°F) at altitudes up to 1000m (3281ft) above sea level. #
Operating rpm range:	1700 - 2100rpm
Typical fuel consumption:	N/A
Emission control technique:	Selective Catalytic Reduction (SCR)
Reductant Tank Size:	60L (16.8 US G)
Plant drive:	High quality pumps driven via engine PTO's
Fuel tank capacity:	500 L (132 US G) - Sufficient to run a 12 hour shift



Hydraulic tank capacity:	550 L (145 US G)
Clutch type:	Highly efficient, Self-adjusting HPTO 12 dry plate clutch with electro hydraulic operation.
Crusher drive:	Direct drive via wedge belts, Clutch pulley diameter 280mm (11") Crusher pulley diameter 800mm (31.5") Crushing performance can be tuned, by changing engine speed between 1700 - 2100rpm on the PLC without significant loss of engine performance
Crusher drive tensioning:	Manually adjustable screw tensioners located under Powerunit

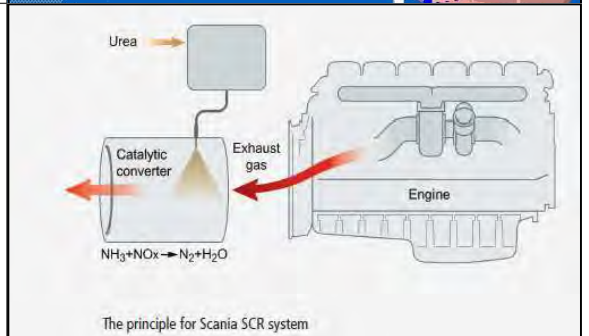


For applications outside this range please consult with Powerscreen as the plant performance / reliability may be affected.

Selective Catalytic Reduction (SCR)

SCR technology is used for Stage IIIB & Tier 4i to reduce the NOx content in the exhaust gases. A chemical process is started by injecting reductant, a urea & water mixture, into the exhaust gas stream. During injection the water evaporates & the urea breaks down to form ammonia. The ammonia then reacts with the nitrogen gases in the catalytic converter & forms harmless products such as nitrogen gas & water.

Through the use of SCR the exhaust gases are purged of poisonous levels of NOx in the best possible way. The Reductant tank holds 60 litres & is heated by the engine's cooling system in order to avoid freezing of the urea solution, urea freezes at -11°C.



Chassis

Heavy Duty I-Section welded construction, provides maximum strength & accessibility

8mm thick web
15mm thick flange

Modular chassis between Pre-Screen & VGF



Plant Controls

Full PLC control system

320 x 240 pixel backlit screen

Complete pictorial user controls

Multi-function backlit menu buttons

High definition screen

Full system diagnostics

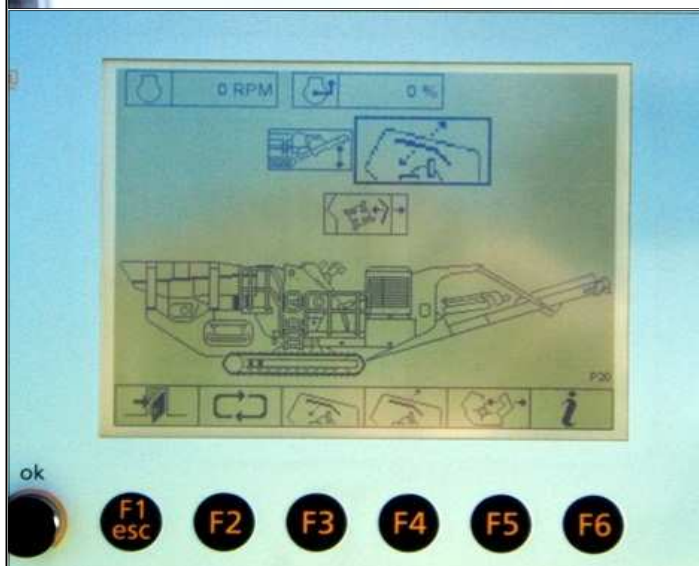
A navigation wheel is fitted onto the control system to operate the following items:

Sequential start up

- Engine/Crusher speed
- Feeder (Start/Stop/Speed)
- Product conveyor & pan feeder (Start/Stop)
- Product conveyor Raise/Lower
- Dirt conveyor
- Crusher control

(SR X Configuration)

- Screen & Fines
- Recirculating conveyor, cross conveyor & optional stockpiling conveyor



Umbilical Control

An Umbilical Control Unit is supplied as standard with the plant

Controls tracking function & has a stop button for the plant



Sizing Screen

Type:	4 Bearing, Double deck vibrating screen
Size:	3350mm x 1525mm (11' x 5')
Location:	Beneath product conveyor
Drive:	Hydraulic drive
Top deck:	45mm aperture fitted as standard
Bottom deck:	Optional mesh
Lubrication:	Grease nipples (4 in total)
Access:	Screen & Fines conveyor can be lowered for maintenance



Top deck - Transfer Conveyor

Belt type:	Plain Belt, EP400/2 with 5mm top & 1.5mm bottom rubber covers & vulcanised joint
Belt Width:	500mm (20")
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples on bearings



Oversize - Recirculation Conveyor

Conveyor type:	Chevron type troughed belt.
Belt type:	EP400/3 with 3mm top & 1.5mm bottom rubber covers, 25mm cleats & vulcanised joint
Conveyor:	Returns oversize material from the top deck back to the impactor for crushing Conveyor can be slewed to enable oversize material to be stockpiled at the side of the plant
Width:	500mm
Drive:	Direct drive hydraulic motor
Lubrication:	Grease nipples on tail shaft bearing, remote grease nipples for head drum



Fines - Product Conveyor

Conveyor type: Plain troughed belt

Belt type: EP400/2 with 5mm top & 1.5mm bottom covers, vulcanised joint

Width: 1400mm (55")

Discharge height: 2.92m (9' 7")

Stockpile volume: 37m³ (48 cu. yd.)

