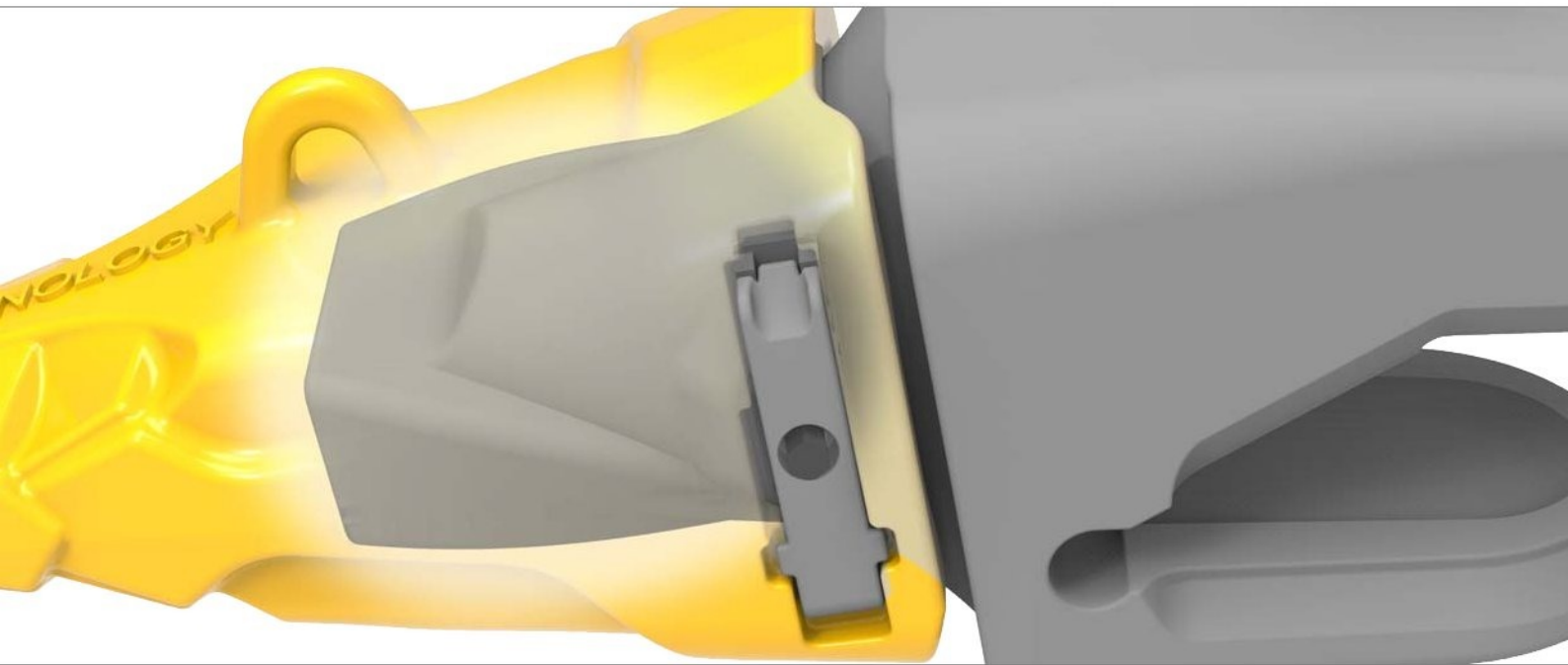


TWISTER HAMMERLESS

Futura TWISTER HAMMERLESS Teeth are compatible with Esco SuperV® adapters

FUTURA TWISTER HAMMERLESS Dientes compatibles con Adaptadores Esco SuperV®

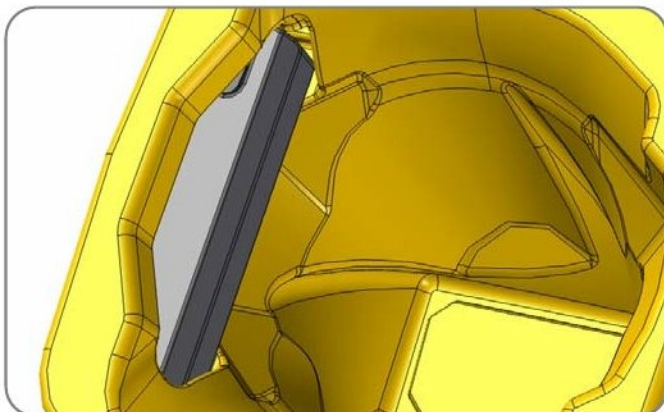


TWISTER DUO

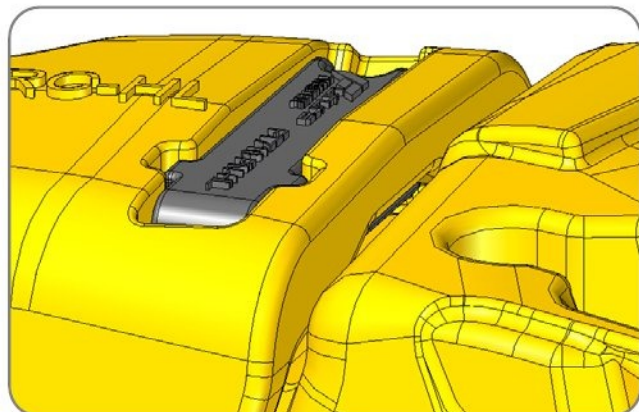
| SYL | RC-HL | RCXL-HL | RX-HL | RPHD-HL | I-HL | |
|----------------------|-------------|---------------|-------------|---------------|------------|------------|
| FT130 SYL 130 | FT590 RC-HL | | | | FT590 I-HL | 590 |
| FT170 SYL 170 | FT610 RC-HL | | | | FT610 I-HL | 610 |
| FT190 SYL 190 | FT690 RC-HL | | FT690 RX-HL | FT690 RPHD-HL | FT690 I-HL | 690 |
| FT230 SYL 230 | FT710 RC-HL | FT710 RCXL-HL | FT710 RX-HL | FT710 RPHD-HL | FT710 I-HL | 710 |
| FT290 SYL 290 | FT810 RC-HL | FT810 RCXL-HL | FT810 RX-HL | | FT810 I-HL | 810 |
| FT330 SYL 330 | | | | | | |
| FT390 SYL 390 | | | | | | |
| FT430 SYL 430 | | | | | | |
| FT510 SYL 510 | | | | | | |

TWISTER

HAMMERLESS

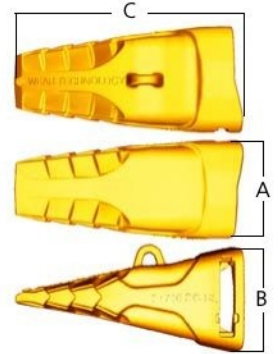
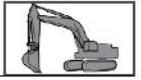


