

CONVEYOR PULLEYS

Supply, refurbishment & lagging



Completed pulley assembly on a transport cradle in the Mackay workshop.

Superior Conveyors supplies new conveyor pulleys and provides workshop assembly, refurbishment and lagging. Select rubber, polyurethane or ceramic to suit belt contact, traction, wear and the existing installation.

New pulley supply

New and replacement assemblies with dimensions, components and documentation confirmed for the order.

Workshop refurbishment

Strip and assess the existing pulley, agree the repair scope, then assemble and record the work.

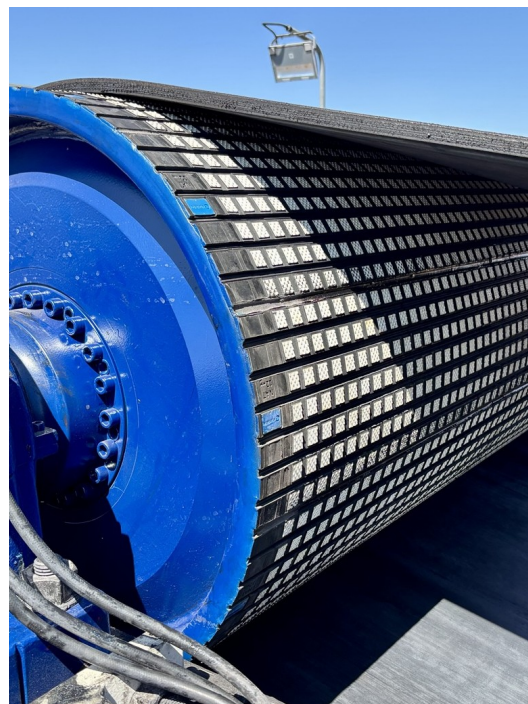
Lagging selection

Rubber, polyurethane and ceramic options, with the contact surface, application method and inspection requirements agreed for the order.

Pulley range & specification

Identify the pulley position, then confirm the complete assembly. Diameter and face width alone do not establish that a replacement will fit.

Drive	Transfers torque to the belt. Confirm tensions, wrap, drive connection and lagging.
Tail	Returns the belt at the tail. Check material entry and the loading or take-up arrangement.
Bend	Changes belt direction. Confirm the belt-force directions and bearing supports.
Snub	Increases wrap at an adjacent pulley. Check clearances and the required minimum diameter.
Take-up	Part of the tensioning system. Confirm imposed loads, travel and support arrangement.
Wing / self-cleaning	An option for selected build-up problems; confirm belt, load and speed suitability.



Ceramic-lagged pulley and housing on site.

NEW OR REPLACEMENT ASSEMBLIES

Drawing & dimensions	Drawing revision, bare and finished diameters, face width, bearing centres and overall shaft length.
Operating information	Belt width, construction, speed, tensions, wrap, starts, braking, reversing and overhung loads.
Components & records	Shaft and drive details, bearing/housing designations, seals, lagging and required inspection reports.

Live shafts rotate with the pulley; dead shafts remain stationary. Identify the arrangement from the drawing or existing assembly.

Workshop refurbishment

A strip-and-assess report establishes the condition of the shell, shaft and component seats. Agree the repair scope from the inspection findings.



Bare pulley shell in the workshop.



Pulley assemblies in the workshop.

01 Receive & identify

Record the asset, drawing and revision.
Photograph visible damage and the reported problem.

03 Agree the repair

Identify parts to retain or replace. Confirm repairs, machining, lagging and additional tests.

05 Lag & inspect

Record lagging specification, preparation conditions, inspection checks and agreed adhesion testing.

02 Strip & assess

Inspect the shell, shaft, hubs and component seats. Record findings and agree the required NDT.

04 Assemble & check

Fit the specified parts. Record relevant locking-element torque, bearing clearances and measurements.

06 Complete & release

Finish the agreed dossier and photographs. Confirm identification, cradle, protection and storage needs.

Repeated failures need the cause checked, not just the failed component replaced.

Rubber lagging

A resilient contact surface with a range of compounds and groove patterns. Rubber remains good value where it provides adequate grip and acceptable wear life.



Diamond-pattern lagging on a pulley in the Superior workshop.

Grip and drainage

Grooves channel water and fines away from the belt contact. Select the groove pattern for the pulley position and direction of travel; packed grooves cannot drain effectively.

Resilience at belt contact

A suitable rubber compound can accommodate local cover variation. Flexibility matters where a pulley contacts a worn carry cover or sees local shear.

A practical replacement

Retain rubber where traction, wear and bond life are satisfactory. Compare installed cost and the change-out interval before moving to another surface.

Compound and finish

Specify hardness, thickness, pattern and application method. Confirm temperature, exposure and any flame-retardant/antistatic requirements for the actual grade.

Do not treat every slip problem as a material problem.

Check belt tensions, wrap, drainage, take-up operation and the contact surface before changing the lagging.

Polyurethane lagging

Abrasion resistance and material shedding for suitable non-drive applications. Select the grade and construction for the actual belt contact.



