



## **ESCO SUPER V<sup>®</sup> Tooth System**



## ESCO Corporation

With a history of proprietary products and a reputation for engineering and metallurgical expertise, ESCO is a leading manufacturer of technically-rich ground engaging tools and durable wearparts for mining, construction, dredging and other industrial applications. ESCO also produces a wide array of critical components for the aerospace and power-generation markets. By designing better products, eliminating waste, reducing costs and improving continuously – ESCO is a global leader in providing customers with Quality, Value and Speed.



## ESCO Engineered Products

With manufacturing facilities throughout North and South America, Europe and Asia – and licensees in key markets around the world – ESCO Engineered Products is the customer's choice for premier, field-tested wear solutions and ground engaging tools for the toughest, most challenging applications.



## Engineered Products Overview

ESCO is a world leader in wear components for all types of applications. ESCO products are in use globally and the company is widely known by construction and mining professionals for its innovative tooth systems including the SUPER V, SV2 and Posilok systems.



### Wear Products

- Tooth and lip systems
- Crusher wearparts
- Dragline rigging
- Cutting edges
- Recycling and conveying systems
- Rigging and wire rope fittings
- Wear plate
- Overlay material
- Chrome white iron wear protection
- Track pads

### Construction Attachments

- Front end loader buckets
- Excavator buckets
- Hydraulic couplers
- Bucket thumbs

### Mining Buckets

- Dragline buckets
- Cabel shovel buckets
- Hydraulic shovel fronts
- Wheel loader buckets

### Dredging Products

- Cutterheads
- Tooth systems
- Pump and pipe components

## SUPER V<sup>®</sup> Tooth System



### Engineered for Optimum Performance

For nearly 50 years ESCO has been the leader in tooth system innovation. ESCO's SUPER V tooth system is a proven performer in construction, aggregate and mining applications around the world. The SUPER V system offers excellent performance and productivity in all applications.

## SUPER V System Benefits

### Longer wear life and greater productivity

- Slimmer nose profile allows points to wear back further
- Innovative point shapes stay sharp and help buckets fill faster

### Improved reliability

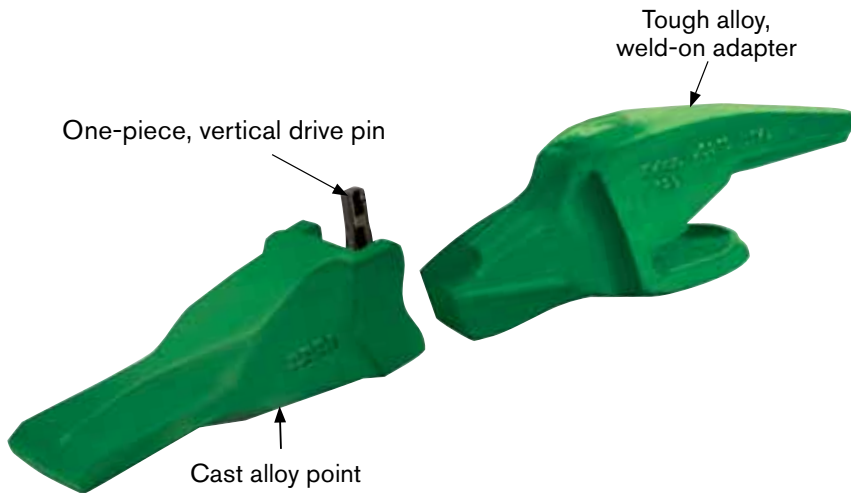
- Unique nose contour has greater fatigue resistance
- Each new point provides a new locking surface to keep the locking pin in place

### Reduced fuel consumption and less maintenance

- Slim profile design requires less power to fill the bucket
- Improved penetration reduces load on the engine, tires, transmission and hydraulic system

### Faster tooth replacement

- Vertical drive pin is quick and easy to remove and replace
- Unique system design minimizes the affects of impacted fines on tooth changes



## SUPER V<sup>®</sup> Tooth System

### How the SUPER V Tooth System Works

#### Point Twists On



Points install with a 1/4 turn and are secured with a one-piece locking pin. The harder the point is driven into digging materials, the tighter it grips the nose.



#### Nose Stabilization & Butt Fit



Large stabilizing flats and helical threads provide greater point stabilization than competitors. Point bears directly on the end of the adapter nose. Takes a powerful thrust loads head-on.