**EXCEPTIONAL
FITMENT**



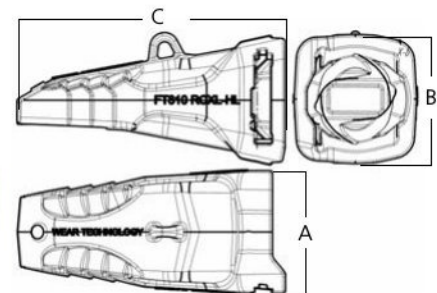
**ENCAJE
PERFECTO**

RC-HL Twister Hammerless Diente Twister Hammerless RC



| mm. | | | | REF | Cross R | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] |
|--------|--------|--------|--------|--------------------|---------|--------------|-----------|--------------|--------------|---------------|---------|----------|------------|---------|
| A | B | C | KG | | | | | | | | | | | |
| 165 | 178 | 389 | 26,40 | FT590 RC-HL | V59SD | FT590 PN-HL | FT590 | FT590 LH | FT590 RH | | FT590 C | FT590 WN | 590 | |
| 6,50" | 7,01" | 15,31" | 58,20 | | | | | | | | | | | |
| 170 | 198 | 419 | 32,50 | FT610 RC-HL | V61SD | FT6165 PN-HL | FT610 | FT610 LH | FT610 RH | FT610 CST | FT610C | FT610 WN | 610 | |
| 6,69" | 7,80" | 16,50" | 71,65 | | | | | | | | | | | |
| 210 | 219 | 455 | 46,70 | FT690 RC-HL | V69SD | FT690 PN-HL | FT690 | FT690 LH | FT690 RH | FT690 CST | - | - | 690 | |
| 8,27" | 8,62" | 17,91" | 102,95 | | | | FT690-90 | FT690 LH | FT690 RH | | | | | |
| | | | | | | | | FT690LH-90 | FT690RH-90 | | | | | |
| 224 | 237 | 501 | 58,00 | FT710 RC-HL | V71SD | FT710 PN-HL | FT710 | FT710 LH | FT710 RH | FT710-100 CST | FT710 C | FT710 WN | 710 | |
| 8,82" | 9,33" | 19,72" | 127,87 | | | | FT710-100 | FT710-100 LH | FT710-100 RH | | | | | |
| 267 | 281 | 578 | 91,00 | FT810 RC-HL | V81SD | FT810 PN-HL | FT810 | FT810 LH | FT810 RH | FT810 CST | FT810 C | FT810 WN | 810 | |
| 10,51" | 11,06" | 22,76" | 200,62 | | | | FT810-140 | FT810-140 LH | FT810-140 RH | FT810-140 CST | | | | |

RCXL-HL Twister Hammerless Diente Twister Hammerless RCXL



| mm. | | | | REF | Cross R | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] | [Image] |
|--------|--------|--------|--------|----------------------|---------|-------------|-----------|--------------|--------------|---------------|---------|----------|------------|---------|
| A | B | C | KG | | | | | | | | | | | |
| 229 | 239 | 515 | 68,00 | FT710 RCXL-HL | V71CHD | FT710 PN-HL | FT710 | FT710 LH | FT710 RH | FT710-100 CST | FT710 C | FT710 WN | 710 | |
| 9,02" | 9,41" | 20,28" | 149,91 | | | | FT710-100 | FT710-100 LH | FT710-100 RH | | | | | |
| 267 | 281 | 583 | 106,00 | FT810 RCXL-HL | V81CHD | FT810 PN-HL | FT810 | FT810 LH | FT810 RH | FT810 CST | FT810 C | FT810 WN | 810 | |
| 10,51" | 11,06" | 22,95" | 233,69 | | | | FT810-140 | FT810-140 LH | FT810-140 RH | FT810-140 CST | | | | |

RX-HL Twister Hammerless Diente Twister Hammerless RX



● ● ● ●
 WEAR FACTOR | DESGASTE

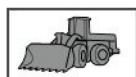
● ● ● ●
 PENETRATION | PENETRACIÓN

● ● ● ● ●
 IMPACT | IMPACTO



| mm. | | | | REF | Cross R | | | | | | | | kg | REF | |
|---------------|---------------|---------------|------------------|--------------------|---------|-------------|-------|----------|----------|--------------|--------------|---------------|---------|----------|------------|
| A | B | C | | | | | | | | | | | | | |
| 210 8,27" | 219 8,62" | 456 17,95" | 54,00 119,05 | FT690 RX-HL | V69SDX | FT690 PN-HL | FT690 | FT690 LH | FT690 RH | FT690 LH-90 | FT690 RH-90 | FT690 CST | FT690 C | FT690 WN | 690 |
| 229 9,02" | 238 9,37" | 506 19,92" | 70,00 154,32 | FT710 RX-HL | V71SDX | FT710 PN-HL | FT710 | FT710 LH | FT710 RH | FT710 LH-100 | FT710 RH-100 | FT710-100 CST | FT710 C | FT710 WN | 710 |
| 267 10,51" | 281 11,06" | 537 21,14" | 102,00 224,87 | FT810 RX-HL | V81SDX | FT810 PN-HL | FT810 | FT810 LH | FT810 RH | FT810 LH-140 | FT810 RH-140 | FT810 CST | FT810 C | FT810 WN | 810 |