Drive: Direct drive hydraulic motor

Lubrication: Head drum - remote greasing, nipples on tail shaft bearings



Bottom Deck - Transfer Conveyor

Function: Transfers material from bottom deck of sizing screen to optional plant mounted stockpiling conveyor or re-circulating conveyor

Belt type: EP400/2 with 5mm top, 1.5mm bottom covers, vulcanised joint

Width: 500mm (20")

Drive: Direct drive hydraulic motor

Lubrication: Grease nipples on head & tail



shaft bearings

Optional Extras

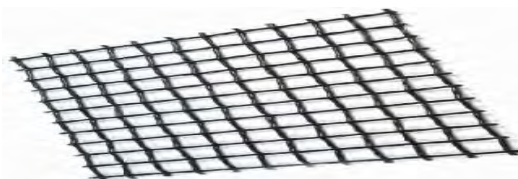
- Four full size hammers in lieu of two full & two half hammers
- High chrome blowbars
- Ceramic Blowbars
- Hydraulic folding extended hopper
- Single pole overband magnetic separator
- Twin pole overband magnetic separator

- Dirt conveyor
- Magnet Prepared
- Plant lighting
- Radio remote control
- Refuelling pump
- Optical belt weigher
- Hydraulic water pump for dust suppression
(For pricing please contact your local dealer)

Feeder Underscreen Mesh

Position: Replaces standard blanking mat, used in conjunction with optional side conveyor

Sizes: 10,20,30,40,50mm



Powerscreen® XH320X Options

SPECIFICATION - Rev 0. 01-06-2012

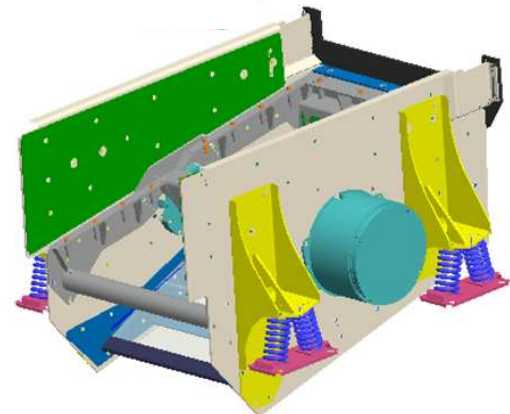
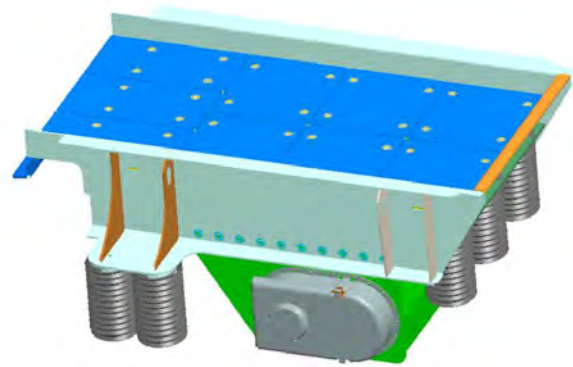
Pan Feeder

- Pan type:** Sprung vibrating pan
- Vibrating unit:** Twin heavy duty cast eccentric shafts running in spherical roller bearings, gear coupled at drive end, flange mounted hydraulic motor
- Dimensions:** Length: 2.15m (7')
Width: 1.08m (3' 6")
- Pan:** 12mm thick replaceable abrasion resistant liners



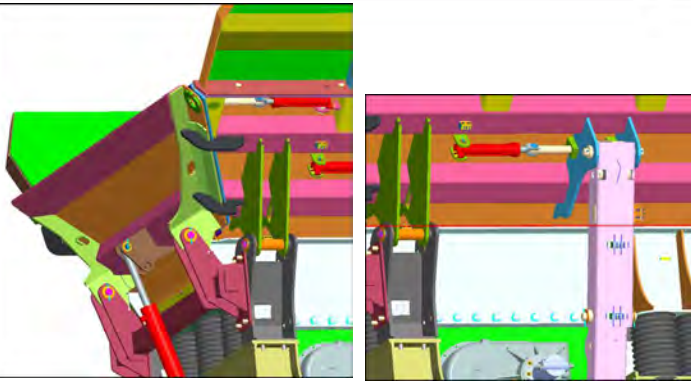



Live Pre-screen

- Pre-screen:** Sprung vibrating unit with stepped finger bofor deck
- Vibrating unit:** Single shaft, out of balance weights, flange mounted hydraulic motor
- Bofor deck:** 2 stepped bolt in cartridges
50mm (2") nominal spacing
9mm throw
1000rpm screen speed
- Dimensions:** Length: 2.0m (6' 7")
Width: 1.06m (36")
- Mesh deck:** 38mm (1.5") nominal spacing
17° incline
- Dimensions:** Length: 1.57m (5' 2")
Width: 1.06m (36")
- 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 conveyor (if blanking mat is fitted)
- Modular section:** Hopper & feeder mounted on removable modular sub frame