#### Vertical Drive Through Pin

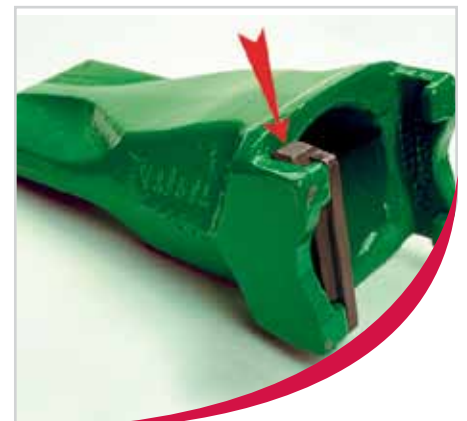


One-piece construction is safer, easy to install and remove. The pin is reusable up to 6 point changes.



#### Pin Protected by the Point Ear

Each new point provides a new locking surface, and protects the pin from wear and material impact.



## SUPER V<sup>®</sup> Tooth System

The SUPER V System has a full offering of tooth shapes designed for excellent digging performance in all applications. The SUPER V System offers point shapes designed for improved productivity, longer wear life and increased reliability.

### Points for Excavators



**SYL** – The SYL style point is the standard offering for excavators. The design wears sharp for excellent penetration, has top and bottom ribs for strength, and plenty of wear metal.



**RYL** – The RYL style point is designed for use in high impact rock applications or as an alternative when impact is causing breakage in longer style points.



**SDX** – The SDX style point is a chisel shape design that delivers very good penetration, and has increased strength and wear metal.



**SHV** – The SHV style point is a heavy-duty centerline point for very abrasive applications when more wear metal is required.



**VY (VYH)** – The VY style point provides maximum penetration in applications such as frost or shale. It has improved wear life over other pick shaped designs. A heavier version VYH style point is also available.



**TVY (TVYH)** – The TVY style point is twin pick design with excellent penetration. It is designed to be used in corner positions in conjunction with the VY design to cut clearance for bucket sides. A heavier version TVYH style point is also available.



**FLARED** – The flared style point is for general purpose clean-up. An excellent choice for trench bottoms and foundation excavations.



**TYLCE** – The CE style point is a non-twist design that is for welding plate steel across the points for easy installation and removal as a continuous edge used for grading, or when flat bottom trenching or a flush cut is desired.



## SUPER V® Tooth System



### Points for Wheel Loaders

**TYL** – The TYL style point is designed for a flush cut in general purpose applications. The design is ideal to replace the CAT® long point.



**AD** – The AD style point is for highly abrasive applications where extra penetration is needed. An excellent choice for quarry applications.



**ADH** – The ADH style point is designed specifically for use on the ESCO Loadmaster® Quarry lip. The extended wear shoe ensures a smooth quarry floor to protect tires, and offers excellent wear life (available in V43 size only).



**AR-ARL** – The AR style point is for highly abrasive applications, and offers the maximum amount of wear metal for long wear life and high economic value. The ARL version is available in certain sizes.



**AG** – The AG style point is for severely abrasive applications and features a large wearshoe on the bottom for maximum wear life. The slimmer profile provides very good penetration.



**ARH** – The ARH style point is a special design for hot slag operations. It features a massive wear shoe, thicker ears and a heavier box section to stand up to the most punishing conditions. It can also be used in any application where the most wear metal is needed.

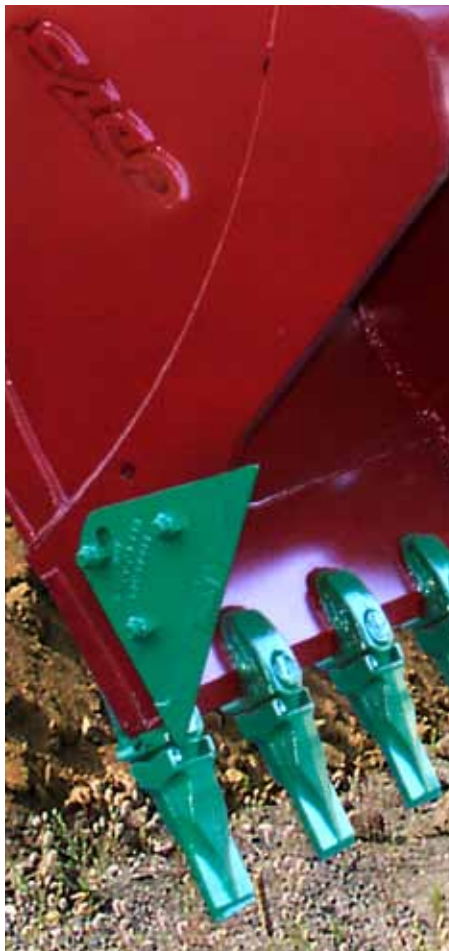


**TYLCE** – The CE style point is a non-twist design that is for welding plate steel across the points for easy installation and removal as a continuous edge used for grading, or when flat bottom trenching or a flush cut is desired.

