ONE SOURCE FOR YOUR MINING NEEDS

www.byg.com
FACTORY DIRECT SOLUTIONS TO MINE SITES

ONE SOURCE FOR YOUR MINING NEEDS
## Quick Selection Guide

<table>
<thead>
<tr>
<th>Nose Size</th>
<th>Talla Diente</th>
<th>Hitachi</th>
<th>Terex</th>
<th>Caterpillar</th>
<th>Komatsu</th>
<th>Komatsu Demag</th>
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<th>Machine Weight</th>
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Posilok®, Posilok® Plus and Sidewinder® are registered trademark of Esco Corporation. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
COMPATIBLE WITH
ESCO POSILOK®

FUTURA MINER 95 COULD BE LOCKED
WITH BOTH: ESCO® SIDEWINDER® OR
FUTURA PINS

FM950 TEETH DRP ESCO POSILOK®

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<tr>
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<th>RCX</th>
<th>I</th>
<th>VX</th>
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FM950 TEETH DRP BRADKEN®

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<th>VX</th>
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PIN

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<td>11</td>
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<td>2</td>
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WEAR CAPS

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<td>411</td>
<td>904</td>
<td>140</td>
<td>5.5”</td>
<td>90 3.5”</td>
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FM950 ADAPTERS

FM950 CLH

FM950 CENTRAL

FM950 CRH

FM950 UP TO 800 T MACHINES
COMPATIBLE WITH ESCO POSILOK® SIZES 110 TO 145

EXTFM
PIN EXTRACTOR FOR STANDARD PINS FM920 PN, FM1120 PN AND FM1220 PN

STANDARD PIN
LOCKS TEETH INTO POSILOK® AND POSILOK® PLUS INTERMEDIATE ADAPTERS

HAMMERLESS PIN
LOCKS TEETH INTO POSILOK® PLUS INTERMEDIATE ADAPTERS

2 PIN OPTIONS: STANDARD OR HAMMERLESS
Maximum compatibility
One tooth covers two systems: HAMMERLESS and NON-HAMMERLESS.
Fits onto Posilok® STANDARD and Posilok® PLUS intermediate adapters.

MINER ASSEMBLY SIZES 110, 130 AND 145

MINER TEETH WILL FIT ONTO AN ESCO® STANDARD POSILOK® AS WELL AS A POSILOK® PLUS INTERNAL ADAPTER.

MINER INT. ADAPTERS WILL FIT ONTO ESCO® POSILOK®, HENSLEY®, CATERPILLAR® OR BRADKEN® ADAPTERS.

ESCO® POSILOK® AND POSILOK® PLUS TEETH WILL FIT ONTO FUTURA MINER INTERMEDIATE ADAPTERS.

FM920 PN
FM1120 PN
FM1220 PN

FM920 HLK
FM1120 HLK
FM1220 HLK

Cross Ref
Tooth
Size

FM920 PN
FM1120 PN
FM1220 PN

FM920 HLK
FM1120 HLK
FM1220 HLK

FM920 PN
FM1120 PN
FM1220 PN

FM920 HLK
FM1120 HLK
FM1220 HLK

Pin Extractor for Standard Pins FM920 PN, FM1120 PN and FM1220 PN.

Miner Assembly Sizes 110, 130 and 145

Standard Pin
Locks Teeth into Posilok® and Posilok® Plus Intermediate Adapters

Hammerless Pin
Locks Teeth into Posilok® Plus Intermediate Adapters

2 Pin Options: Standard or Hammerless
Maximum Compatibility
One Tooth covers two systems: Hammerless and Non-Hammerless.
**SOLID TEETH RANGE**
**SIZES 110 TO 145**

SOLID TEETH ARE ASSEMBLED DIRECTLY ON THE ADAPTER WITHOUT INTERMEDIATE ADAPTERS.

**TEETH SIZES 92, 112 AND 122**

TEETH CAN BE ASSEMBLED WITH STANDARD OR HAMMERLESS PINS.