All specifications subject to change without prior notice



<p>Pre-Screen Hopper</p> <p>Hydraulic folding hopper with over centre struts Hydraulic hopper lock system operated at ground level</p> <p>Hopper width: 2.54 m (8' 4")</p> <p>Hopper capacity: 6.25m³(8.2 cu. yd.)</p> <p>Hopper body: 8mm (0.31") thick abrasion resistant steel plate</p>	
<p>Pre-Screen Hopper (Extensions)</p> <p>Hydraulic folding hopper with over centre struts Hydraulic hopper lock system operated at ground level</p> <p>Hopper width: 4.0 m (13' 2")</p> <p>Hopper capacity: 9.0m³(11.7 cu. yd.)</p> <p>Hopper body: 8mm (0.31") thick abrasion resistant steel plate</p>	
<p>Dirt Conveyor</p> <p>Conveyor type: Steel troughed roller, hydraulic folding</p> <p>Width: 650mm (26")</p> <p>Discharge: 2.6m (8' 6")</p> <p>Stockpile volume: 26m³ (85 cu. yd.)</p> <p>Drive: Direct drive hydraulic motor</p> <p>Position: Discharge on RHS of plant std LHS variant available</p>	
<p>Extended Dirt Conveyor</p> <p>Conveyor type: Steel troughed roller, hydraulic folding</p> <p>Width: 650mm (26")</p> <p>Discharge: 3.7m (12' 2")</p> <p>Stockpile volume: 75m³ (85 cu. yd.)</p> <p>Drive: Direct drive hydraulic motor</p> <p>Position: Discharge on RHS of plant LHS variant available</p>	

Powerscreen® XH320X Options

SPECIFICATION - Rev 0. 01-06-2012

Midsize - Stockpiling Conveyor

Function:	Stockpiles material from bottom deck, via side transfer conveyor
Conveyor type:	Chevron type troughed belt
Belt type:	EP400/3, 3mm top, 1.5mm bottom covers, 25mm cleats, vulcanised
Width:	500mm (20")
Discharge Height:	4.45m (14' 7")
Stockpile volume:	131m ³ (171cu. yd.)
Drive:	Direct drive hydraulic motor
Lubrication:	Head drum - remote greasing, nipples on tail shaft bearings



Overband Magnet

Magnet type:	Terex TX440 Single Pole (S.P.) & Twin Pole (T.P.) available.
Belt width:	750mm (30")
Centres:	1700mm (67")
Magnet block:	S.P. 1050mm x 530mm (41" x 21") T.P. 1042mm x 672mm (41" x 26")
Drive/Control:	Direct drive hydraulic motor / Pre-set variable speed
Weight:	S.P. 975kg / T.P. 1470kg



Blowbars

Two full size Martensitic & two half size Manganese blowbars

Two further options are available:

High Chrome: Suitable for medium to hard rock applications with no steel present in feed. Good wear characteristics

Ceramic: Suitable for applications with limited steel in feed. Improved wear characteristics over standard martensitic

4 full blowbars: Available in all options



All specifications subject to change without prior notice



Powerscreen® XH320X Options

SPECIFICATION - Rev 0. 01-06-2012

Belt Weigher

XH320X:

Optical belt scale, monitors material volume

Can be converted into mass & downloaded to

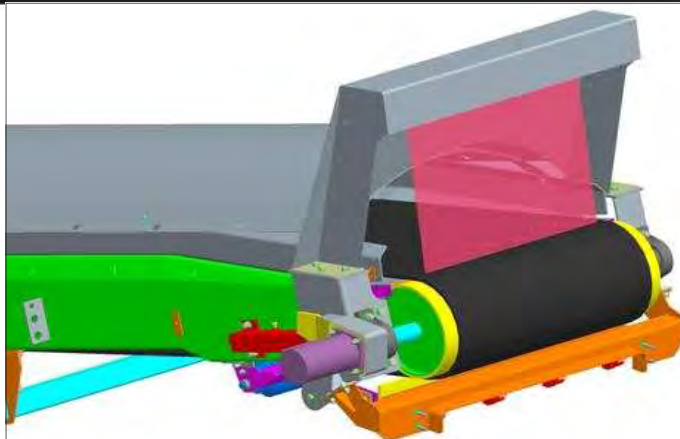
hand held PDA unit via Bluetooth

PDA unit included in kit

XH320SR X:

Single idler belt weigher with integrator &

Speed-sensing wheel fitted to fines conveyor



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 for:

- Feeder (stop/start/speed)
- Product conveyor (raise/lower)
- Open top apron



Electric Refuelling Pump

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



Plant Lighting

Plant lighting kit available, contains two bi-directional working lamps.

