

C-1540 Dual Power Cone Crusher



 **DUALPOWER** 

Key Features:

- ▶ The plant's electrically driven power systems provide significant cost advantages and efficiencies.
- ▶ Superior performance in dusty applications and in high altitude environments.
- ▶ Optional pre-screen module maximises production and reduces wear on the chamber by removing fine material before it enters the cone.
- ▶ Metal detection system on feed belt with 'auto-stop' protects the cone from tramp metal and the purge system removes contaminants from the machine.

C-1540 DUAL POWER

The dual powered Terex Finlay C-1540 cone crusher offers operators the flexibility to power the plant either by mains electric connection or the onboard genset powerpack configuration. Either power option presents operators with significant power, servicing and maintenance cost savings.

This energy efficient and productive machine incorporates the proven Terex® 1000 cone crusher with direct electric drive, automatic tramp relief and hydraulic closed side setting (CSS) adjustment.

The dual powered Terex Finlay C-1540 can be fitted with an optional patented pre-screen module which allows fines materials to bypass prior to being fed to the crushing chamber offering better wear rates in the crushing chamber.

The large hopper/feeder has an automated metal detection and a purge system to protect the cone and reduce downtime by removing metal contaminants via the purge chute.

Additional benefits include, rapid set up time, ease of maintenance, high reduction ratio, high output capacity and advanced electronic control system.

Main conveyor

- ▶ Belt: 900mm (36")
- ▶ Discharge Height: 3.3m (10' 10")
- ▶ Standard Stockpile capacity: 53.5m³ (70yds³) 40°

Pre-screen system (optional)

- ▶ Top deck: 1.83m x 1.22m (6' x 4')
- ▶ The pre-screen module will maximise production through the cone by removing as much fine material as possible before it enters the cone chamber. This will also reduce wear within the cone chamber



Cone chamber

- ▶ Terex 1000mm (40") cone chamber
- ▶ Drive arrangement: Direct electric cone drive

Metal purge chute

OVERVIEW



Metal Detector

Powerpack

- ▶ Tier 2 Equivalent: Scania DC09
Engine Power: 257kW (350hp)
Engine Speed: 1500 rpm
- ▶ Stage IIIA Constant Speed: Scania DC09
Engine Power: 273kW (365hp)
Engine Speed: 1500 rpm
- ▶ Tier 4F / Stage IV: Scania DC09
Engine Power: 257kW (350hp)
Engine Speed: 1500 rpm (EU) / 1800 rpm (USA)

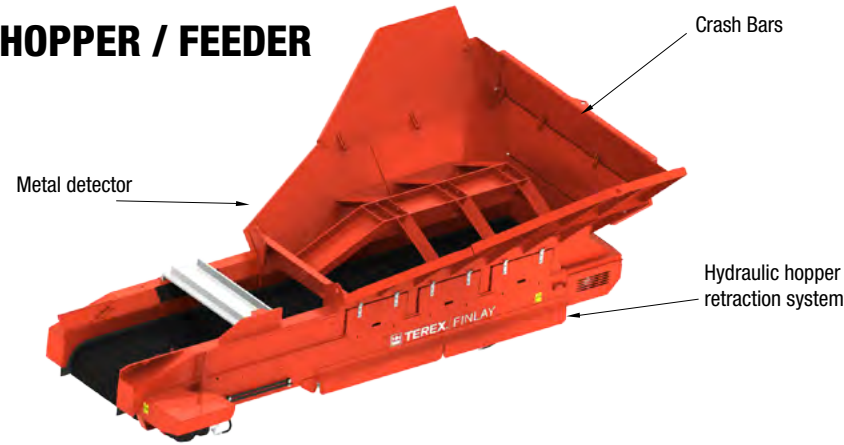
Hopper / Feeder

- ▶ Hopper capacity: 5m³ (6.5yd³)
- ▶ Drop down rear door for auxiliary crusher feed
- ▶ Crash bar fitted to reduce impact load on feed conveyor

