

Sandvik QI441 PriSec Impact Crusher

Technical specification sheet



The QI441 is a heavy duty, tracked, self propelled impact crusher which features the unique Sandvik CI421 PriSec impact chamber, offering customers unparalleled flexibility through the ability to work in both primary and secondary applications.

It is available with an optional double deck hanging screen system, which will allow customers an even greater return on investment through the facility to produce accurately sized products for immediate use.

The QI441 has the following exciting features:

- The Sandvik PriSec impactor is the most flexible impactor currently available on the market designed to meet end product specifications.
- The machine is fitted with a pre-screen to ensure maximum scalping capability in order to prevent any undersize material passing through the impactor, thereby maximising throughput and reducing wear costs. This also allows a specified sized product to be produced from the natural fines conveyor.
- The pre-screen has a choice of grizzly, punch plate or heavy duty mesh top deck and mesh bottom deck, providing the flexibility to suit any application.
- The QI441 is fitted with an underpan feeder which drastically reduces any spillage issues generally associated with impact crushers. The underpan feeder eliminates the need for skirt rubbers that are normally situated in the severe impact zone of a feed boot.
- The underpan feeder also protects the conveyor belt from high velocity material from the rotor. This material is contained on the wear resistant underpan feeder liners and gently delivered onto the conveyor belt.
- Two hydraulically adjustable apron curtains can be positioned to produce a wide range of material, product sizes and specifications.
- The above combined with the variable engine speed gives a tip speed range of 30 m/s to 37 m/s resulting in a wide range of product gradations being achievable.
- Capable of operating in the most hostile environments with a 50°C ambient temperature capability without any oil changes.

	QI441
Feed Hopper	
Hopper width	2540 mm / 8' 4"
Length	4290 mm / 14' 1"
Capacity	6 m ³ / 7.85yd ³
Primary Feeder	
Wear resistant lined feeder	1278 mm x 2365 mm / 4' 2" x 7' 9"
Twin eccentric shaft	Oil lubrication hydraulic variable drive
Pre screen	
Hardox top deck grizzly / punch plate	1360 mm x 2160 mm / 4' 6" x 7' 1"
Bottom deck mesh	1360 mm x 1730 mm / 4' 6" x 5' 8"
Pre screen grizzly spacing	20 - 60 mm / ¾ - 2 ¾"
Impactor	
Sandvik CI421 PriSec impact crusher	
Feed opening	1360 mm x 800 mm / 54" x 31 ½"
Hydraulic inlet opening	1360 mm x 1000 mm / 54" x 39 ½"
4 Bar rotor	1150 mm / 45 ½" diameter
Rotor speed (variable)	502 rpm to 620 rpm
Tip speed (variable)	30 - 37 m/s / 98 - 121 ft/s
2 aprons	Hydraulic assist
Optimum feed size	700 mm / 27.5"
Main Conveyor	
Belt width	1200 mm / 47 ½"
Belt length (endless)	20,700 mm / 67' 11"
Discharge height	4210 mm / 13' 10"
Hydraulic drive	Twin 500 cc / 30.5 cu inch x 2
Underpan feeder	
Type	Spring mounted stepped vibrating feeder
Width	1022 mm / 40 ½"
Length	2400 mm / 94 ½"
Pan feeder amplitude	9 mm / 3/8"
Natural fines conveyor	
Belt width	650 mm / 25 ½"
Belt length (endless)	12063 mm / 39' 7"
Discharge height	3100 mm / 10' 2"
Hydraulic drive	400 cc / 24.4 cu inch
Re-circulating Conveyor	
Belt width	500 mm / 19 ¾"
Belt length (endless)	19300 mm / 63' 4"
Discharge height	5104 mm / 16' 9"
Hydraulic drive	630 cc / 38.4 cu inch
Fines Conveyor	
Belt width	1200 mm / 47 ½"
Belt length (endless)	12800 mm / 42'
Discharge height	3040 mm / 10' 0"
Hydraulic drive	800 cc / 48.8 cu inch
Magnet	
Model	Eriez CP20/100-SC2
Weight	1300 Kg / 2866 lbs