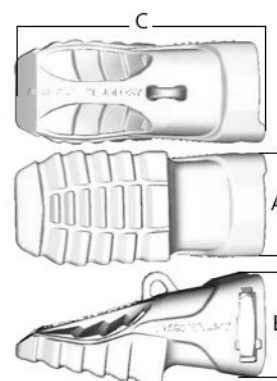
RPHD-HL Twister Hammerless Diente Twister Hammerless RPHD



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 WEAR FACTOR | DESGASTE

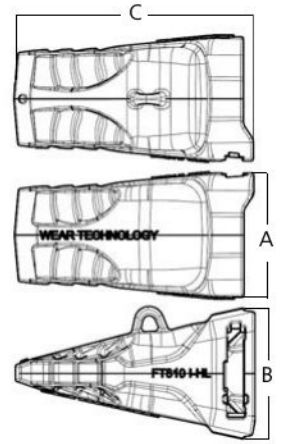
● ● ● ●
 PENETRATION | PENETRACIÓN

● ● ● ● ●
 IMPACT | IMPACTO



| mm. | | | | REF | Cross R | | | | | | | kg | REF |
|---------------|--------------|---------------|-----------------|----------------------|---------|-------------|----------|------------|------------|----------|------------|----|-----|
| A | B | C | | | | | | | | | | | |
| 210 8,27" | 219 8,62" | 467 18,39" | 64,11 141,34 | FT690 RPHD-HL | VTH69 | FT690 PN-HL | FT690 LD | FT690 LDLH | FT690 LDRH | FT690 WN | 690 | | |
| 261 10,28" | 249 9,80" | 498 19,61" | 89,50 197,31 | FT710 RPHD-HL | VTH71 | FT710 PN-HL | FT710 LD | FT710 LDLH | FT710 LDRH | FT710 WN | 710 | | |

I-HL Twister Hammerless Diente Twister Hammerless Impacto



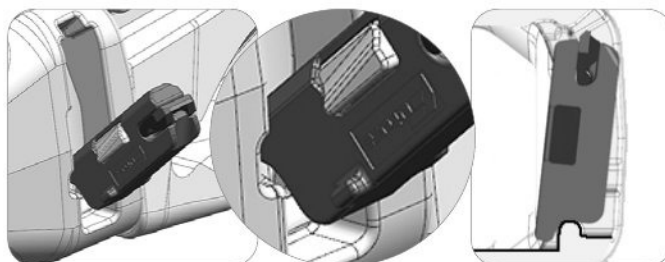
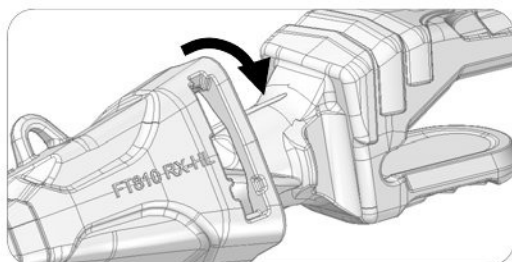
| mm. | | | | REF | Cross R | Image 1 | Image 2 | Image 3 | Image 4 | Image 5 | Image 6 | Image 7 | Image 8 | Image 9 | Image 10 | Image 11 | Image 12 | Image 13 | |
|---------------|---------------|---------------|-----------------|-------------------|---------|--------------|--------------------|--------------------------|--------------------------|----------------------------|---------|----------|------------|---------|----------|----------|----------|----------|--|
| A | B | C | KG | | | | | | | | | | | | | | | | |
| 165 6,50" | 178 7,01" | 345 13,58" | 26,20 57,76 | FT590 I-HL | U59RYL | FT590 PN-HL | FT590 | FT590 LH | FT590 RH | FT590 CST | FT590 C | FT590 WN | 590 | | | | | | |
| 166 6,54" | 196 7,72" | 364 14,33" | 28,26 62,30 | FT610 I-HL | U61RYL | FT6165 PN-HL | FT610 | FT610 LH | FT610 RH | FT610 CST | FT610C | FT610 WN | 610 | | | | | | |
| 210 8,27" | 219 8,62" | 415 16,34" | 44,46 98,02 | FT690 I-HL | U69RYL | FT690 PN-HL | FT690 FT690-90 | FT690 LH FT690LH-90 | FT690 RH FT690RH-90 | FT690 CST | FT690 C | FT690 WN | 690 | | | | | | |
| 229 9,02" | 237 9,33" | 442 17,40" | 55,50 122,35 | FT710 I-HL | U71RYL | FT710 PN-HL | FT710 FT710-100 | FT710 LH FT710-100 LH | FT710 RH FT710-100 RH | FT710-100 CST | FT710 C | FT710 WN | 710 | | | | | | |
| 267 10,51" | 281 11,06" | 511 20,12" | 87,70 193,34 | FT810 I-HL | U81RYL | FT810 PN-HL | FT810 FT810-140 | FT810 LH FT810-140 LH | FT810 RH FT810-140 RH | FT810 CST FT810-140 CST | FT810 C | FT810 WN | 810 | | | | | | |

