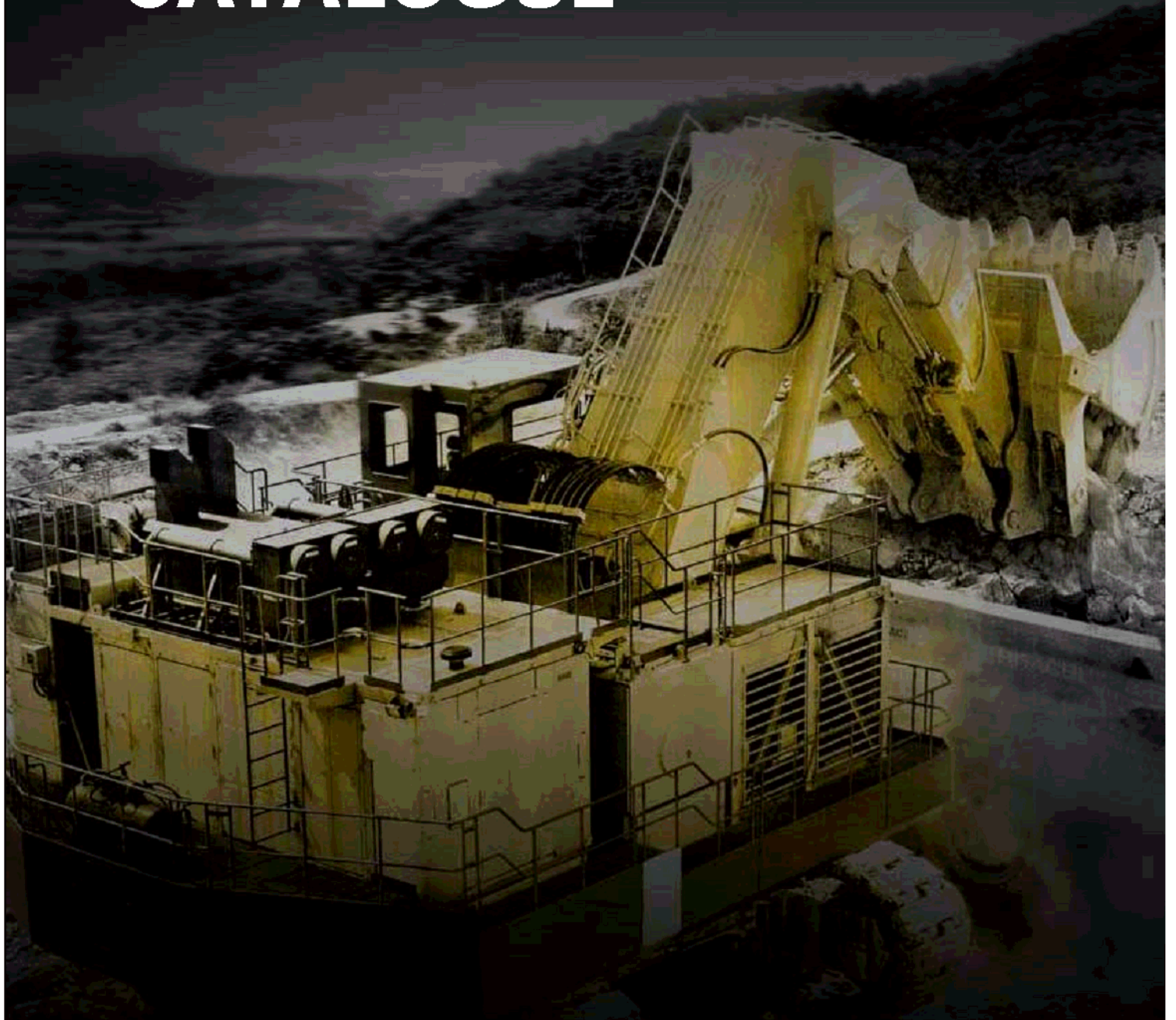


MINING CATALOGUE



Brandt

Futura
MINING



Product overview



TWISTER
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FUTURA MINING
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Complete lip assemblies
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Wear plates
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Fasteners
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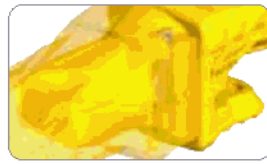
Carbide cutting tools
page 23