Both activated remotely from control panel



All specifications subject to change without prior notice



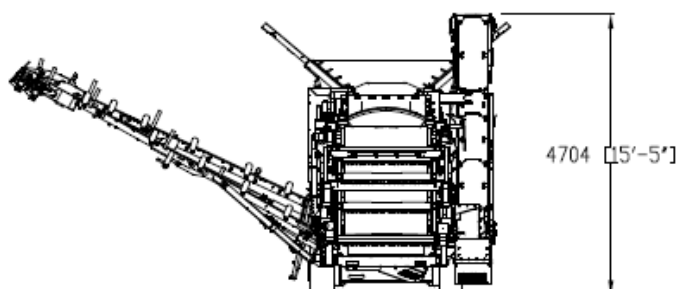
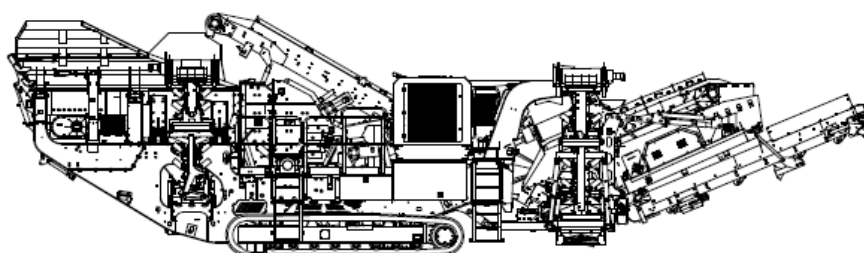
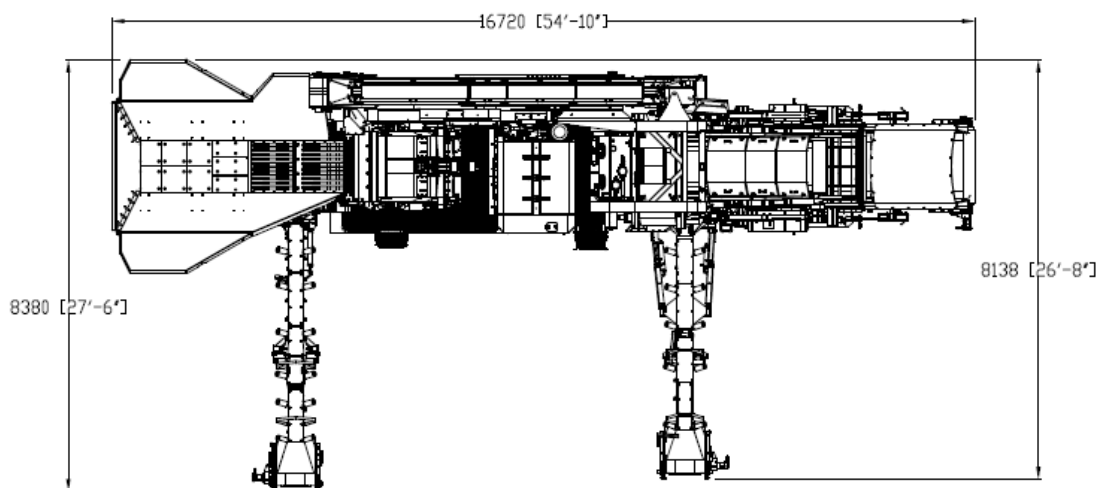
Approximate Plant Weights & Dimensions

Working length: 16.15m (53' 0")
Working height: 4.56m (15' 0")
Working width: 8.6m (28' 3") with extended dirt conveyor deployed

Total plant weight: 36,540kg (80,469lbs) *
* = c/w Tier 4 Engine with Pan Feeder & Pre-screen, Hopper, Dirt and Product Conveyor extensions, Magnet