Undercarriage

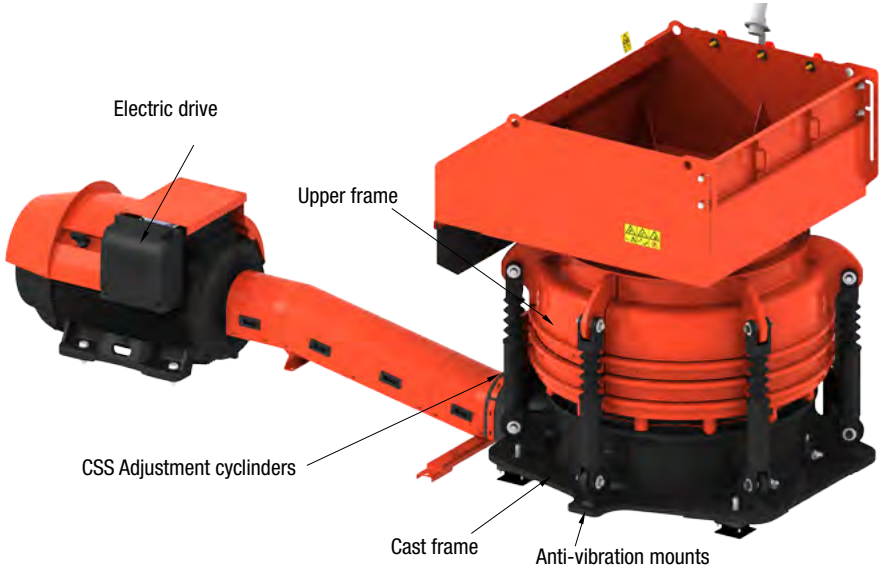
- ▶ Shoe Width: 500mm (20")
- ▶ Sprocket Centres: 3.80m (12' 6")

HOPPER / FEEDER



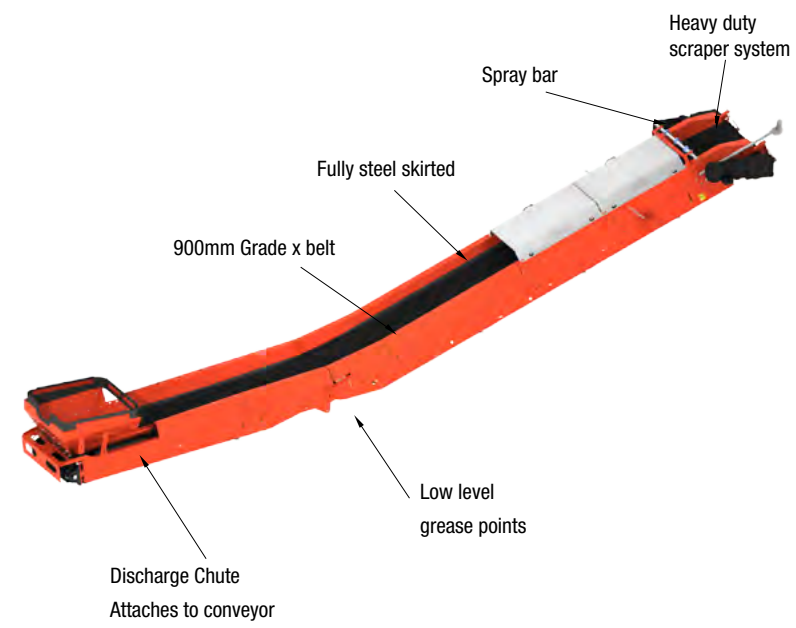
STANDARD FEATURES	BENEFITS
Hopper capacity 5m ³ (6.5yd ³), with impact reducing cross bars and rollers	Rubber lagged Impact rollers reduce noise and belt wear Crash bar allows dump feeding with loading shovel Larger capacity than 4.4m hopper on Powerscreen Automax 1000 Low level drop down feed point assists feeding from an upstream crusher Wear-resistant liner plates increases the hopper wear life when crushing abrasive material
Hydraulic hopper retraction system	Movable hopper directs feed onto cone centre reducing uneven wear in chamber Hydraulic action is safe, easy and simple to position from transport to working position Hydraulic movement saves time and manpower
Metal detection system on feed belt with 'auto-stop' feature	Detects steel and manganese steel hidden in the feed material Protection of cone chamber from tramp metal by automatically stopping the feed belt
Controllable discharge system to purge metal contaminants from feeder	No need to physically clear metal objects from feed belt. Operator can dump tramp metal feed to the side of machine via main control panel or via optional radio remote Clears multiple or consecutive pieces of tramp metal on same belt run Chamber protection and reset reduces plant downtime
Heavy duty, high torque hydraulically driven feed belt 1.05m (42") wide	Heavy duty, high torque, hydraulic drive can handle high loads Large diameter, rubber lagged drive drum to prevent belt slippage Automated variable speed ensures maximum output from plant and ensures the cone chamber is always choked Full length skirting reduces spillage and plant maintenance Ground level greasing to bearings on drive drum