Teeth: FUTURA TWISTER teeth fit on your current SuperV[®] adapters ✓



Adapters and Weld-on Noses: FUTURA TWISTER adapters are suitable to be used with Lscó SuperV[®] teeth ✓



FUTURA TWISTER adapters, noses, tooth and pins are fully compatible with other HILLIX style products in the market ✓

UP TO 400 TONS MACHINES

Key to part numbers

F	T	6	1	0	V	T	L
----------	----------	----------	----------	----------	----------	----------	----------

Brand Type Size Version Vector Taper Length

Guide to part sizes by Maximum Machine Weight (tons)

	610	690	710	810
Standard	144.1	248.4	345.1	
HD	103.7	136.4	211.3	
ST/HD	119.9	188.0	270.5	402.2
Extra HD	88.8	129.9	188.0	275.2
ST/HD	110.0	161.1	218.5	334.5
Extra HD	82.9	120.4	161.1	231.9

Futura TWISTER are compatible with Esco SuperV[®] products

TWISTER is a **complete system** featuring teeth, adapters and pins ✓

Variety of designs to suit common & heavy duty excavator or loader applications ✓

TWISTER TEETH

S



Kq	Lt	Part#	Cross Ref	Size
31.6	60	FT610 S	9511Y	610
40.7	60	FT690 S	9529Y	690

RPHD



Kq	Lt	Part#	Cross Ref	Size
45.6	102	FT610 RPHD	951AR	610
69.2	106	FT710 RPHD	971AR	710

WTL



Kq	Lt	Part#	Cross Ref	Size
34.7	70	FT610 WTL	9511Y	610

VTL



Kq	Lt	Part#	Cross Ref	Size
27.6	61	FT610 VTL	9511X 9312L	610
40.3	65	FT690 VTL	9529X	690
65.7	113	FT710 VTL	9711X	710
80.0	128	FT810 VTL	9511X	810

PN TWISTER PIN

HPN

Pins could be re-used several times ✓
Fully compatible with other products ✓



Kq	Lt	Part#	Cross Ref	F	Size
0.47	1.0	FT610 PN	9511X	A	610
0.60	1.1	FT610 HPN	9514X	B	610
0.75	1.2	FT690 PN	9529X	A	690
0.86	1.3	FT6971 HPN	95241A	B	690 710
0.81	1.8	FT710 PN	9711X	A	710
1.21	3.2	FT810 PN	9511X	A	810

RC



Kq	Lt	Part#	Cross Ref	Size
32.6	72	FT610 RC	9511X 9511X 9312L	610
45.6	102	FT690 RC	9529X	690
65.7	113	FT710 RC	9711X	710
90.0	128	FT810 RC	9511X	810

EXTFT EXTRACTION TOOL



EXTFT-3961	Size 610
EXTFT-6981	Sizes 690 to 810

I



Kq	Lt	Part#	Cross Ref	Size
26.1	63	FT610 I	9511Y	610
44.1	67	FT690 I	9529Y	690
64.2	113	FT710 I	9711X 9711Y	710
81.0	131	FT810 I	9511X 9511Y	810

TWISTER NOSES, ADAPTERS, WEAR CAPS AND CORNERS

WN

TWISTER WELD-ON NOSE



Convert any adapter into the FUTURA TWISLR system ✓

Kg	L	Part#	Cross Ref	Size
23.5	51.7	FT610 WN	5828-991	610
33.8	74.4	FT690 WN	5828-992	690
47.5	104.5	FT710 WN	5828-971	710
64.2	125.9	FT810 WN	5828-991	810

LD

Loader Adapter



Kg	L	Part#	Cross Ref	Size
120	264	FT710 LD	5828-971	
122	268	FT710 LDLH	5828-971	710
122	268	FT710 LDRH	5828-971	



WC

UNIVERSAL WEAR CAPS

Futura Wear Caps add extra wear resistance to any FUTURA adapter. Versatile protection.