Paint colour: RAL 5021

XH320X Working Dimensions



All specifications subject to change without prior notice

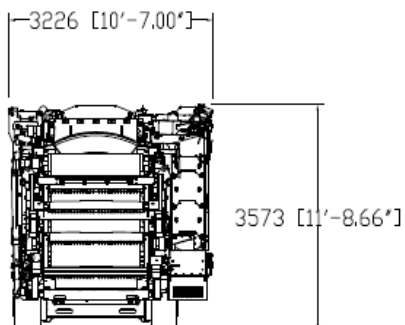
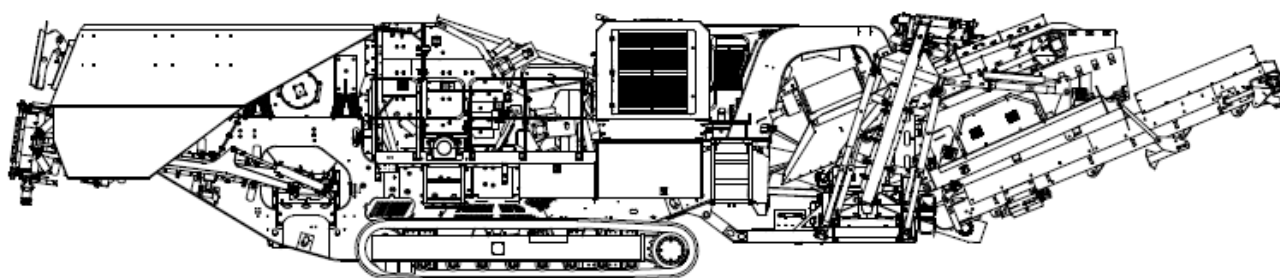
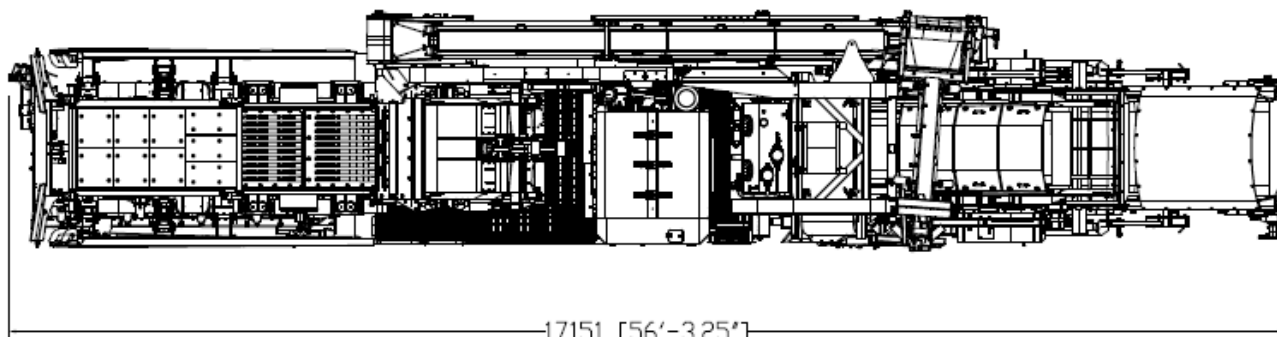


Approximate Plant Weights & Dimensions

Transport length: 17.15m (56' 3")
Transport height: 3.4m (11' 2")
Transport width: 3.58m (11' 9")

Paint colour: RAL 5021

XH320SR X Transport Dimensions



All specifications subject to change without prior notice

Powerscreen® XH320SR X

SPECIFICATION - Rev 0. 01-06-2012

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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All specifications subject to change without prior notice



Powerscreen® XR400S Jaw Crusher

SPECIFICATION - Rev 4. 01/08/2012





Specification		XR400S
Total weight		44,750kg (98,656lbs) including magnet & dirt conveyor
Transport	Length	15.2m (49' 10")
	Width	2.8m (9' 2"), 4.3m (14' 1") including dirt conveyor
	Height	3.4m (11' 2")
Working	Length	14.9m (49' 10")
	Width	4.3m (14' 1") with dirt conveyor
	Height	4.1m (13' 6")
Crusher type:		Single toggle jaw, feed opening 1100mm x 700mm (44"x28")
Powerunit:		Caterpillar C9 ACERT 194kW (260hp) or Scania DC9 070A 202kW (275hp)
Paint colour:		RAL 5021

Features & Benefits

The Powerscreen® X400S range of high performance primary jaw crushing plants are designed for medium scale operators in quarrying, demolition, recycling & mining applications.

The range includes the XA400S with hydraulic adjust & the XR400S 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 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 overload, ideal for applications with un-crushable material in feed, up to 200mm³
- Hydraulic crusher setting adjustment
- Improved manganese liner retention, protects jaw supports on both swing & fixed jaws
- Excellent under crusher access for removal of wire with hydraulic raise lower product conveyor
- Angle adjustable product conveyor, 3.9m discharge height, lowers for transport
- Low fuel consumption due to highly efficient direct drive system
- Easy access powerunit canopy
- PLC control system with auto start facility
- Remote control via umbilical
- Dust suppression system
- Easily set up

Applications

Aggregate

- Sand & gravel
- Blasted rock
- River rock

Recycling

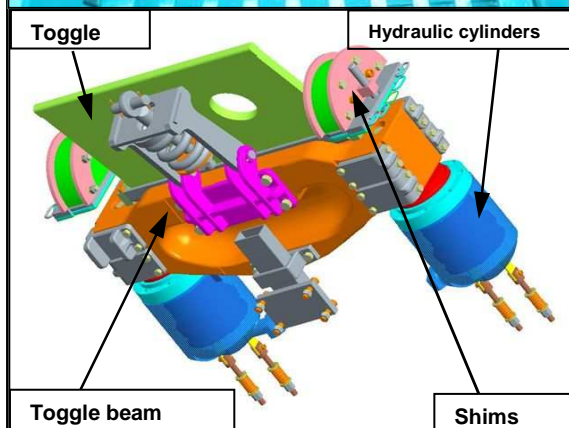
- C&D waste
- Overburden
- Foundry waste

Mining

- Processed ores
- Processed minerals

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:	Wedge 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 settings measured from root to tip & subject to suitability of feed material. This plant is designed for recycling applications but can be used on quarry applications where appropriate. If in doubt please contact your dealer or Powerscreen.
Maximum setting:	125mm (5") CSS
Hydraulic adjustment:	Fitted as standard
Hydraulic overload:	System designed to prevent damage caused by tramp metal up to 200mm (8") lump size (maximum edge length) Any downstream plant must be capable of accepting oversize from dumped condition
Controls:	When overload occurs, feeder will stop, crusher & product conveyor will continue to operate until re-set



