

ESCO®

Nemisys® cast lip systems

for mining excavators,
face shovels and
dragline buckets



WEAR

Mining technology for a sustainable future



“Annual cost savings of \$1.1M USD justified converting our entire fleet to the Nemisys system.”

– Iron Ore Mine, Africa

Lower your cost per ton with the Nemisys[®] system

Proven and efficient

With over 1000 installations worldwide, ESCO[®] Nemisys lip and G.E.T. system is field proven to lower operating cost per ton.

Increased machine availability

- Superior alloys and optimized system profile result in longer-lasting components
- Simple, intuitive locks provide safer, faster parts replacement
- Reliability and wear life unmatched in the industry keeps machines operating with minimal downtime

Lower maintenance costs

- Proprietary alloy, increased lip protection and large bearing areas extend operating intervals
- Longer lasting and more reliable G.E.T. reduces planned and unplanned service events
- Quick and easy parts replacements by fewer crew members, with no hot-work required

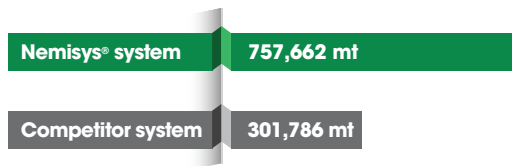
Lower total parts expense

- Longer lasting and more reliable G.E.T. results in fewer parts purchased versus competitors
- Fewer parts purchased reduces mine site inventory to ship, stock and manage

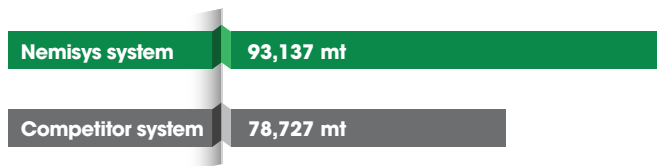


Case study: Lip system production performance

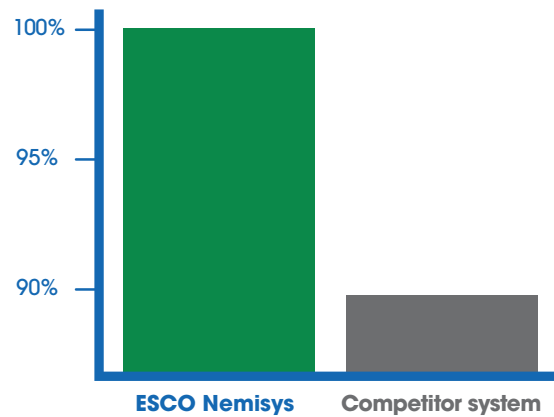
Based on over 5M metric tons of production data by a PC5500 Hydraulic Face Shovel at a major Brazilian Copper Mine



Total production
per hour of required maintenance



Total production
per set of points and adapters



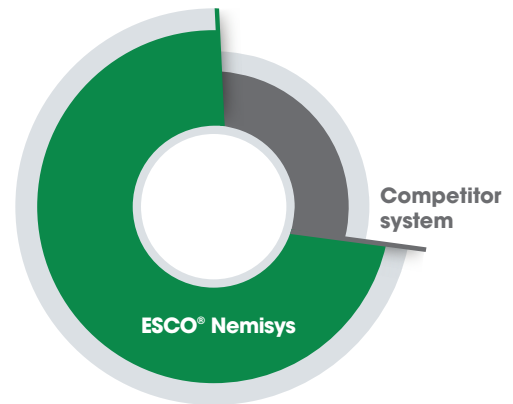
Reliability

ESCO Nemisys lip system

- Zero shroud losses per 1M metric tons produced

Competitor system

- One shroud loss per 1M metric tons produced

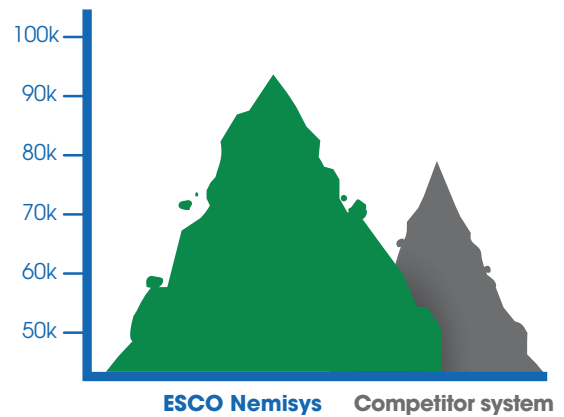


Machine availability

Production per each hour of required maintenance

Nemisys – 75,800,000 metric tons

Competitor – 30,200,000 metric tons



Average tons moved

ESCO Nemisys lip system

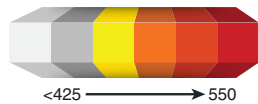
- 93,137 metric tons per unit G.E.T.