CONE CHAMBER



STANDARD FEATURES	BENEFITS
Terex® 1000 Cone chamber, 1000mm (40") head diameter Long throw eccentric Medium Coarse concave (max feed size 160mm) fitted as standard	Combination of eccentric throw and cavity design gives this crusher high reduction ratios and large capacity for most applications Good ability to generate fines Unrestricted feed opening reduces blockages, bridging and maximises output
Level sensor fitted over inlet feedbox maintains optimum choked conditions	Choke feeding improves production, reduces wear on manganese, reduces shock loads on the bearings, reduces power requirements
Hydrostatic cone drive with advanced electronic speed control system	Powerunit operates constantly around peak power while allowing crusher speed to change Hydrostatic motors fitted directly to crusher drive shaft removing need for V-belts A speed sensor fitted to cone input drive shaft observes and maintains the crusher speed and also protects the crusher unit from overloading Five cone speed settings help to produce quality aggregates
Hydraulically adjustable closed size setting with monitoring system	Computer controlled CSS adjustment Mantle / Concave wear indicator CSS adjustment can occur while crushing
Overload protection with automatic reset	This allows the upper frame to lift up, so tramp metal and other un-crushables can pass. The system then automatically returns the upper frame to its original position

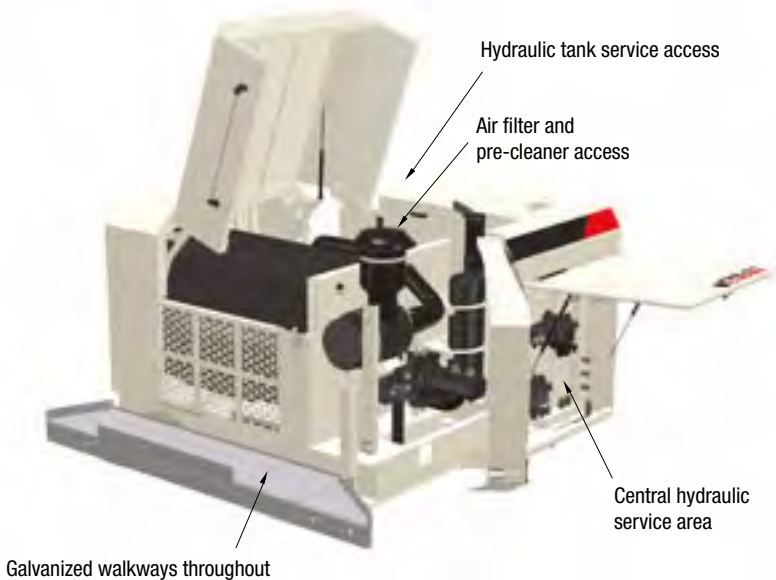
MAIN CONVEYOR



STANDARD FEATURES	BENEFITS
900mm (36") wide main conveyor belt	More space to crawl to tail drum to help with daily checks
High specification scraper at main conveyor head drum	Ensures site cleanliness Improved belt life and roller life Self tensioning reduces operator maintenance
Wear resistant liners at crusher discharge	5mm mild steel plate around discharge chute 15mm wear resistant plate fitted at impact point Impact bars directly under crusher discharge point
Easy maintenance	Full length skirting reduces spillage and plant maintenance Ground level greasing to bearings on drive drum
Dust suppression system	Spray bars help reduce dust emmissions