Twister Hammerless Assembly Montaje Pasadores Twister Hammerless

1

Fit TOOTH on adapter finding the half spin. Insert PIN as shown in the picture

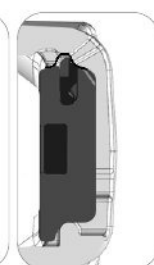
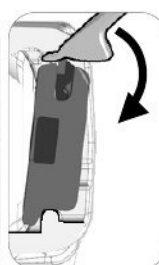
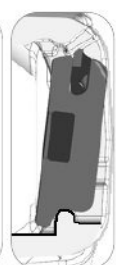
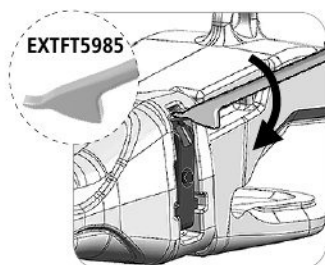
Encaje el DIENTE en el PORTADIENTES con un pequeño giro e inserte el PASADOR en la posición que se muestra en el dibujo



2

With extraction tool EXTFT5985, press until pin tab reaches its locking position and is fully released on the orifice

Utilice la herramienta EXTFT5985 para hacer palanca sobre la pestaña móvil del pasador hasta que quede completamente extendida dentro del orificio



✓ CHECK THE LOCKING TAB IS FULLY RELEASED INSIDE THE RECESS
 COMPRUEBE QUE LA PESTAÑA DE ENCAJE QUEDA COMPLETAMENTE EXTENDIDA

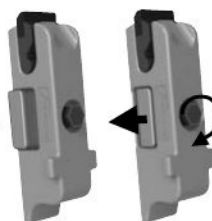


3

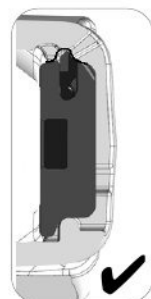
Use socket screw to expand lateral tab to the end

Use una herramienta hexagonal para expandir al máximo la pestaña lateral del pasador

SIDE TAB
 PESTAÑA LATERAL



USE A HEX TOOL OR SOCKET HEX TOOL AND SCREW TO THE END
 GIRE CON UNA LLAVE HEXAGONAL HASTA QUE NOTE QUE LLEGA A FINAL



| | | | |
|--------------|-------|----|------------|
| FT1317 PN-HL | - | - | EXTFT-1317 |
| FT1923 PN-HL | - | M5 | |
| FT2933 PN-HL | - | M6 | |
| FT390 PN-HL | - | M6 | EXTFT5985 |
| FT430 PN-HL | - | M6 | |
| FT510 PN-HL | - | M6 | |
| FT590 PN-HL | 10 mm | | |
| FT6165 PN-HL | 10 mm | | |
| FT690 PN-HL | 13 mm | | EXTFT-5985 |
| FT710 PN-HL | 13 mm | | |
| FT810 PN-HL | 17 mm | | |

