QS331
HOPPER DOORS

- Heavy duty hopper sides
- 5m³ / 6.5yd³ nominal hopper capacity
- 6.5m³ / 8.5yd³ hopper capacity with extensions
- Rear loading width 2305mm / 7’ 6¾”
- Rear loading width with extensions 3600mm / 11’ 9¾”
- Rear loading height 3455mm / 11’ 4”
- Rear loading height with extensions 3815mm / 12’ 6¼”
QS331

FEED HOPPER

• 1000mm / 39½” wide belt
• Impact cradle protects the belt from feed material weight and impact
• Material spreader plate evenly distributes the material across the belt
• Hydraulically raised and lowered for transport
• Hydraulic drive via motor and gearbox with proportional control
• Feed material is automatically maintained at optimal levels by a level monitor & automatic proportional feeder speed control
QS331
METAL DETECTOR

• Metal detector fitted as standard

• Over and under system for maximum stability and detection control

• Stops the feed conveyor when steel is present in the feed material also acoustic and visual system to warn that the feeder has stopped

• Prevents ferrous tramp metal entering the crushing chamber

• Top coil hinges open to easily access the belt to remove the tramp material
QS331
GREASING AND MAINTENANCE

• Remote greasing lines for the feed conveyor bearings
• Located in one place for ease of maintenance
• Tail drum access door
• Easy to reach tensioners
• Greasing from ground level
The “S” type can accept a feed size up to 90% larger than current standard cones allowing maximum productivity of your primary, or even run the “S” cone as a primary crusher on gravel applications.

Capable of producing large reduction ratios with minimal fines production it is ideally suited for crusher run, ballast / drainage stone or material for a tertiary crushing plant.

Unique crusher design:
- Long crushing chamber
- Very large feed opening
- Excellent reduction ratio
- Variable crusher speed via the engine to manipulate product gradation
QS331

CONE ACCESS

• Access doors located around the cone
• These allow easy maintenance of the cone arm shields
• Good access from below the crusher
QS331
PRESSURISED CONE

• Pressurised cone prevents dust ingress into the cone bearings
• Achieved by pumping air into the mainframe which is then forced out through the dust seal below the cone head
• Prolongs the life of the internal parts of the crusher and lubrication oil
• Pressure provided by a 24 volt air pump with easy change filter
QS331

GAP SETTING

• Adjustment is by a hydraulic cylinder located under the main shaft assembly.
• This allows for CSS adjustment whilst crushing under load
• This unique crusher design can offer a CSS adjustment of tenths of a millimetre / fractions of an inch!
QS331

ECCENTRIC THROW

- The eccentric throw can be changed simply by turning the bush in the eccentric
- This provides flexibility regarding CSS, capacity and gradation of the end product

<table>
<thead>
<tr>
<th>Bush settings</th>
<th>QS331</th>
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<tbody>
<tr>
<td>16mm throw</td>
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<tr>
<td>20mm throw</td>
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<tr>
<td>25mm throw</td>
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<tr>
<td>30mm throw</td>
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Throws available
There are 3 liner options available for the CS430 cone:

EC – Extra Coarse: max feed size 360mm / 14⅜”
C – Coarse: max feed size 300mm / 12”
MC – Medium Coarse: max feed size 235mm / 9¼”

CSS range of 19mm to 51mm / ¾” to 2”
Up to 344 tph / 379 stph depending on concave and bush setting
QS331

CONE WEAR PARTS

• Chamber is divided into three main parts:
  − Upper concave segments
  − Lower concave ring
  − Mantle

• Lower concave can be replaced independently to the upper segments which reduces cost
QS331

CONE HYDROSET AND LUBRICATION

• The lubrication tank is located at the rear of the machine under the feed conveyor
• Easy maintenance access to the lubrication tank, oil cooler and tail conveyor
• Lube tank capacity of 250 litres / 66 US Gal
• Dual heating system for rapid start up in cold conditions
• The Hydroset is located directly underneath the centre of the crusher
• Its operation is incorporated into the main plant hydraulic system
QS331

CRUSHER DRIVE

• The cone is driven through a 12” PT-Tech wet clutch (hydraulically operated)

• Oil immersed clutch plates are able to control the slippage and give a known friction and heat generation allowing for controlled engagement for a smooth start up.