### Quality You Can Rely On

ESCO Corporation will replace at no charge any SUPER V point or adapter that breaks, FOB point of manufacture, due to defects in materials or workmanship, providing it is not worn out and 100% ESCO components have been used in the assembly.





## SUPER V<sup>®</sup> Tooth System

### Adapters

#### Excavators

ESCO offers adapters for all excavator applications. The 1-1/2 bottom leg adapter is the most popular style. A 1-1/4 leg version is available in select sizes. The shorter top leg fits in the bucket to minimize carry back and allows quicker dumping.



1-1/2 Bottom leg adapter



#### Front End Loaders

ESCO offers a wide range of adapter designs to fit loaders in all applications. The 1-1/2 top leg adapter is the most popular and can be used in most HD/XHD applications. For general purpose applications or where a flush cut is needed, the flushmount style is the best selection. ESCO also offers bolt-on center and corner adapters to fit most popular machines.



1-1/2 Top leg adapter



Bolt-on adapter



Flushmount adapter



## SUPER V<sup>®</sup> Tooth System

### Applications

The ESCO SUPER V tooth system offering covers all segments of the market.

#### Light Construction Market

- For backhoe loaders, mini excavators and other compact machines
- Sizes V13, V17 and V19 offer a selection of adapters and point shapes to fit all applications
- Both weld-on and bolt-on adapters for wheel loaders



#### Construction Market

- For mid range wheel loaders and excavators
- Sizes V23, V29, V33 and V39 offers a wide selection of points and adapters for applications from general purpose to extreme service
- Both weld-on and bolt-on adapters for most wheel loader



#### Heavy Construction Market

- For large wheel loaders, excavators and face shovels
- Sizes V43, V51 and V59 offer a complete range of points and adapters
- Designed to perform in the toughest conditions, from pipeline work in rock to demanding quarry applications



## Tough Alloy Steel

ESCO alloys endure the world's toughest applications! We've created specialized alloys tailored specifically to withstand the high impact and abrasion found in construction, mining, dredging, mineral processing and other industrial markets.

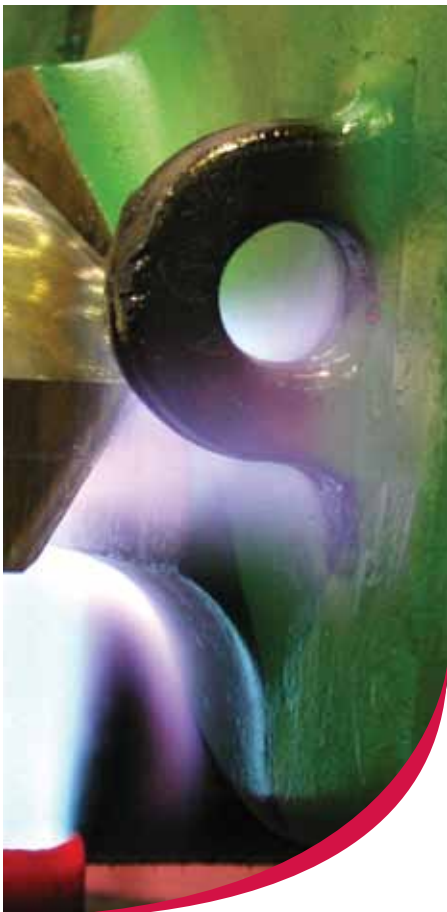
ESCO metallurgists have pioneered stainless and heat-resisting alloys to meet corrosion and temperature extremes. ESCO also offers tough manganese alloys for strong, long wearing crusher wear parts.

### Carbon Alloys

ESCO 12 series alloys are low to medium carbon steels that provide a balance between structural strength, impact toughness, and wear resistance properties. ESCO offers over 14 variations, each designed for specific needs. These alloys are used in a variety of components, ranging from structural to wear parts.