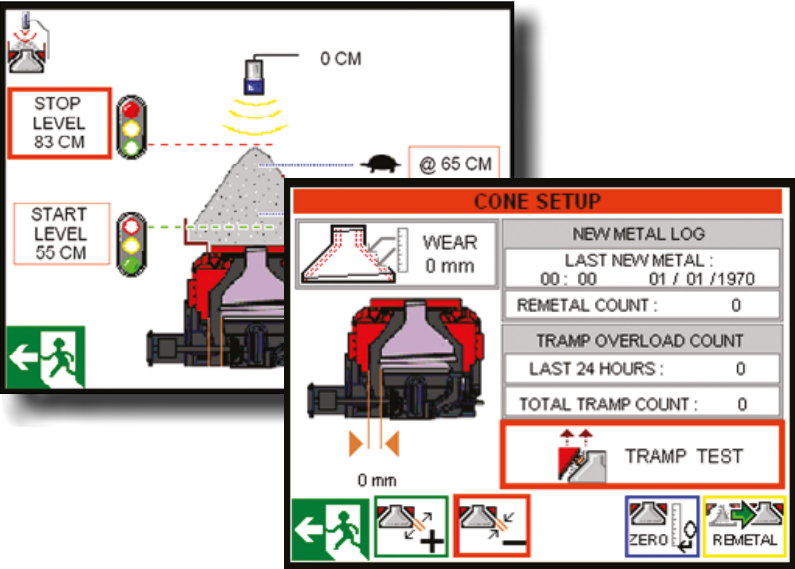
POWER UNIT

Tier 2 Equivalent: Scania DC09 257kW (350hp)
Stage IIIA Constant Speed: Scania DC09 273kW (365hp)
Tier 4F / Stage IV: Scania DC09 257kW (350hp)



STANDARD FEATURES	BENEFITS
Closed loop Linde hydrostatic transmission for crusher drive	Fixed displacement gear pumps provide power to drive all conveyors, tracks, optional pre-screen and hydraulic cylinders. They also provide power to the lubrication oil pump and supplies the crusher hydraulics and adjustment system
Excellent service access	Full catwalk access on both sides of powerunit Removable access panels for engine maintenance Hydraulic tank suction filters easily accessible from top without draining oil tank

CONTROL SYSTEM



STANDARD FEATURES	BENEFITS
Advanced CAN-bus compliant control system	Easy to find faults and configure plant parameters on screen Component monitoring and electronic plant control
User friendly control panel	Large colour display screen with simple icons used to guide operators Simple selection of feeder and crusher speeds Main menu consists of 8 user modes to monitor, set-up and operate the plant Control panel mounted inside a lockable control cabinet
Hand held track control set with 5m connection lead	Operation and positioning from a safe distance Optional radio remote can operate and move machine from a distance

ADDITIONAL FEATURES	BENEFITS
Safety features	<p>Galvanised catwalk c/w handrail, kick board and access ladders provide safe, all-round access to key areas of the plant.</p> <p>Safety guards in compliance with machinery directive</p> <p>Catwalks are accessible from both sides of machine</p> <p>Self-closing gates and double row hand rails ensure safe working areas</p> <p>Emergency stops accessible around the machine</p>
Heavy duty track unit	<p>Track length length 3.8m (12' 6"), pad width 500mm (20") provides strength & stability during operation</p> <p>Single speed tracks with soft start provides control in positioning & transport movement</p>
Multiple easy access low level greasing points	Easy maintenance of areas with difficult access
Dust suppression system (manifold, 3 bars, piping)	Reduced impact to environment by reducing dust emissions
Interlink system for Upstream/ Downstream compatibility with other crushers and screeners	Operation of crushing trains can be controlled to stop overspilling if another crusher stops working