**REINFORCED WALLS ON RCX & RCXL DESIGNS**

**RCX & RCXL TEETH WITH EXTRA WEAR MATERIAL**

**EXTRA WEAR MATERIAL ON RCX & RCXL TEETH COMARED TO STANDARD TEETH**

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### WELD-ON ADAPTERS AND CORNERS SIZE 110

#### INTERMEDIATE ADAPTERS

<table>
<thead>
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<td>5875</td>
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<td>653</td>
<td>FM1100-160</td>
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<td>725</td>
<td>1.595</td>
<td>FM1100 CLH</td>
<td>110</td>
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<td>725</td>
<td>1.595</td>
<td>FM1100 CRH</td>
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**IA** INTERMEDIATE ADAPTER

**WC** OPTIONAL WEAR CAPS FOR FUTURA INTERMEDIATE ADAPTERS

**WC** DIRECT REPLACEMENT WEAR CAPS FOR POSILOK INTERMEDIATE ADAPTERS

#### ADAPTER WEAR CAPS

<table>
<thead>
<tr>
<th>Kg</th>
<th>Lb</th>
<th>Part#</th>
<th>Drp Poslok</th>
<th>Poslok Plus</th>
<th>Hersley</th>
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**WC** CAPS WILL FIT ONTO ESCO® ADAPTERS. USE FUTURA WC.1100 PN HAMMERLESS PIN FOR ASSEMBLY

### INTERMEDIATE ADAPTER PIN

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<th>Ø</th>
<th>in</th>
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<td>3,7</td>
<td>14,5</td>
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## Excavator Lip Shrouds

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<td>2,4”</td>
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<td>F90X245 LS/LSSH</td>
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### Loader Lip Shrouds

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### FAB FAP Pin

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### FBB Pin

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<td>120</td>
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<td>3,9”</td>
<td>191</td>
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<td>4,6”</td>
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<td>F120X375 LS/LSRH</td>
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<td>F120X375 LS/LSRH</td>
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<td>F120X375 LS/LSRH</td>
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HAMMERLESS FAP (PIN) FAB (BASE)

WING SHROUDS WITH 2 ASSEMBLY OPTIONS: STANDARD OR HAMMERLESS

Kg  Lb  L  in  Part#  Cross Ref  Base  Pin  Thrust Block  Cross Ref
27  59  440 17.3  F40X440 LWS  TAW40X440-1A  FDD33095 TB  FDD33095TB
53  117 600 23.6  F40X560 LWS  TAW40X560-1  FDD51413 TB  FDD51413TB
40  8  140 5.5  F40X600 LWS  TAW40X600-1  FDD32816 TB  FDD32816TB
40  8  140 5.5  F40X600 LWS  TAW40X600-1  FDD32816 TB  FDD32816TB
50  110 505 19.9  F50X505 LWS  TAW50X505-2  FDD33095 TB  FDD33095TB
31  68  295 11.8  F50X505B LWS  TAW50X505-1A  FDD33095 TB  FDD33095TB
40  8  140 5.5  F50X620 LWS  TAW50X620-1A  FAB FAP
39  85  210 8.3  F50X620 LWS  TAW50X620-1A  FAB FAP
47  105 800 31.5  F50X800 LWS  TAW50X800-1A  FDD33095 TB  FDD33095TB
52  114 545 21.5  F50X800 LWS  TAW50X800-1A  FDD33095 TB  FDD33095TB
59  130 53 2,0  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB
67  147 495 19.5  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB
75  165 430 17  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB
159 349 965 38.0  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB
166 365 760 29.9  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB
239 526 300 11.8  F50X900 LWS  TAW50X900-1A  FDD33095 TB  FDD33095TB

Cross Ref

Part#  L mm  Part#  L mm
ES4410  796 31.3  FES4410  796 31.3
ES4410  884 34.8  FPDE52445TB  303 12.0
ES4410  884 34.8  FPDE52445TB  303 12.0

LMM  in  Kg  Lb  Part#  Cross Ref
150  5.9  1.6  F150 WS  145  0.6
200  7.9  3.4  F200 WS  20  0.8
280  11.0  5.0  F280 WS  28  1.1

Cross Ref

Part#  L mm  Part#  L mm
F3050SC  160  6.3  F3050 SC  160  6.3
F6080SC  180  7.1  F6080 SC  180  7.1

Toplok® is a registered trademark of Esco Corporation. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
TWISTER adapters are suitable to be used with Esco SuperV® teeth. **Variety of designs to suit common & HD applications**.

FUTURA TWISTER teeth fit on your current SuperV® adapters. TWISTER is a complete system featuring teeth, adapters and pins.

**COMPATIBLE WITH ESCO SUPERV®**

**TWISTER TEETH**

**S**

<table>
<thead>
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<th>Kg</th>
<th>Lb</th>
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**RPHD**

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**WTL**

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**RC**

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<td>56.4</td>
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**I**

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<td>V71RXL, V71RYL</td>
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<td>87.0</td>
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<td>FT810 I</td>
<td>V81RXL, V81RYL</td>
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**EXTFT**

**EXTRACTION TOOLS**

**EXTFT-3961**

- SIZE 610
- SIZES 690 TO 810

**PN**

**HPN**

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PINS COULD BE RE-USED SEVERAL TIMES, FULLY COMPATIBLE WITH OTHER PRODUCTS.