• This slippage allows controlled torque limiting which protects the clutch and engine

• The PT-Tech clutch is a stand alone unit that takes the drive directly from the engine.

• PTO drives for the hydraulic pumps
QS331

DRIVE SYSTEM

• Simplified grooved pulley system
• Easy belt adjustment without moving the engine
• 8 single SPC belts for maximum power transmission
• Shock absorber & bush system to allow for crusher movement
• Belt slippage warning to protect the belt
QS331
LEVEL MONITORING

• Automatic feed conveyor belt speed control
• Monitored via level sensor mounted over the crushing chamber
• Ensures the cone is continually choke fed
• Camera attached to level sensor with a small screen in cabinet for visual monitoring of feed material
• Display screen is located at ground level for improved operator safety
QS331

MAIN CONVEYOR

- 1000mm / 39½” belt
- The conveyor tail can be lowered down hydraulically for any maintenance under the crusher
- Remote greasing of bearings
- 3065mm / 10’ ¾” discharge height
- Under crusher impact bed to protect and prolong belt life
- Canvas covers fitted as standard
QS331

DUST SUPPRESSION

• Environmentally friendly dust suppression feature fitted as standard
• Dust suppression spray bars located at:
  − Cone hopper
  − Product conveyor discharge
• Canvas covers on the main conveyor
QS331

ENGINE

• Powered by Caterpillar C9 Acert Stage 3A/Tier 3 or optional C9.3 Acert Stage 3B/Tier 4i engine
• Stage 4 / Tier 4 final introduction during 2015 to replace Stage 3B/Tier 4i engines
• Developing 261kW / 350hp
• Complies with current global emission laws
• 50°C ambient capability (engine and hydraulics)
• Easy access for maintenance via three canopy doors
QS331

HYDRAULIC TANK

- 660 litre / 174 US Gal capacity hydraulic tank
- Multi-stage filtration system to ensure maximum oil cleanliness and component life
- Filters located at the top of the unit for ease of maintenance via platform
- Hydraulic oil cooled via a hydraulic driven oil cooler
- Oil temperature monitored and controlled to protect the hydraulic system
QS331

HYDRAULIC SYSTEM

- Sauer Danfoss variable displacement swash plate pump
- PVG 32 power solution controlling all major functions around the machine
- Steel pipe work for total reliability under extreme working conditions
- Metric soft seals on the steel pipes to ensure leak free operation
- Dissipates heat
QS331

FUEL TANK

• 660 litre / 174 US Gal diesel tank
• Optical level gauge
• Heavy duty industrial size lockable filler cap
• Electronic fuel level sensor
• Low level fuel warning stops the feed belt and initiates a programmed machine shut down
QS331

TRACKS

- Hydraulically driven crawler track mounted for full site mobility
- Speed 0-1 km/h / 0-0.62 mph

500mm / 19¾” wide

3800mm / 12’ 5¾” long
QS331
CONTROL PANEL

- Full colour display screen
- Simple user friendly push button control panel layout
- All functions clearly marked for simple, error free operation
- All engine and plant operating parameters can be viewed from the PLC screen
- Screen is still visible in hot (+40°C) and cold (-30°C) conditions
QS331

CONTROL FUNCTION

• Tracking controlled by wired umbilical controller
• Full proportional control
• Variable speed for ease of loading and on site mobility
• Spare battery and on plant charger
• Optional radio control for the following areas:
  • Track control
  • Stop engine button

Radio controller (optional)