Kg	L	Part#	Adapters	UNITS
			- 710 - 0	3 - 01
5.5	17	F8071 WC	- 710 - 0 - 2	90 - 009
			- 710 - 0 - 4	



X

Excavator Adapter



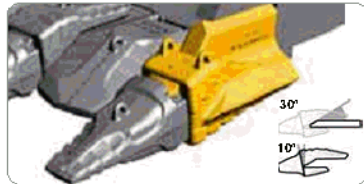
Kg	L	Part#	Cross Ref	Size
60	127	FT610 X	5828-991	610
74	167	FT690 X	5828-992	690
75	164	FT690-90 X	5828-992	
122	267	FT710 X	5828-971	710
118	260	FT710-100 X	5828-971	
177	290	FT810 X	5828-991	810

C

Corner

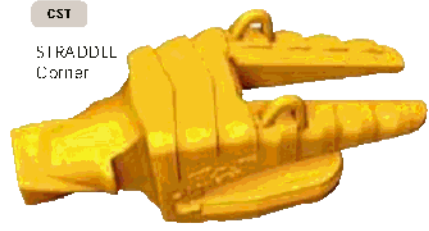


Kg	L	Part#	Cross Ref	Size
162	224	FT610 C	5828-991 5828-992	610
175	254	FT690 C	5828-992	690
262	290	FT710 C	5828-971	710
431	342	FT810 C	5828-991	810

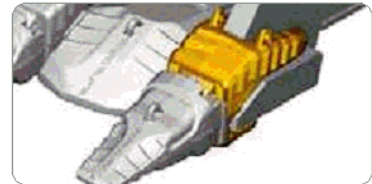


CST

STRADDLE Corner



Kg	L	Part#	Cross Ref	Size
87	151	FT610 CST	5828-991	610
114	251	FT690 CST	5828-992	690
147	277	FT710-100 CST	5828-971	710
210	407	FT810 CST	5828-991	810
218	478	FT810-140 CST	5828-991	



PN-HL TWISTER TIL Hammerless Pin

Kg	L	mm	in	Part#	Size
1.4	2	150	6.1"	FT710 PN-HL	710
2.0	4	188	7.4"	FT810 PN-HL	810

TWISTER TIL Rock Chisel

RC-HL



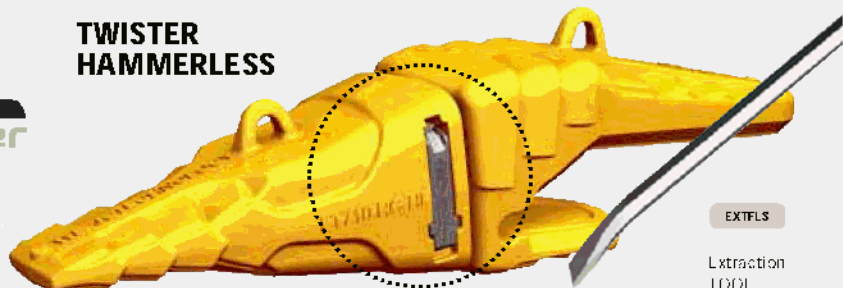
Kg	L	Part#	Cross Ref	Size
58.7	175	FT710 RC-HL	97°S2	710
90.8	200	FT810 RC-HL	95°S2	810



FULLY COMPATIBLE WITH YOUR CURRENT HELIX STYLE ADAPTER

EXCEPTIONAL FITMENT

TWISTER HAMMERLESS



EXTELS

Extraction TOOL



QUICK SELECTION GUIDE

NOSE SIZE	950 TOOTH 950	1100 TOOTH 920	1300 TOOTH 1120	1450 TOOTH 1220
MACHINE WEIGHT	UP TO 350T	350-500T	500-750T	750-1000T
HITACHI	LX3500, LX3500-3	LX3600	LX5500, LX5600	LX8000
TEREX	RI1120L	RI1170	RI1340, RI1360	RI1400
CATERPILLAR	603D, 523DML, 3560B	604D, 6050B, 5230B	6060FS	6090FS
KOMATSU	PC3000, PC3000-6	PC4000	PC4000, PC5500, PC5500-6	PC8000
KOMAT. (DEMAG)	11285	11285S	11485S	11485J
LIEBHERR	R994, R9250	R9250, R9400, R9350, R994B	R995	R9800, R986