**Edition Information**

- **Ser.:** 0.3
- **Type:** L
- **Edition:** 07.00
- **Date:** 07/2010
- **Language:** English
- **Year:** 2010
- **Wt.:** 270g

**SuperV®** is a registered trademark of Esco Corporation. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
TWISTER NOSES, ADAPTERS, WEAR CAPS AND CORNER

EXCAVATOR ADAPTER

The easiest & quickest way to convert any adapter into the TWISTER system.

LD LOADER ADAPTER

C CORNER

TWISTER HAMMERLESS

FULLY COMPATIBLE WITH SUPERV® ADAPTERS

EXCEPTIONAL FITMENT

UNIVERSAL WEAR CAPS


1] 1 1 1 1

Super® is a registered trademark of Esco Corporation. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
**COMPATIBLE WITH ESCO SV2®**

**RC EXCAVATOR**

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<thead>
<tr>
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**RCXL EXCAVATOR**

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**RX ROPE SHOVEL**

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<td>80</td>
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**RXL ROPE SHOVEL**

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**WC EXCAVATOR**

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**WC DRP WEAR CAPS FOR WHISLER ADAPTERS**

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**X LOADER**

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**VX LOADER**

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**EXTFT5985**

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**HAMMERLESS PIN PN-HL**

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<td>6.2’’</td>
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**ASSEMBLY**

**COMPATIBLE WITH ESCO SV2®**

- RC EXCAVATOR
- RCXL EXCAVATOR
- RX ROPE SHOVEL
- RXL ROPE SHOVEL
- WC EXCAVATOR
- VX LOADER
- X LOADER
- EXTFT5985
- PN-HL

**COMPATIBLE WITH ESCO SV2® & Whisler® are registered trademarks of Esco Corporation. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.**
### Compatible with Hensley XS® and Komatsu KMAX®

**TL**

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**RC**

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**RPHD**

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**PN**

**HAMMERLESS PIN**

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**EXTFT5985**

**WC**

**WEAR CAP**

**X**

**EXCAVATOR ADAPTER**

**RPHD DESIGN**

**LATERAL RIBS**

Extra wear material on lateral ribs contribute to self-sharpening effect

**UNDERSIDE POCKET**

Maintains bit sharpness without comprising point integrity

**REINFORCED TOOTH BOX**

Protects pin and tooth pocket

---

XS® and KMAX® are registered trademarks of Hensley®. Manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
UNIVERSAL HAMMERLESS SOLUTION

With the design of a quick and easy replacement assembly, FUTURA fastening solutions contribute to reduce machine’s downtime. Hammering is avoided and parts remain perfectly locked in place. 100% Compatible with OEM adapters.

The FUTURA HL2 system works only with FUTURA teeth but is fully compatible with Direct Replacement Parts.

FUTURA DRP: UNIVERSAL HAMMERLESS SIDE PIN SOLUTION 100% COMPATIBLE WITH CATERPILLAR SIDE PIN ADAPTERS

**VTL**

- Kg: 34.0
- Lb: 75
- Part#: FC600 VTL
- Cross Ref: 107-8609
- Size: 60

**RPL**

- Kg: 38.8
- Lb: 85
- Part#: FC600 RPL
- Cross Ref: 7Y-0602
- Size: 60

**L**

- Kg: 31.0
- Lb: 68
- Part#: FC600 L
- Cross Ref: 6I-6602
- Size: 60

**SYL**

- Kg: 40.6
- Lb: 89
- Part#: FC600 SYL
- Cross Ref: 159-0607
- Size: 60

**WTL**

- Kg: 39.9
- Lb: 88
- Part#: FC600 WTL
- Cross Ref: 6I-6602 WTL
- Size: 60

**P**

- Kg: 27.3
- Lb: 60
- Part#: FC600 P
- Cross Ref: 7I-7609
- Size: 60

**RC**

- Kg: 42.8
- Lb: 94
- Part#: FC600 RC
- Cross Ref: 6I-6602 RC
- Size: 60

**TL**

- Kg: 30.3
- Lb: 67
- Part#: FC600 TL
- Cross Ref: 107-8609
- Size: 60

**BEST COMBINATION OF RC+RE TOOTH INTO ONE NEW DESIGN**
DRP CATERPILLAR EXCAVATOR AND LOADER ADAPTERS

**X EXCAVATOR ADAPTER**

**S LOADER ADAPTER**

**WEAR CAP**

**WC OPTIONAL WEAR CAP**

Weld On Noses are the easiest and quickest way to convert any proprietary adapter into the FUTURA Hammerless system.