Umbilical controller

Battery charger (supplied with radio controller)
QS331

TRANSPORT DIMENSIONS

Transport length  14.56m / 47’ 9¼"
Transport length  14.77m / 48’ 5¼” (with hopper extensions)
Transport width   2.80m / 9’ 2¼”
Transport width   2.94m / 9’ 7¾” (with hopper extensions)
Transport height  3.8m / 12’ 5½”
Standard weight   36,000kg / 79,366lbs
QS331

TRANSPORT DRAWINGS
QS331

WORKING DIMENSIONS

- Working length: 13.50m / 44' 3½"
- Working width: 3.14m / 10' 3½"
- Working height: 4.77m / 15' 7¾"
- Standard weight: 36,000kg / 79,366lbs
QS331

NOISE EMISSIONS
QS331
STANDARD FEATURES

• Feed hopper
• 1000mm / 39½” wide feed conveyor belt
• 1000mm / 39½” wide main conveyor with dust covers
• Metal detector (over and under)
• Sandvik CS430 cone crusher with coarse chamber
  25mm bush setting
• CAT C9 Acert Stage 3A / Tier 3 engine
• 12” direct drive PT tech wet plate clutch
• Camera on crusher feed hopper
• Dust suppression spray bars
• Proportional tracking via wired umbilical controller
• 50ºC ambient capability with a change of lube oil
• Level sensor on crushing chamber
QS331

AVAILABLE OPTIONS

• Medium coarse and extra coarse chamber kit
• Wear resistant hopper liner plates back and sides
• Hydraulic folding hopper extensions for rear loading
• Central autolube (all bearings)
• Central autolube all bearings including hanging screen (excluding screen bearings)
• Arctic package -20ºC (-4ºF) (32 grade hydraulic oil, engine oil and 100 grade lubrication oil)
• Arctic package -30ºC (-22ºF) (arctic hydraulic oil, engine oil, 100 grade lubrication oil and webasto coolant heater)
• Tropical package (220 grade lubrication oil for +30ºC ambient)
• Main conveyor level sensor (stockpile monitor)
• Fines conveyor level sensor (stockpile monitor HS only)
• Lighting mast and cabinet lights
• 13’ x 5’ single deck hanging screen unit complete with re-circulating conveyor and 1.75m extended main conveyor
• Remote diesel pump (electric)
• Pull stop cords on the main conveyor
• Pull stop cords on the recirculating and fines conveyor
• Water pump (hydraulic)
• Overband magnet (not available with hanging screen)
• Engine filter kit - 250 hours (for 3A engines only)
• Plant and engine filter kit - 500 hours (3A engine)
• Plant and engine filter kit - 500 hours (3B & 4 Final engine)
• Intelligent line multi-machine communication
• Head drum guard on the main conveyor only (not available with hanging screen)
• Main conveyor under guards, head drum guard and additional side and rear guards (not available with hanging screen)
• Tool box and contents
• Radio remote control
• 1.75m extended main conveyor (standard with HS)
**QS331**

**OPTIONAL HANGING SCREEN**

- 4m x 1.5m / 13’ x 5’ single deck hanging screen system
- Complete with re-circulating conveyor and 1.75m extended main conveyor
- Allows the machine to produce a screened product and recirculate the oversize back into the feed conveyor.
- The oversize conveyor can be hydraulically rotated through 90° to stockpile onto the floor to produce two products.
QS331

BENEFITS OVERVIEW

- World class production and reliability
- Maximum tonnage and high capacity, combined with economy and maximum uptime
- Capable of handling a feed size up to 14\(\frac{3}{8}\)” / 360 mm, the QS331 can be used as a primary, as well as a secondary crusher
- Direct drive for optimum efficiency and power transfer
- Remote camera for visibility of the crushing chamber from ground level
- Level sensor above the crushing chamber to regulate the feed to optimise production and reduction
- Superb access around the crusher for easy maintenance
- Massive tonnage to fuel consumption ratio
Precision Screen
Screening and Crushing Solutions

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www.precisionscreen.com.au

Australian dealers for Sandvik’s range of mobile crushing and screening equipment