Competitor system

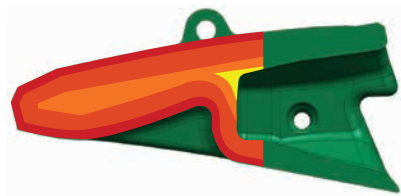
- 78,727 metric tons per unit G.E.T.

Nemisys® systems are engineered to outlast

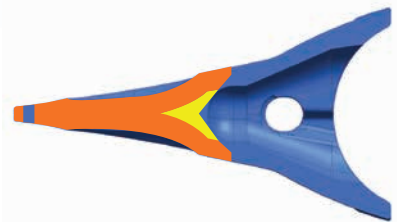
ESCO® alloys deliver unsurpassed reliability and performance



Brinell Hardness Range



Nemisys



Competitor

Nemisys
55% UTILIZATION
 (45% THROWAWAY)

Competitor
38% UTILIZATION
 (62% THROWAWAY)

Data confirms ESCO provides exceptional savings per each unit of production moved:

- 32% increase in production per ton of G.E.T. consumed
- 60% reduction in G.E.T. related downtime per unit production
- Overall reduction in point and adapter consumption per unit production



Data contained in this document is based on actual field performance at a Brazilian copper mine and is for comparison purposes only and does not constitute a guarantee. Installation, operating conditions, wear and tear and maintenance are factors outside the control of ESCO and will affect product performance.

Nemisys lip system sustainable performance

- Reduced parts consumption protects natural resources
- Improved machine efficiency lowers the carbon footprint





“Longer-lasting components have helped increase safety by reducing the frequency of required maintenance.”

– Iron Ore Mine, Australia

Increase site safety with the Nemisys® system

Engineered to reduce exposure to injury

- Keep your crew away from crusher maintenance through superior locking systems that keep teeth and shrouds on the lip
- Safer installation and removal with Integrated pry points and compatibility with the ESCO® SecureLift™ system
- Longer lasting alloy for fewer parts replacements and less exposure for maintenance personnel
- Faster and easier replacement: all teeth and adapters feature the same fully hammerless lock that use standard hand tools



Over 1000 installations worldwide

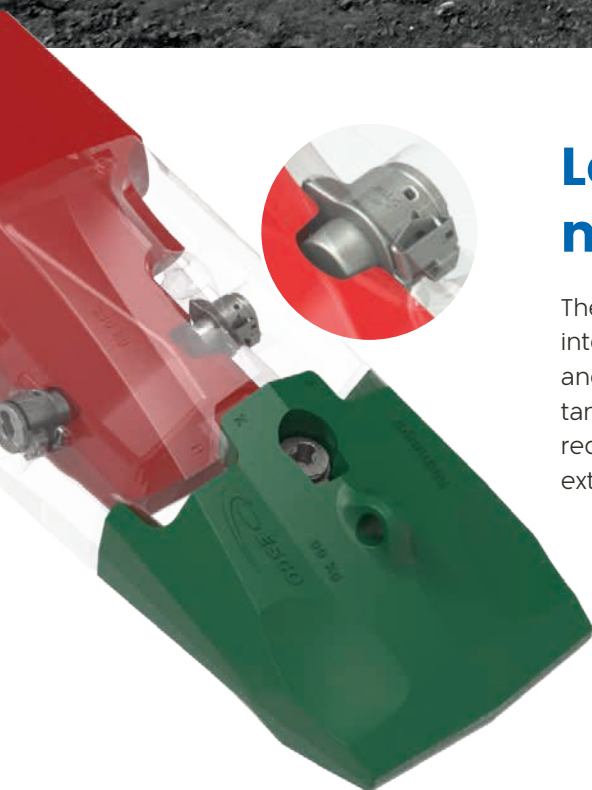
The Nemisys® lip system is helping mines across the globe increase productivity and lower their cost per ton through best-in-class tooth and shroud retention, faster and safer replacement and improved lip coverage. As confirmation of its value and reliability, over 2 out of every 3 users of the Nemisys system have already elected to install Nemisys products on additional machines at their site.

**We realized an 80%
increase in service life and
impressively low throw
away metal with Nemisys.**

– Iron Ore Mine, Brazil

“We’re moving over 400,000 more tonnes between tooth changes using Nemisys.”

– Coal Mine, Australia



Longer-lasting, more reliable

The Nemisys® system features a reliable integral locking system, proprietary alloy, and streamlined geometry – working in tandem to lower your cost per ton by reducing G.E.T. – related downtime and extending the life of your bucket.