Blue polyurethane lagging on a pulley in the Superior workshop.

Abrasive fines and wear

Consider polyurethane where repeated sliding contact with abrasive residue wears rubber lagging. Check the wear pattern, operating temperature and belt-cover condition.

Material release

A low-adhesion surface can help release sticky fines and limit pulley build-up. Effective belt cleaning and return protection are still required.

Non-drive belt protection

Lower friction can reduce shear against the belt cover where relative movement occurs on bend and other non-drive pulleys. That differs from drive-traction requirements.

Cast-on or rubber-backed

A hot-cast covering avoids bonded strip joins and is finished to the required profile. Rubber-backed polyurethane strips use a different application process. Confirm the construction before re-lagging.

Confirm the polyurethane grade, not just the colour.

Check hardness, thickness, pattern, wet-service suitability and material approvals. Drive use requires a specific traction review.

Ceramic lagging

Wear-resistant tiles for drive and non-drive applications. Tile profile, coverage and backing construction must suit the belt contact and operating loads.



Ceramic tiles embedded in rubber. This photograph does not show direct-bond ceramic.

Dimpled drive surfaces

Raised tile profiles improve traction at the belt cover. Check running and starting tensions, wrap and contact pressure. Do not change take-up settings without a conveyor review.

Smooth non-drive surfaces

Smooth tiles provide wear resistance without the same raised traction profile. Assess abrasive residue, cover condition and relative movement before selection.

Rubber-backed ceramic

The rubber matrix supports the tiles and provides resilience. Specify coverage, spacing, drainage channels and the complete lagging-to-shell bond system.

Direct-bond ceramic

Tiles attach to the prepared shell without a rubber backing. Tile retention, joint filling and the chosen drive or non-drive surface are separate specification requirements.

Check the belt as well as the lagging.

Cracked, loose or missing tiles, open joints and trapped material require attention. A harder surface is not automatically a better replacement.



Lagging selection & application

Start with the pulley position and the reported problem. Compare the complete installation rather than ranking materials from cheapest to hardest.

Adequate rubber service life	Retain a suitable rubber specification. Compare wear, grip, installed cost and the replacement interval.
Non-drive abrasion / build-up	Consider polyurethane; compare with smooth ceramic where appropriate. Identify residue, belt-face contact and slip marks.
Wet drive slip	Assess grooved rubber or dimpled ceramic against T1/T2, wrap, starting loads, drainage and belt-cover condition.
Severe recurring lagging wear	Compare polyurethane and ceramic for the actual pulley role. Include belt damage, change-out cost and downtime.
Lagging separates from shell	Review preparation, contamination, application conditions, cure and the bond failure before repeating the job.

Material and application method are separate decisions

Cold-bonded sheets, hot-vulcanised systems, hot-cast polyurethane and direct-bond ceramic tiles are different processes. Confirm the selected product, whether the pulley can be removed, the facilities required and the cure period before planning the shutdown.

Information to supply

Pulley role and belt face in contact; speed, tensions and wrap; temperature, water and fines; existing material, wear pattern, dimensions and service history.

Pulley QA records

Ceramic-rubber lagging record excerpts. Polyurethane applications require their own material and process records.

Lagging details

Lagging thickness:	12
Lagging grade:	Natural
Lagging type:	Ceramic
Lagging design:	Single row (38%)
Tile type:	Non-dimpled

Preparation and lagging

Ambient temperature: (°C)	16.6
Relative humidity: (%)	73.0
Dew point: (°C)	12
Steel temperature: (°C)	16.4
Are heat lamps required:	No
Is lagging adequately buffed:	Yes
Are all surfaces clean:	Yes

Further completed checks — intervening rows omitted

Have air pockets been removed:	Yes
Has excess lagging been trimmed:	Yes
Have strips and ends been sealed:	Yes

Adhesion test

Force applied to peel strip: (N)	590
Adhesion test result:	Meets minimum adhesion requirement of 585N
Failure type:	Adhesive failure (rubber/adhesive)

The recorded 590 N result and 585 N minimum are job-specific. Strip width and test method are not stated; no N/mm value or universal acceptance limit is implied.

Pulley enquiries & workshop support

Send the information you have. Unknown measurements can remain blank; include the drawing, photographs or part number so we can identify what still needs checking.

New / replacement	The controlling drawing and revision, quantity, application information and required delivery date.
Refurbishment	Asset and conveyor ID, service history, reported damage and the assessment or repair required.
Re-lagging / parts	Existing lagging and component details, replacement specification and the work to be included.
Identification help	Photographs of the whole assembly, shaft ends, bearing housings, identification plate and problem area.



Paget workshop, 45–47 Centurion Drive.

Agree the handover records

Specify the required inspection scope with the enquiry. Records can include asset and drawing IDs, NDT reports, component details, torque and bearing-clearance checks, lagging records and completion photographs.

Reference drawings and dimensional tables are supplied separately. They assist enquiries; the approved assembly drawing and order requirements control manufacture and refurbishment.

45–47 Centurion Drive, Paget QLD 4740