SMI SCRAPING SYSTEM | PART 2 OF 3

BROW PULLEY

40 min per shift

Avoids 40 minutes of tools-down time per shift, per winch

The rope stops wearing against the hanging wall, so it breaks less often — and air, water and electrical services stay intact.

UNDERGROUND APPLICATION

- Brows in raises
- Centre gullies
- Strike ASGs
- Any elevation transition where the rope runs against the hanging wall
- Roller lengths to suit narrow and wide raises and ASGs

DEVELOPMENT STATUS

New product, currently in development. Design and manufacture are complete; underground trialling has not yet been carried out. SMI is seeking a host shaft for a production trial.

PRODUCT VIDEOS ON OUR WEBSITE
www.snatchmining.com

BROW PULLEY

THE PROBLEM — UNDERGROUND REALITY

- Friction of the scraper rope against the hanging wall cuts its life expectancy.
- The rope damages air, water and electrical services.
- Rope friction against rock creates dust.
- Weakened ropes break repeatedly, and every splice is tools-down time.

THE SMI SOLUTION

A mechanically simple, low-maintenance pulley that lifts the rope clear of the hanging wall at the brow — eliminating all four problems at source, with no maintenance requirement of its own.

BENEFITS

- Easy to install, with no maintenance required
- Prevents loss of production by safeguarding air, water and electrical services
- Protects the scraper rope from friction against the hanging wall
- Limits tools-down time for scraper rope splicing
- Reduces dust generated by rope-on-rock friction
- Enhances safety by minimising rope breakages and related hazards
- **Polymer rollers** — lighter to carry and install, no corrosion in wet gullies, and gentler on the rope than bare steel

SPECIFICATIONS

SCRAPER ATTACHMENTS	Required. Sold in sets of two, fitted to the mine's existing scraper — whether one part of the system is used or all three.
ROLLERS	Two polymer rollers with a 1 000 mm working face, on FAG 6208-ZZ-C3 sealed bearings — four per unit
MATERIAL	Polymer
ASSEMBLED DIMENSIONS	1 211 mm overall; 1 200 mm roller assembly; rollers on 200 mm centres
SIZE VARIATIONS	Different roller lengths to fit narrow and wide raises or ASGs
MOUNTING	Six shackles and two turnbuckles to eyebolts in the hanging wall; the turnbuckles set the working height
OPERATION	Full rope runs below the bottom roller; empty rope runs between top and bottom rollers
ENGINEERING	SM-BRWPLY-GA-01 Rev A, issued for approval 30 October 2025. The Rev A general assembly shows the earlier steel-drum version.

INSTALLATION & MAINTENANCE

- Installed by SMI. Six drilled eyebolt holes per side — three for lifting gear, three for suspension
- Mine personnel mark hole positions and declare the area safe; work is supervised by competent personnel and signed off by mine Engineering
- Daily inspection added to the winch operator's checklist; defects reported to SMI for repair

DESIGN LIFE	SUGGESTED SPARES	IMPLEMENTATION
6 months · 3-month warranty	Defined spares set per system	1 month on site — see p.20