PN-HL Hammerless Twister PIN PASADOR Twister Hammerless



| mm. | in | Lb | | REF | | | TOOL |
|------|-------|------|------|---------------------|----|--------------------|------------------|
| L | | | | | | | |
| 31,4 | 1,24" | 0,03 | 0,06 | FT1317 PN-HL | - | 130 170 | EXTFT1317 |
| 51,8 | 2,04" | 0,05 | 0,11 | FT1923 PN-HL | M5 | 190 230 | |
| 64,9 | 2,56" | 0,16 | 0,35 | FT2933 PN-HL | M6 | 290 330 | |
| 76,9 | 3,03" | 0,21 | 0,46 | FT390 PN-HL | M6 | 390 | EXTFT1951 |
| 85,0 | 3,35" | 0,29 | 0,64 | FT430 PN-HL | M6 | 430 | |
| 93,0 | 3,66" | 0,34 | 0,75 | FT510 PN-HL | M6 | 510 | |

| mm. | in | Lb | | REF | | | TOOL |
|-------|-------|------|------|---------------------|-------|------------|------------------|
| L | | | | | | | |
| 123,3 | 4,85" | 0,60 | 1,32 | FT590 PN-HL | 10 mm | 590 | |
| 132,0 | 5,20" | 0,75 | 1,65 | FT6165 PN-HL | 10 mm | 610 | |
| 136,0 | 5,35" | 1,10 | 2,43 | FT690 PN-HL | 13 mm | 690 | EXTFT5985 |
| 156,0 | 6,14" | 1,40 | 3,09 | FT710 PN-HL | 13 mm | 710 | |
| 186,0 | 7,32" | 2,00 | 4,41 | FT810 PN-HL | 17 mm | 810 | |

EXTFT Hammerless Extraction Tool Herramienta Extractora



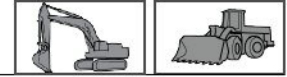
| mm. | in | Lb | | REF | |
|-----|--------|------|------|------------------|--|
| L | | | | | |
| 388 | 15,28" | 0,86 | 1,90 | EXTFT1317 | 130 170 |
| | | | | | 190 230 290 330 390 430 510 |
| 387 | 15,24" | 0,86 | 1,90 | EXTFT1951 | |
| 390 | 15,35" | 1,00 | 2,20 | EXTFT5985 | 590 610 690 710 810 |

EXTFT1317

EXTFT1951

EXTFT5985

SYL Symmetric Simétrico



● ● ● ●
WEAR FACTOR | DESGASTE

● ● ● ● ● ● ● ●
PENETRATION | PENETRACIÓN

● ● ● ● ● ● ● ● ● ●
IMPACT | IMPACTO

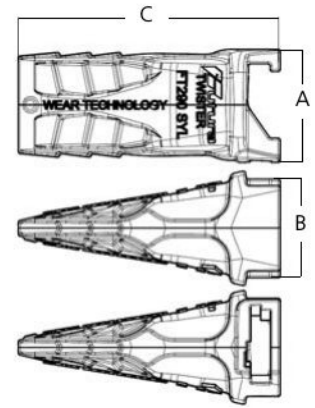
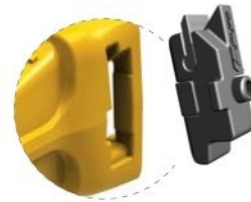