### Austenitic Manganese Alloys

ESCO 14 series alloys are designed to take advantage of the unique work hardening properties of manganese steel. Parts made with manganese work better than any other alloy where the right combination of structural loads and high impacts allow the part surface to work harden. The surface hardness increases dramatically – beyond what is attainable with low to medium carbon steels. These steels are found in ESCO crushing and other wear part products.



The wide array of cast ESCO alloys provide superior performance in virtually all mining, construction and industrial applications, no matter how extreme. All ESCO components are backed by our metallurgical laboratory, unmatched in our industry for alloy and part analysis. ESCO uses actual field load and stress data to ensure parts can endure wear, abrasion and fatigue. Superior alloys, the industries' leading test expertise and ISO 9001 certification enables ESCO to bring you the strongest, long wearing, abrasion resistant products made!

## Quality, Value and Speed

ESCO's culture of Quality, Value and Speed (QVS) and lean manufacturing is integral to everything we do. From boardroom to break room, from office to plant floor – ESCO employees strive to reduce waste, ensure safety, drive down costs, decrease lead times, standardize production techniques, and improve continuously. The result: ESCO production output meets strict specifications and offers customers superior flexibility and value. These business practices also create sustainable economic, environmental and social benefits for our employees and in the communities where we operate.

Continuous QVS assessment of each ESCO facility worldwide is based on the following criteria:

### Quality

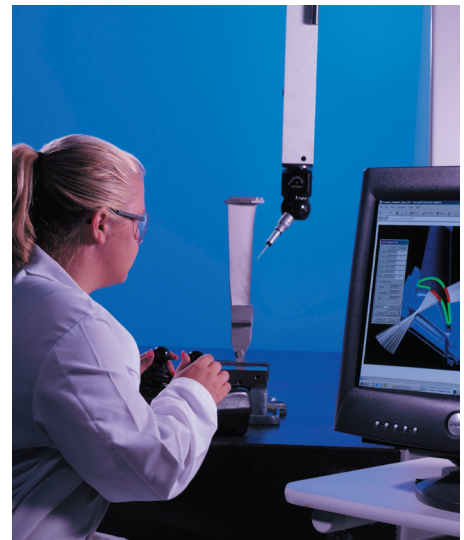
- Metal industry expertise
- Capability to identify, eliminate and prevent defects at the source
- Operational stability
- Established culture of continuous improvement
- Production process excellence
- Total material traceability
- In-house metallurgical testing
- Foundry operations: ISO 9001 certified

### Value

- Quick reaction to changes in customer demand
- Reduced cost of ownership through enhanced product performance
- Products which are easier and safer to replace than the competition's
- Longer wear life than competitors
- Engineering expertise and product support

### Speed

- Electronic link to customer order processes
- Real-time customer access to supply chain data
- Rapid prototyping capability
- Global supply chain management



ESCO Shanghai  
Suite 25GH, LeKai Tower  
No. 660, Shangcheng Road  
PuDong District, Shanghai  
PR China 200120  
Phone: +86.21.58354560

ESCO (Xuzhou) Wearparts Co., Ltd.  
Middle Section of Yinshan Road,  
Tongshan Economic Development Zone,  
JiangSu Province  
PR China 221116  
Phone: +86.516.80138820

SCW  
No 53 Yuhe Street  
Taiyuan,  
Shanxi Province  
PR China 030024  
Phone: +86.351.6362472



[www.escocorp.com](http://www.escocorp.com)

ESCO Corporation is the preferred provider of technically rich metal components and wear solutions for industrial applications. ESCO has over 40 locations and affiliates worldwide.

**North America**

2141 NW 25<sup>th</sup> Avenue  
Portland, OR 97210  
PH: 800.523.3795 | 503.228.2141

**Latin America**

Rua Engenheiro Gerhard Ett, 1215  
Distrito Industrial Paulo Camilo Sul  
Betim – Minas Gerais  
Brasil  
CEP: 32669-110  
PH: 55.31.3539.1200

**Europe, Africa, Middle East,  
Commonwealth of Independent States**

Rue des Fours à Chaux  
7080 Frameries, Belgium  
PH: 32.65.611.555

**Asia Pacific**

1 Scotts Road, Number 16-08  
Singapore 228208  
PH: 65.6733.5858