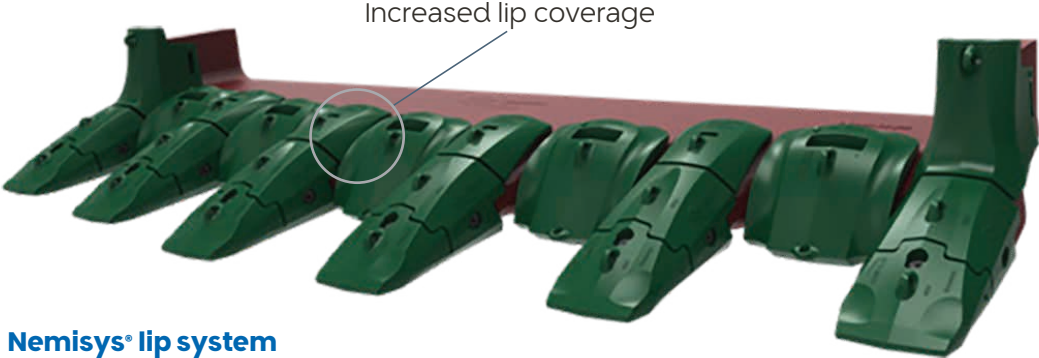


ESCO® SecureLift™ system for safer removal.

Increased lip protection and productivity

Fewer lip rebuilds and lower maintenance costs

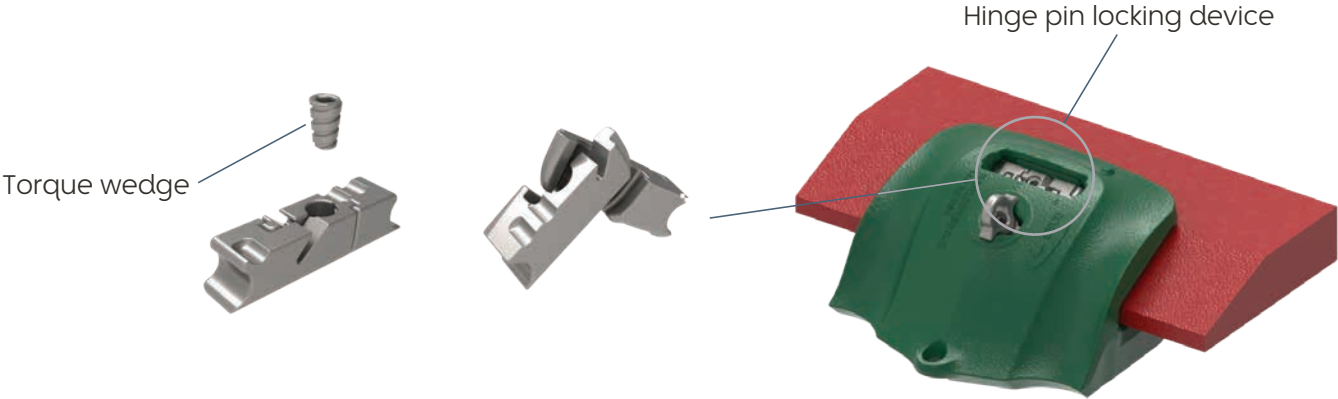
The shrouds and adapters are engineered to protect more of the Nemisys lip leading edge, extending the service life between lip rebuilds by up to 70%. Improved wear metal placement increases shroud life by up to 30%. The contoured profile promotes material flow for more efficient loading to reduce cycle times and increase production.



The ESCO® hinge pin hammerless locking system

Easy to use and extremely reliable

The Nemisys lip shrouds are held in place with the ESCO Hinge Pin featuring the unique Torque Wedge. The Hinge Pin lock uses standard hex tools for installation. The pivoting action helps removal by loosening compacted fines, simplifying the removal process. While other locking devices may contain a rubber that can degrade over time, the Hinge Pin components are all steel for unsurpassed reliability.



**“Excellent
for maintaining
sharpness as
they wear.”**

– Coal Mine, North America



Pick the best tool for the job



The Nemisys® system is available with a wide range of tooth shapes, adapter types and shroud duty classes to match your digging conditions.

"R" Rock



"SW" Standard Wear Cap



"S" Standard



"DG" Dragline



"V" V-Bit



"LS" Single piece



Standard, XHD and wear cap adapters



Standard and XHD shrouds



Sizing guide

The Nemisys system is available in five sizes to better match machine break out force.

Machine Class for Nemisys System								
MACHINE CONFIGURATION	350 TON		500 TON		600 TON		800 TON	
	Std-Duty	XHD	Std-Duty	XHD	Std-Duty	XHD	Std-Duty	XHD
Mining Hoe	N95	N1	N3	N5	N3	N5	N5	N7
Face Shovel	N95	N1	N3	N5	N5	N5	N5	N7

Note: The table above provides conservative nose sizing guidance based on all global mining applications. Please consult with your ESCO representative to ensure the Nemisys product is correctly applied to your application.

A world map in shades of blue and teal, with numerous small yellow dots scattered across the continents, representing global operations or locations. The dots are concentrated in North America, South America, Europe, Africa, and Australia.

WEIR

Mining technology for a sustainable future

www.esco.weir

ESCO Group LLC - A Weir Group Division

PO Box 10627
Portland, OR 97296
USA

P3025MIN-ENG-L0322

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