**SIDE CUTTERS**

SC 500HB

**WELD-ON LIP SHROUDS**

LS 450HB

**MECHANICALLY ATTACHED LIP SHROUDS 500HB**

**UP TO 250 TONS MACHINES**


Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
**UNIVERSAL BUCKET PROTECTION PARTS**

## COMPLETE RANGE OF BUCKET PROTECTION

### HS 450HB
**WELD-ON HEEL SHROUDS**

<table>
<thead>
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<th>B</th>
<th>Kg</th>
<th>Lb</th>
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<tr>
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<td>10,0</td>
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<td>F10 HS</td>
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<tr>
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<td>7.4”</td>
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### HSQR 500HB
**HEEL SHROUDS**

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<td>7.4”</td>
<td>64</td>
<td>23,8</td>
<td>52</td>
<td>F24 HS</td>
</tr>
<tr>
<td>253</td>
<td>10,0”</td>
<td>64</td>
<td>40,1</td>
<td>88</td>
<td>F40 HS</td>
</tr>
<tr>
<td>250</td>
<td>9,8”</td>
<td>115</td>
<td>87,5</td>
<td>193</td>
<td>F90 HS</td>
</tr>
</tbody>
</table>

### WR 500HB
**WEAR RUNNERS**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Kg</th>
<th>Lb</th>
<th>Part#</th>
<th>Cross Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>14</td>
<td>426</td>
<td>957</td>
<td>15</td>
<td>FWR01C</td>
</tr>
<tr>
<td>9</td>
<td>20</td>
<td>471</td>
<td>1,071</td>
<td>19</td>
<td>FWR02C</td>
</tr>
<tr>
<td>19</td>
<td>42</td>
<td>1,193</td>
<td>2,657</td>
<td>24</td>
<td>FWR19C</td>
</tr>
</tbody>
</table>

### PTV 450HB
**UNIVERSAL WELD-ON WEAR PAD**

<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
<th>Kg</th>
<th>Lb</th>
<th>Part#</th>
<th>Cross Ref</th>
</tr>
</thead>
<tbody>
<tr>
<td>158</td>
<td>6.2”</td>
<td>275</td>
<td>10,8</td>
<td>50,6</td>
<td>2,0</td>
</tr>
</tbody>
</table>

---

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
MINING BUCKETS

MINING BUCKETS FOR

BUCYRUS
RH 120

CATERPILLAR
5230 ME
3560B
6030
6040
6050B
52309
6060FS
6090FS
PC 5090
PC 5130

HITACHI
EX 800
ZX 850
ZX 870
EX 1200-6
EX 1900
EX 2600
EX 3500
EX 3600
EX 5500
EX 5600
EX 5800

HYUNDAI
R 800

KOMATSU
PC 750
PC 1250
PC 1600
PC 1800
PC 2000
PC 3000
PC 4000
PC 5500
PC 8000

LIEBHERR
R 974
R 984
R 994
R 9250
R 9350
R 9400
R 994B
R 995
R 9800
R 996

TEREX
RH120E
RH170
RH340
RH360
RH400

VOLVO
EC 700

FABRICATED MINING BUCKETS

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
FUTURA WEAR BUTTONS & BARS ARE MANUFACTURED WITH 20% MORE WEAR MATERIAL IN THE WEAR AREA AND THE WELDING PLATE THAN OTHER STANDARD BUTTONS AND BARS

Available in different sizes and shapes, the FUTURA Chrome white iron part is extremely hard, laminated bi-metallic, wear resistant composite with chrome-moly white iron being bonded onto a mild steel backing plate. The bonding shear strength is over 210 Mpa and will not separate.

CONSISTENT PROPERTIES

Post bonding heat treatment is conducted to ensure the FUTURA parts have finely dispersed microstructure and more consistent properties compared to most brands in the market.

HARDNESS 700HB

The hardness of alloy, 700 brinell or HRC 63 minimum, provides maximum abrasion resistance, while the steel backing plate acts as a means of absorbing high impacts and allows easy fitting and use. The ideal working temperature for FUTURA Bucket parts is no higher than 300°C.