STANDARD PIN

TWISTER DUO



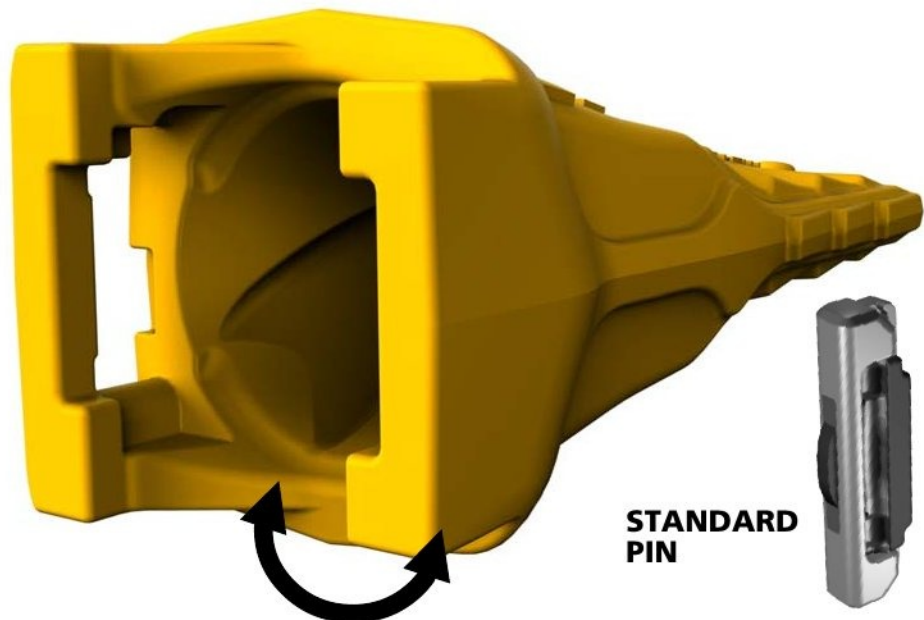
HAMMERLESS PIN



| mm. | | | KG | REF | Cross R. | Pin Options | | | | | | | WG |
|--------------|--------------|---------------|----------------|-------------------------|---------------------------|---------------------------|--------------------------------------|----------|--------------------------------|----------------------------------|----------|------------|----|
| A | B | C | | | | FT1317 PN-HL FT1317 PN | FT130 | FT130 BL | FT130 FL | - | - | FT130 WN | |
| 59 2,32" | 54 2,13" | 118 4,65" | 0,80 1,76 | FT130 SYL V13SYL | FT1317 PN-HL FT1317 PN | FT130 | FT130 BL | FT130 FL | - | - | FT130 WN | 130 | |
| 68 2,68" | 62 2,44" | 135 5,31" | 1,40 3,1 | FT170 SYL V17TYL | FT1317 PN-HL FT1317 PN | FT1317 PN-HL | FT170 BL | FT170 FL | - | - | FT170 WN | 170 | |
| 80 3,15" | 88 3,46" | 183 7,20" | 2,50 5,51 | FT190 SYL V19SYL | FT1923 PN-HL FT1923 PN | FT190 | FT190 BL | FT190 FL | - | - | FT190 WN | 190 | |
| 91 3,58" | 92 3,62" | 209 8,23" | 3,46 7,6 | FT230 SYL V23SYL | FT1923 PN-HL FT1923 PN | FT230 FT230-30 | FT230 BL | FT230 FL | FT230-25 B016 FT230-30 B016 | FT230-25 BOC23 FT230-30 BOC19 | FT230 WN | 230 | |
| 104 4,09" | 104 4,09" | 240 9,45" | 5,80 12,8 | FT290 SYL V29SYL | FT2933 PN-HL FT290 PN | FT290 FT290-35 | FT290 FL | FT290 FL | FT290-35 B016 FT290-40 B016 | FT290-35 BOC23 FT290-40 BOC23 | FT290 WN | 290 | |
| 114 4,49" | 113 4,45" | 261 10,28" | 6,90 15,2 | FT330 SYL V33SYL | FT2933 PN-HL FT330 PN | FT330 | FT330 FL | - | - | - | FT330 WN | 330 | |
| 128 5,04" | 130 5,12" | 288 11,34" | 10,80 23,8 | FT390 SYL V29SYL | FT390 PN-HL FT390 PN | FT390 | - | FT390 FL | - | - | FT390 WN | 390 | |
| 144 5,67" | 146 5,75" | 325 12,80" | 14,90 32,85 | FT430 SYL V43SYL | FT430 PN-HL FT430 PN | FT430 | FT430 LD FT430-B22 FT430-60B22 | FT430 FL | - | - | FT430 WN | 430 | |
| 151 5,94" | 152 5,98" | 349 13,74" | 18,30 40,34 | FT510 SYL V43SYL | FT510 PN-HL FT510 PN | FT510 | FT510 LD FT510-B22 | FT430 FL | - | - | FT510 WN | 510 | |



HAMMERLESS PIN



STANDARD PIN