Options

Pre screen grizzly spacing option
Pre screen top deck punch plate
Pre screen open aperture bottom rubber to feed natural fines conveyor (high fines / sticky applications)
Mesh underscreen options
Hopper extensions for rear loading with wear resistant liners
Hopper extensions for rear loading with rubber liners
Hopper wear resistant liner plates back and sides
Hopper high impact Sandvik rubber liners back and sides
Central auto lube (crusher bearings only)
Central auto lube (plant bearings excluding crusher)
Water pump (Hydraulic)
Arctic package -20°C (-4°F) (arctic hyd oil and engine oil)
Arctic package -30°C (-22°F) (grade 32 hyd oil, engine oil, lubrication oil and webasto coolant heater)
Lighting mast and cabinet lights

	QI441
Type	Self cleaning suspended
Gauss at 200 mm distance from belt	600 gauss / force density 15Kdynes/cc
Gauss at 250 mm distance from belt	490 gauss / force density 10Kdynes/cc
Stockpile Conveyor	
Belt width	500 mm / 19 ¾"
Belt length (endless)	12,020 mm / 39' 5"
Discharge height	3229 mm / 10' 7"
Hydraulic drive	630 cc / 38.4 cu inch
Cross Conveyor x 2	
Belt width	500 mm / 19 ¾"
Belt length (endless)	5000 mm / 16' 5"
Hydraulic drive	315 cc / 19.2 cu inch
Double Screen	
Screen box 1 top deck	1525 mm x 1525 mm / 5' x 5'
Screen box 1 bottom deck	1525 mm x 1525 mm / 5' x 5'
Screen box 2 top deck	2440 mm x 1525 mm / 8' x 5'
Screen box 2 bottom deck	2440 mm x 1525 mm / 8' x 5'
Power Unit	
Engine	CAT C13 Tier 3A or Tier 3B / 4i
Engine power	328 kW / 440 Hp
Drive Type	Direct / Hydraulic
Fuel tank	660 litres / 174USG
Hydraulic tank	660 litres / 174USG
Tracks	
Tracking speed	0 - 1.4 kph / 0.87 mph (proportional)
Shoe width	500 mm / 19 ¾"
Drive	Hydraulic motors / gearbox
Control	Radio / Umbilical
General Technical Data (Hanging Screen Details)	
Operation length HS	19.46 m / 63' 10"
Operation width HS	6.83 m / 22' 5" inc natural fines conv
Operation width HS	11.15 m / 36' 7" stockpile + natural fines conv
Operation height HS	5.35 m / 17' 6"
Transport length HS	18.51 m / 60' 9"
Transport width HS	3.54 m / 11' 7"
Transport width (without stockpile con)	3.30 m / 10' 10"
Transport height HS	3.75 m / 12' 3"
Weight HS	62,400 kg / 137,568 lbs
Operation length Open	16.50 m / 54' 2"
Operation width Open	6.70 m / 22' 0"
Operation height Open	4.60 m / 15' 1"
Transport length Open	15.73 m / 51' 7"
Transport width Open	3.00 m / 9' 10"
Transport height Open	3.60 m / 11' 9 ¾"
Weight Open	53,000 kg / 116,845 lbs

Note. All weights and dimensions are for standard units only (full diesel tank)

Remote diesel pump (electric)
Double deck hanging screen system
Additional stockpile conveyor for the hanging screen system
Pull stop cords for natural fines and main conveyor
Pull stop cords for re-circulating conveyor
Pull stop cords for stockpile conveyor
Pull stop cords for fines conveyor
Engine filter kit - 250 hours (air and oil filters - for 3A engines only)
Plant and engine filter kit - 500 hours (3A engine)
Plant and engine filter kit - 500 hours (3B engine)
Intelligent line multi-machine communication
Main conveyor level sensor (stockpile monitor)
Tail conveyor level sensor (Hanging Screen only)
No overband magnet
No natural fines conveyor