APPLICATIONS

Typical applications include buckets (excavator, loader, dragline, face shovel), crusher, spider arm guards, discharge chutes, rock boxes, grizzly bars or feeders, shredder and grinding mills, sugar cane knife edges, adapter / attachment protection, dredging equipment, screen feed distribution and feed hopper wear areas.

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
WHAT IS A TUNGSTEN COATING?

A tungsten coating is made of extremely hard Tungsten particles (Tungsten is harder than Quartz and Topaz). This coating forms a protective shield over key wearing surfaces. The Tungsten coating is bondable to practically any tip, blade or wear part manufactured.

ARM APPLICATIONS

Tungsten coating is recommended for applications where sand, gravel and other abrasive materials severely diminish wear parts life.

ARM hardfacing is a great way to extend life in areas with high wear but low impact conditions.

The use of the ARM coating is recommended on the following applications: Mining, mineral processing, dredging, etc and on the following parts: tips, adapters, shrouds, cuttings, edges, blades, wear caps, etc...

Tungsten Coating cutting edges work best in high abrasion/low to moderate impact applications.

Please do ask us for advise on the use of tungsten components on your work area.

ECONOMY

Tungsten coating protects components from wear in critical areas. Compared with non-coated components, protected parts can last up to 3-5 times longer in high abrasion/low to moderate impact conditions. This represents a substantial saving on total operating costs. The tungsten coating delivers dramatically lower costs per hour in appropriate applications.

Tungsten coating enhanced wear patterns improve penetration and help your machines do more work each hour, which increases productivity and therefore profitability. Long wear life means you’ll spend less time replacing wear parts, which help reduce total operating costs.

TUNGSTEN PROTECTS COMPONENTS FROM WEAR IN CRITICAL AREAS

ON DEMAND:
ARM HARDFACING SERVICE OFFERED FOR ANY LISTED PART. PLEASE CONSULT

Wear parts: standard vs. tungsten coated

<table>
<thead>
<tr>
<th>STANDARD</th>
<th>TUNGSTEN COATING</th>
</tr>
</thead>
<tbody>
<tr>
<td>0h</td>
<td>1000h</td>
</tr>
<tr>
<td>Duration, working hours</td>
<td></td>
</tr>
</tbody>
</table>

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
HIGHER HEAD
Heads 20% higher than American Standard B 18.2.1. Higher heads mean longer wear life and maximum holding for the nut.

SAE GRADE MARKS
Radial marks indicate the grade of SAE strength. Six marks on the head guarantee the quality grade 12.9 / 35-38 Rockwell (113/124 Kg/mm²)

FORGED HEAD
Provides a correct flow of the steel fibre reducing the fatigue points ensuring major resistance to bumps and an even distribution of the weight. The edges do not round off and the bolts can be reused. The washer sits perfectly below the head.

LAMINATED THREAD
Laminated with the maximum precision BYG bolts and nuts provide a strong hold eliminating the risk of breakage.

FINE GRADE STEEL
The fine grade steel provides an even microstructure improving resistance and with a lower percentage of breakage.

COMPLETE FASTENING SYSTEM
For better assurance and to get the maximum resistance and duration use BYG HD nuts and washers in combination with BYG fasteners.

FASTENERS QUALITY 12.9
BYG standard fasteners meet or exceed the requirements ISO 12.9:
- Pretensile strength 120.000 lb/pulg²
- Elastic load limit 150.000lb/pulg²
- Hardness (hexagonal fasteners): 33 to 39 Rockwell C
- Hardness (plow and track bolts): 37 to 42 Rockwell C

BLADES AND EDGES

550 HB
600 HB
FUTURA PREMIUM BLADES

CARBON 250 HB
BORON 500 HB

500 HB
CAST BLADES

63-67 RC
BIMETALLIC BLADES AND EDGES

WORLDWIDE LEADER MANUFACTURER
WITH OVER 50 YEARS EXPERIENCE
MODERN MANUFACTURING FACILITIES
CONSTANT RESEARCH BY ENGINEERING TEAM
BIMETALLIC PLATES

OVERLAY WEAR PLATE

Bimetallic plates are welded by chromium carbide overlay on a mild steel backing plate. Manufactured by our own design’s welding machine with exclusive technique. The OVERLAY-PLATE has excellent performance in abrasion resistant.