OPTIONAL FEATURES	BENEFITS
Pre-screen system - 1.83m x 1.22m (6' x 4') single deck screen with 1000mm (40") feed conveyor system (folds for transport). (Requires 1 x auxiliary drive*)	<p>Improves plant capacity</p> <p>Still keeps shape within many countries specifications</p> <p>Removes a percentage of dirt and sand from the crushing chamber to increase the wear life of the manganese liners</p> <p>Provides additional flexibility for different applications</p> <p>Transfer conveyor duct cover reduces dust emissions</p>
Hydraulically driven water pump for dust suppression. (Requires 1 x auxiliary drive*)	Water pump can be fitted to aid dust suppression system set up
Main conveyor dust cover	Covers main conveyor to reduce dust emissions
Electric pump refuelling kit	<p>Makes refuelling on site very easy and reduces spillage that occurs when using a conventional funnel</p> <p>Option is integrated into the plant</p>
Special Paint Colour (if different from Finlay Orange RAL 2002). RAL must be provided	Customised livery for specific customer colours
Manual extensions for feed hopper (total capacity 8m³ / 10.4yd³)	<p>Extensions mean a loading shovel can fill the hopper from the rear (Extended width 3.7m)</p> <p>Large standard feed hopper means that these are rarely required</p>
Radio remote System: Operational controls of machine (auto start/stop) & track movement	Optional radio remote can operate and move machine from a distance

C-1540 DUAL POWER

OPTIONAL	BENEFITS
Belt weigher for main conveyor	Ability to manage production, measure capacity and log data. Modem can be fitted to supply data to external laptop (optional) Printout of production data is possible (optional)
Stockpiler drive. (Requires 1 nr auxiliary drive*)	Ability to increase the stockpile capacity using an additional Stockpiler / Stacker
Lighting mast for catwalk	Visibility during night operation
Hot climate lubrication kit	Higher oil viscosity assists operation in hot climate where ambient air temperatures are +30°C
Hot climate cooler pack. (Requires 1 nr auxiliary drive*)	Using an oil cooler reduces oil temperatures in hot climates where ambient air temperatures are +40°C.
Cold climate lubrication kit	Lower oil viscosity assists operation in cold climate where ambient air temperatures are -10°C
Terex 1000 Extra coarse concave - max feed size 195mm	Different set-up configurations and metalurgies can be used to reduce wear costs and optimise aggregate production. (Check lead-time on options)
Terex 1000 Coarse concave - max feed size 175mm	
Terex 1000 Sand concave - max feed size 63mm	
This option must also use the Short throw eccentric option	
Short throw eccentric (check leadtime)	Provides a tighter product range and less fire generation

* NOTE: ONLY 2 x AUXILIARY DRIVES ARE AVAILABLE

ELECTRICAL SPECIFICATION

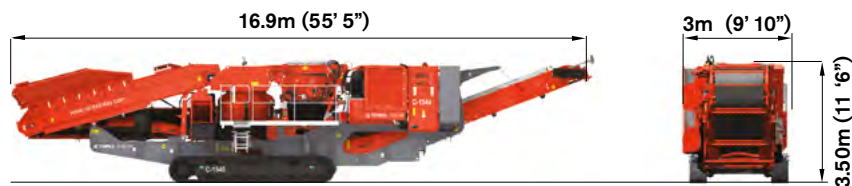
Main Conveyor: 2 x 5.5kW Motors

Lube Oil Heaters: 2 x 1.5kW

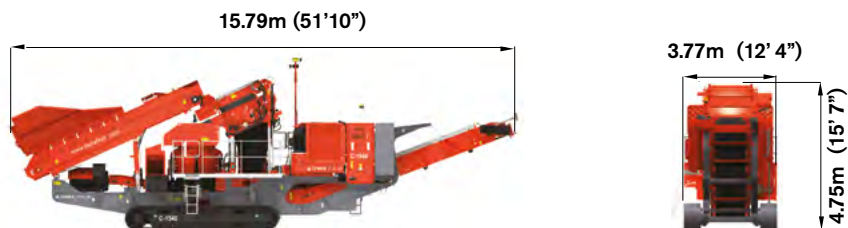
Hydraulic Pump: 55 kW (Tracking, Pre-Screen module, Feed conveyor, Folding)

Crusher Motor: 185kW

Transport Dimensions



Working Dimensions



Maximum Plant Capacity:	TPH*	US TPH*
	260	287

Machine Weight: **45,320kg (99,914lbs)**
with optional pre-screen

* Material is based on Limestone with bulk density 1.6T/m³. Where available optional Pre-screen is used. Maximum capacity uses optimal mesh sizes and material conditions.

NOTES

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.