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



Hopper

Hopper type:	Boltless hydraulic folding hopper, over centre struts & wedge lock
Hopper length:	4.9m (16' 1")
Hopper width:	2.4m (7' 11")
Hopper capacity:	10m³ (13 cu. yd.)
Hopper body:	15mm thick wear resistant steel plate, mild steel reinforcing ribs
Control:	Variable speed control through a proportional flow control valve



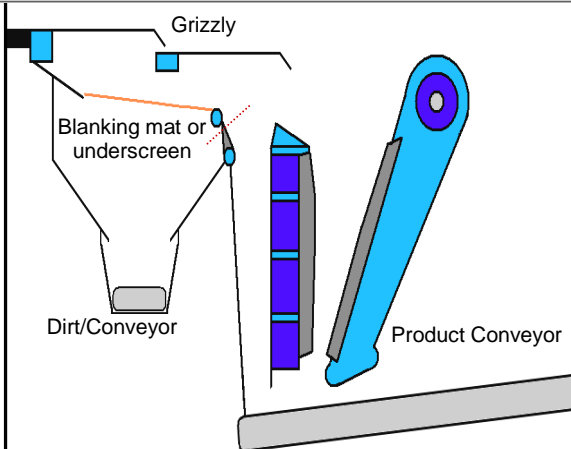
Vibrating Grizzly Feeder

Type:	Spring mounted vibrating pan & 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
Feeder length:	4.08m (13' 5")
Feeder width:	1.06m (3' 6")
Grizzly:	2 replaceable 1.60m long stepped cartridge type grizzlies 50mm nominal aperture, self cleaning
Grizzly length:	2.12m (7')
Under-screen:	Rubber blanking mat fitted as standard. Can be substituted for optional wire meshes, use in conjunction with optional side conveyor.



Plant Chute-work

Crusher feed chute:	One piece fabrication with 12mm thick mild steel plate sides with 20mm thick bottom plate
Grizzly fines/ bypass chute:	2-way dirt chute provided to discharge to product conveyor or optional dirt conveyor when fitted. Fabricated from 6mm mild steel, complete with hand operated flap door to direct grizzly fines to either dirt conveyor or product conveyor.



Product Conveyor

Conveyor type:	Troughed belt conveyor
Design:	Hydraulic raise & lower facility to aid rebar removal & transportation. Can be raised or lowered whilst crushing. Fully removable modular unit to aid access & maintenance.
Belt type:	EP630/4 with 6mm top & 2mm bottom cover, vulcanised
Belt width:	1000mm (39")
Discharge height:	3.9m (12' 9")
Stockpile volume:	89m ³ (116 cu. yd.)
Max. clearance:	472mm (jaw to belt - lowered) 747mm (engine to belt - lowered)
Drive:	Direct drive hydraulic motor
Tunnel:	Conveyor fitted with 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 drum
Belt covers:	Canvas type removable dust covers fitted to head section beyond magnet
Belt scraper:	Polyurethane blades as standard
Lubrication:	Remote head drum grease points located under shedder plate
Skirting:	Wear resistant rubber skirts along entire conveyor length



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



Powerunit

EU Stage IIIA / US Tier 3:	Caterpillar C9 ACERT, 6 cylinder, direct injection 194kW (260hp) at 1600rpm *
Operating conditions:	Ambient temp. +40°C & -12°C (104F & 10F) altitudes up to 1000m (3281ft) above sea level #
Operating rpm range:	1600rpm
Typical fuel consumption:	N/A
Plant drive:	High quality pumps driven via belts
Fuel tank capacity:	410 L (108 US G) - sufficient for a 12 hour shift
Hydraulic tank capacity:	340 L (116 US G)



EU Stage IIIB / US Tier 4i :	Scania DC9 080A 5 cylinder, turbo, 202kW (275hp) at 2100rpm
Operating conditions:	Ambient temperature +40°C & -12°C (104F & 10F) at altitudes up to 1000m (3281ft) above sea level #
Operating rpm range:	1600rpm
Typical fuel consumption:	N/A
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:	450 L (119 US G) - sufficient for a 12 hour shift
Hydraulic tank capacity:	445 L (117 US G)



Clutch type:	Highly efficient, self-adjusting HPTO 12 dry plate clutch with electro hydraulic operation
Crusher drive:	Direct drive via wedge belts, Clutch pulley diameter 212mm (8.3") Crusher pulley diameter 1260mm (4' 2")
Drive tensioning:	Manual screw tensioners located beside powerunit

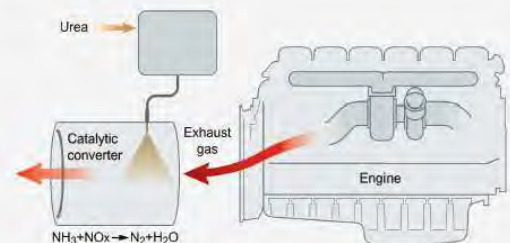


For applications outside this range please consult with Powerscreen as the plant performance / reliability may be affected

Selective Catalytic Reduction (SCR)

SCR technology is used for Stage IIIB & Tier 4i to reduce the NOx content in the exhaust gases. A chemical process is started by injecting reductant, a urea & water mixture, into the exhaust gas stream. During injection the water evaporates & the urea breaks down to form ammonia. The ammonia then reacts with the nitrogen gases in the catalytic converter & forms harmless products such as nitrogen gas & water.