CHEMICAL COMPOSITION

<table>
<thead>
<tr>
<th>C</th>
<th>Cr</th>
<th>Mn</th>
<th>P</th>
<th>S</th>
<th>Ni</th>
<th>Mo</th>
<th>B</th>
<th>Fe</th>
</tr>
</thead>
<tbody>
<tr>
<td>Min</td>
<td>4,1</td>
<td>2</td>
<td>0,015</td>
<td>0,015</td>
<td>0,015</td>
<td>0,5</td>
<td>rest</td>
<td></td>
</tr>
<tr>
<td>Max</td>
<td>5,1</td>
<td>3</td>
<td>1,1</td>
<td>0,035</td>
<td>0,035</td>
<td>0,035</td>
<td>1,25</td>
<td>rest</td>
</tr>
</tbody>
</table>

BASE PLATE SPECIFICATIONS

TYPES OF BASE STEEL
S235JR / SS400 or equivalent

DIMENSIONS OF BASE PLATE
1500 X 3000 mm (59” x 118”)
1250 X 2500 mm (49” x 98”)
1000 X 2000 mm (39” x 79”)

THICKNESS OF BASE PLATE
3 - 4 - 5 - 6 - 8 - 10 - 12 - 15 - 20 mm

CLADDING SPECIFICATIONS
Chrome, Boron, Manganese

WELDING PROCEDURE
Submerged Open Arc (SAW)

DEPOSIT SPECIFICATIONS

STANDARD PLATE DIMENSIONS
1400 X 2900 mm (55” x 114”)
1150 X 2400 mm (45” x 95”)
900 X 1950 mm (35” x 77”)

THICKNESS
3 - 4 - 5 - 6 - 7 - 8 - 9 - 10 mm
Any thickness until max. of 35 mm.

WEAR RESISTANT
Abrasion, Erosion

HARDNESS
Rockwell 60-64HRC
Brinell 590-625
Vickers 700-800

BENDING
Bend carefully in little steps with low pressure

CUTTING PROCEDURES
Plasma, water jet and laser

APPLICATIONS

Ash liners, blast furnace bell & burden, elbow, sinner plant, bucket & lips, drag liners, duct, chute & hopper liners, classifier, fan blades & housings, mine car liners, cyclones, ore chutes, discharge funnels, slag chutes, dredge pump side plates, extension ring, drizzly bars, vibrator pan feeder liner, sinter breaker bar, conveyor casings, green walt crushers, steel plant, etc...

COMPLETE WEAR PLATES OR CUTOUTS

BIMETALLIC PLATES
CUT TO ANY SHAPE

AVAILABLE WIDTHS FROM 3MM (0,12”) TO 20MM (0,8”)
**FUTURA 550 BLADES**

**FUTURA 550: +60% WEAR LIFE COMPARED TO OTHER 500 BRINELL BORON STEEL**

FUTURA 550 is an abrasion resistant steel with a nominal hardness of 550 HBW. Typical applications are components with abrasion resistance.

### Mechanical Properties

<table>
<thead>
<tr>
<th>Thickness (mm)</th>
<th>Hardness (HBW)</th>
<th>Resilience (CVL)</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.0 - 65.0</td>
<td>525 - 575</td>
<td>30J / -40º</td>
</tr>
</tbody>
</table>

### Chemical Composition (heat analysis)

<table>
<thead>
<tr>
<th>C (Max%)</th>
<th>Si (Max%)</th>
<th>Mn (Max%)</th>
<th>P (Max%)</th>
<th>S (Max%)</th>
<th>Cr (Max%)</th>
<th>Ni (Max%)</th>
<th>Mo (Max%)</th>
<th>B (Max%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.37</td>
<td>0.50</td>
<td>1.30</td>
<td>0.020</td>
<td>0.010</td>
<td>1.40</td>
<td>1.40</td>
<td>0.60</td>
<td>0.004</td>
</tr>
</tbody>
</table>

FUTURA 550 is an abrasion resistant steel with a nominal hardness of 550 HBW. Typical applications are components with abrasion resistance.
FUTURA 600 is an abrasion resistant steel with a nominal hardness of 600 HBW. Typical applications are components with abrasion resistance.