Through the use of SCR the exhaust gases are purged of poisonous levels of NOx in the best possible way. The reductant tank holds 60 litres & is heated by the engine's cooling system in order to avoid freezing of the urea solution, urea freezes at -11°C.



The principle for Scania SCR system

Crawler Tracks

Type: Heavy-duty tracks
Pitch: 190mm
Longitudinal centers: 3715mm
Track width: 500 mm

Climbing grade: 25° maximum
Speed: 0.9kph (0.56mph)
Drive: Hydraulic motors
Tensioning: Hydraulic adjuster, grease tension



Guarding

Wire mesh or sheet metal 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

A detachable access ladder is provided to gain access to each side of the powerunit

A maintenance platform is provided on one side of the feeder with double row handrails & access ladders.

A platform is also included to gain access between the crusher & the powerunit.



EU Stage IIIA / US Tier 3 only

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 dirt 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
- Deflector plate under crusher
- Dirt conveyor
- Magnet prepared

- Single pole overband magnetic separator
- Twin pole overband magnetic separator
- Belt weigher
- Electric refuelling pump
- Hydraulic water pump
- Radio remote control

(For pricing please refer to your local dealer)

Powerscreen® XR400S Options

SPECIFICATION - Rev 4. 01/08/2012

Hopper Extensions

Hopper type: Hydraulic folding extended hopper with over centre struts & wedge-lock system

Hopper length: 4915mm (16' 1")

Hopper width: 3815mm (12' 6")

Hopper body: 15mm wear resistant plate, steel ribs

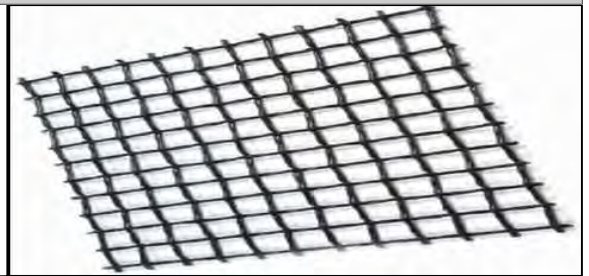


Feeder Under Screen Mesh

Position: Removable wire meshes fitted in lieu of the standard rubber blanking mat, use in conjunction with optional dirt 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)

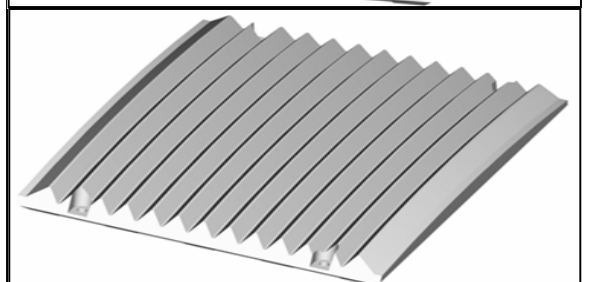
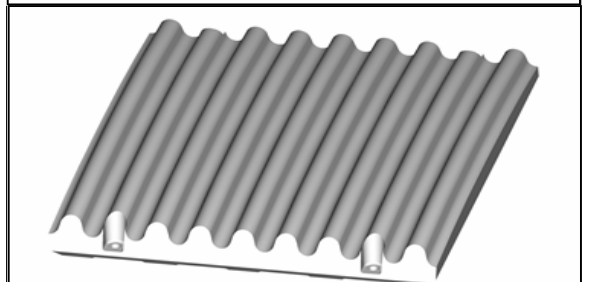
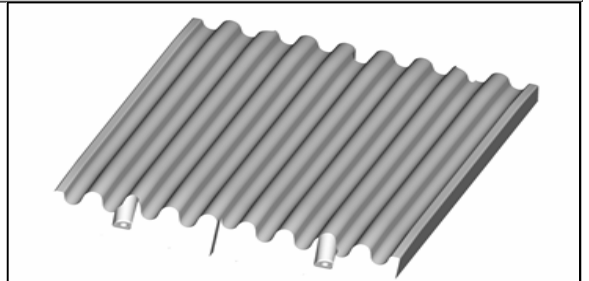
Premium jaws are fitted as standard in all XR400 jaw crushers. They are suitable for most quarry & recycling applications & give an excellent cost per tonne crusher.

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.

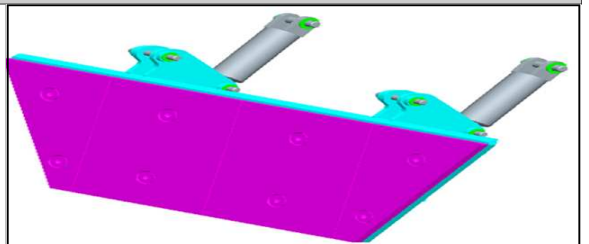
Multi Tooth Jaws

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.



All specifications subject to change without prior notice



Powerscreen® XR400S Options

SPECIFICATION - Rev 4. 01/08/2012

Dirt Conveyor

Conveyor type:	Troughed belt conveyor, folds hydraulically for transport
Width:	600mm (23.6")
Discharge height:	2.0m (6'5")
Stockpile volume:	12m ³ (16 cu. yd.)
Drive:	Direct drive hydraulic motor
Position:	Discharge on RHS of plant



Magnet

Options:	Magnet prepared Terex TX440 single pole (S.P.) Terex TX440X 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. 975kg (2150lbs) T.P. 1470kg (3240lbs)



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)



Belt Weigher

Type:	Modular scale with stainless load cells, single idler speed wheel & display unit
Accuracy:	± 1.0 + 0.5%
Load cells:	2 temperature compensated parallelogram-style, stainless steel
Display:	Separate read out near control panel



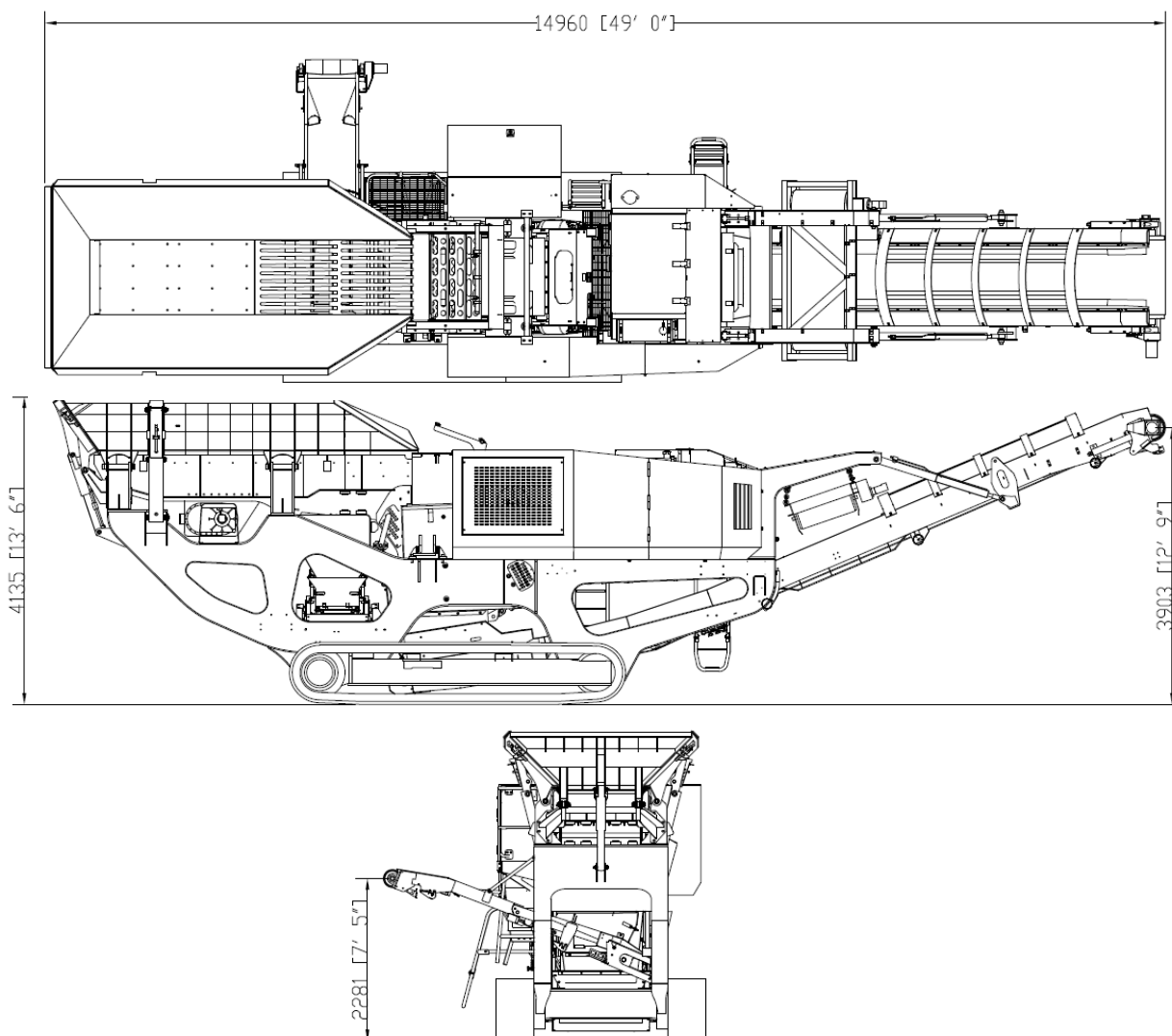
All specifications subject to change without prior notice



Approximate Plant Weight & Dimensions

Working length:	14.96m	(49' 0")
Working height:	4.13m	(13' 6")
Working width:	2.8m	(9' 2")
	4.3m	(14' 1") including dirt conveyor
Transport length:	15.2m	(49' 10")
Transport width:	2.80m	(9' 2")
Transport height:	3.4m	(11' 2")
Total plant weight:	44,750kg	(98,656lbs) including magnet & dirt conveyor
Paint colour:	RAL 5021	

XR400S Working Dimensions



All specifications subject to change without prior notice



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.

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Appendix F: Noise Assessment