**Mechanical Properties**

<table>
<thead>
<tr>
<th>mm</th>
<th>HBW</th>
<th>CVL</th>
</tr>
</thead>
<tbody>
<tr>
<td>51,1 - 65,0</td>
<td>550 - 640</td>
<td>20J / -40º</td>
</tr>
</tbody>
</table>

**Chemical composition (heat analysis)**

<table>
<thead>
<tr>
<th>C Max%</th>
<th>Si Max%</th>
<th>Mn Max%</th>
<th>P Max%</th>
<th>S Max%</th>
<th>Cr Max%</th>
<th>Ni Max%</th>
<th>Mo Max%</th>
<th>B Max%</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,47</td>
<td>0,70</td>
<td>1,00</td>
<td>0,015</td>
<td>0,010</td>
<td>1,20</td>
<td>2,50</td>
<td>0,70</td>
<td>0,005</td>
</tr>
</tbody>
</table>

FUTURA 600 BRINELL PRODUCTS CAN BE A SUBSTITUTE FOR CARBIDE OVERLAY CUTTING EDGES AT A VERY AFFORDABLE COST
FABRICATED STEEL LIPS AND EDGES

EDGES FOR BULLDOZER, LOADER, SCRAPER AND GRADER

ROLLED STEEL BLADES
Standard bulldozer blades for general use made out of rolled steel. Rolled steel blades are available in different thicknesses to suit work being done.

BLADES FOR BULLDOZER
Cutting edges of different sections for ease of installation, maintenance, handling and storage. Sections can be replaced or rotated individually so that each can be utilized to the maximum amount of wear. Made of rolled steel with a high resistance to breakage. Deep Hardened to increase wear resistance. Deep-drawn for better protection of the lag screws.

MACHINE FINISHED END BITS

WIDE INVENTORY OF OEM PART NUMBERS
MADE TO MEASURE BLADES UNDER REQUEST
CAST BLADES

Special cast blade for use in high abrasion and or high impact conditions. They are notably reinforced and provide greater resistance to breakage compared to rolled blades.

CAST BLADES FOR BULLDOZER AND GRADERS

MACHINE FINISHED CAST END BITS

D11 -11U CATERPILLAR ASSEMBLY

D9N -9SU CATERPILLAR ASSEMBLY

CAST EDGES FOR GRADERS

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
BIMETALLIC BLADES AND EDGES

BULLDOZER

BIMETALLIC BLADES AND END BITS FOR BULLDOZER

HARDNESS
ROCKWELL 60-64HRC
BRINELL 590-625
VICKERS 700-800

LOADER

BUCKET PROTECTION

LOADER BOLT-ON EDGE

GRADER

LOADER SEGMENT

LOADER END BIT

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
ONE-PIECE MACHINE FINISHED RIPPER SHANKS

MANUFACTURED ONE-PIECE MACHINE FINISHED RIPPER SHANKS WITHOUT ANY WELDING AVOIDING THE RISK OF BREAKAGE ON WELDED AREAS

HIGH TOUGHNESS

Ripper toughness is very high even under the most difficult ripping conditions, such as low temperature / extreme ripping conditions, because we use the highest quality steel available.

HIGH STRENGTH

Due to its high strength, our shanks have better dimensional stability because they maintain the same thickness along the shank and thus sustain a smaller amount of permanent deformation.

OUR ONE-PIECE RIPPER SHANKS ARE CUT TO LENGTH, FORMED AND FULLY MACHINED

Made of tough abrasion resistant alloy steel and thru-hardened for strength and maximum wear life. We offer a complete range of shanks for main O.E.M. brands on the market, covering from the smallest ripper shank up to the largest 110 mm thick, for the biggest dozers on the market.

IMPROVED ADAPTER PROFILE

Improved adapter profile by making the gap between the adapter and the protector to the minimum.

IMPROVED DESIGN

Reinforced adapter box keeps ripper teeth movement to the minimum as well as protecting the rear area of the tip.

BETTER DIMENSIONAL STABILITY

with same thickness of material along the shank.

RIPPERS

HARDNESS, Brinell HB

THICKNESSES

40-120mm.

TYPICAL VALUES of...

Impact Strength Charpy V notch longitudinal test piece at -40°C

for <70mm. thick plate 95 J

for >70mm. thick plate 70 J

Tensile Strength

for <70mm. thick plate 980 MPa

for >70mm. thick plate 900 MPa
**RIPPER COMPONENTS**

**FUTURA HP HAMMERLESS SYSTEM IS 100% COMPATIBLE WITH YOUR CURRENT CATERPILLAR RIPPER PARTS**

**INCREASED SAFETY**

Increased pin retention: HL2 pins are securely locked in place. Rubber inster under locking tab allows the locking tab (fig 3) to compress, rotate and lock. Easy to install and remove with a hex wrench.

**HAMMERLESS SOLUTION**

System compatible with your Caterpillar style ripper shank. All FUTURA CLACK teeth can be used with the FUTURA HAMMERLESS SYSTEM as well as with the standard Caterpillar pin and washers.

---

**RPT**

NEW HAMMERLESS RIPPER PROTECTOR

IMPROVED DESIGN FOR EXTRA SHANK AND TOOTH PROTECTION

---

**R2ST**

MEDIUM STAR

**R2S**

MEDIUM CENTERLINE

**R3ST**

LONG STAR

---

**ARM**

TUNGSTEN COATED RIPPER TEETH AVAILABLE ON DEMAND

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**DIRECT REPLACEMENT PARTS FOR ESCO**

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**DIRECT REPLACEMENT PARTS FOR KOMATSU**

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**Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.**
CRAWLER SYSTEMS

CAT – KOMATSU – HITACHI – TEREX – O&K – BUCYRUS

IDLER GROUPS AND IDLER SHELLS

Idler Wheels & Idlers Complete & Slide Bars and other inner parts to assemble the idler

SPROCKETS & DRIVE TUMBLERS

ROLLERS (TRACK ROLLERS & CARRYING ROLLERS)

TRACK PADS ASSEMBLED INCLUDING PINS, NUTS AND BOLTS ACCORDING TO YOUR REQUEST

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
UNDERCARRIAGE AND COMPONENTS

BYG protection chains offer safety, reliability, savings and productivity. Our lower direct hourly operating costs allow the following benefits:

Multiplied tyre life significant reduction in tyre costs Predictable service life of chains and tyres means accurate budgeting at lower costs

Minimised downtime due to tire failure means maximum equipment availability

Improved stability, increased traction and better penetration for digging and break-out increased productivity in tonnage per hour

Optimum tire protection reduced tire maintenance

Our tyre protection chains can be used on mining applications such as open pit mining, underground mining and tunneling, quarrying, slag, and scrap and traction.

The BYG professional series is aimed at all customers using XS-XXL equipment (up to LeTourneau 1850, WA 1200 or CAT 994) in soft to hard rock, steel plants and on any really tough applications.

These chains provide an optimum solution for all users who require traction (and sufficient protection) on ice, snow and any other slippery or muddy terrain. BYG stocks a wide range of high-quality mining vehicle chains.

TYRE PROTECTION CHAINS

BYG protection chains offer safety, reliability, savings and productivity. Our lower direct hourly operating costs allow the following benefits:
CARBIDE CUTTING TOOLS

BYG offers carbide tools for Roadheaders and mining equipment. BYG has invested in this line to complete the product range offered to a growing number of clients. BYG carbide tools are manufactured for both domestic and export markets. All BYG cutting tools are presented with a practical packaging for transportation.

CARBIDE TIPS
Hardened for optimized pick life

SHANK
Quenched and tempered for constant tensioning force, even during long duty periods

SLEEVE
Pre-tensioned for quick and easy pick assembly

HOLDER
Special wear plate for low toothholder wear & optimum pick rotation

PARTS & TOOLS FOR HYDRAULIC BREAKERS

All BYG tools are manufactured from top quality alloy steels, machined and heat treated ensuring that each tool has the consistent impact strength, hardness and toughness required for demolition, trenching, quarrying and mining applications.

The BYG tool range includes not only standard tools, always available in stock, such as pyramid and chisel, but special tools such as blunt, wide chisel, asphalt cutter, big blunt or driving tool, depending on the application.

BYG is a supplier for hydraulic breaker parts. BYG provides spare parts for almost all major companies and brands of Hydraulic breakers. The line of spare parts for hydraulic breakers includes pistons, bushings, side bolts, seal kits, retainers, diaphragms and other parts.

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
BYG offers a complete line of quality repair parts at competitive prices. BYG also offers comprehensive resources for dealers, including the following benefits: We stock high-quality OEM brands, as well as great aftermarket brands and access to an extensive amount of major OEM product lines.

We have long-established, positive relationships with Original Equipment Manufacturers (OEM) and Aftermarket Accessory Brands. Our sales team and customer service representatives are unparalleled. Due to their extensive knowledge, responses are quick and timely. With our extensive product offering, we have the sales history and data to decipher which parts sell the most, and offer correlating line options for our customers.

Specialist in aftermarket parts for:
- Caterpillar
- Komatsu
- Cummins
- Detroit Diesel
- Volvo

Other manufacturer’s names, descriptions, pictures and part numbers are used for reference purposes only.
FACTORY DIRECT SOLUTIONS TO MINE SITES