FUTURA MINING SIZE 950

RC

Rock Chisel



Kg	L	Part#	Cross Ref.	Size
106.8	72.5	FM950 RC	114 92551	950

I

Impact



Kg	L	Part#	Cross Ref.	Size
104.0	73.5	FM950 I	114 92548	950

PNK

Mining Pin



Length	inch	Ø	inch	Kg	L	Part#	Cross Ref.	Size
780	11.0	Ø 74	6.2	11.2		FM950 PNK	92549A	950

FUTURA MINING SIZES 1100, 1300 AND 1450

RC

Rock Chisel



Kg	L	Part#	Cross Ref.	Cross Ref.	Nose	Adapt. Size
51	122	FM920 RC	241 09144	241 09144	920	1100
75	167	FM1120 RC	241 12144	241 12144	1120	1300
106	221	FM1220 RC	241 12144	241 12144	1220	1450

RCXL

Rock Chisel XL



Kg	L	Part#	Cross Ref.	Cross Ref.	Nose	Adapt. Size
		FM920 RCXL	241 09144M	241 09144M	1120	1300
99	218	FM1120 RCXL	241 12144M	241 12144M	1120	1300
134	295	FM1220 RCXL	241 12144M	241 12144M	1220	1450

WT

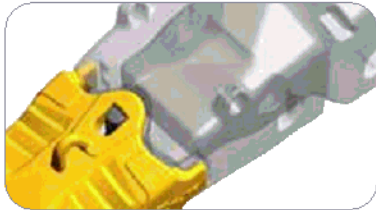
Twin Tiger



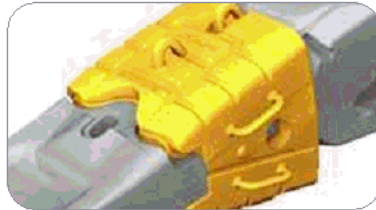
Kg	L	Part#	Cross Ref.	Cross Ref.	Nose	Adapt. Size
75	167	FM1120 WT	241 12149	241 12149	1120	1300
94	207	FM1220 WT	241 12149	241 12149	1220	1450

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FUTURA MINING COMPATIBILITY



Futura Mining teeth will fit onto a Lisco Standard Posilok as well as a Posilok Plus Intermediate adapter.




Lisco Posilok and Posilok Plus teeth will fit onto Futura Mining Intermediate adapters.



Futura Mining Intermediate adapters will fit onto Lisco Posilok, Hensley, Caterpillar and Bradken Mining Adapters.

EXTFM



Pin Extractor for mining pins
 FM 920 PN, FM 1120 PN and FM 1220 PN



Hard facing service:
 Tungsten coated mining teeth available

STANDARD MINING PIN

PN



DRP Posilok Plus Fits Posilok Plus

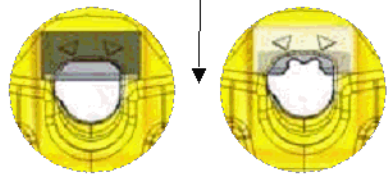
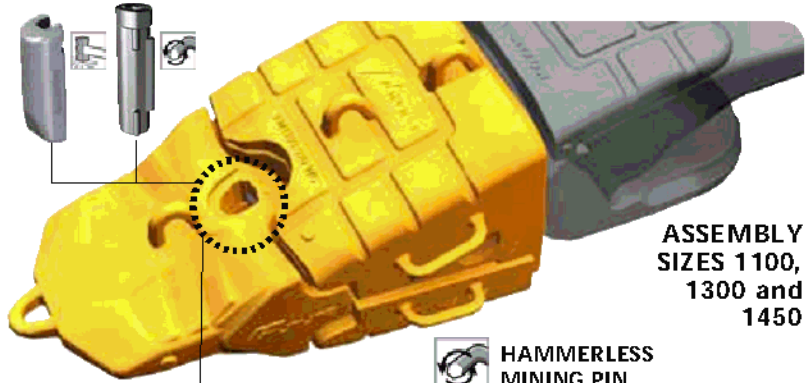
Lmm	In	Ø	In	Kq	Lt	Part#	Cross Ref.	Acse	Size
147	5.8	38	1.5	1.2	9.6	FM920 PN	DRP PN20K	920	1100
158	6.2	44	1.7	1.6	9.5	FM1120 PN	DRP PN120K	1120	1300
183	7.4	50	2.0	2.3	9.0	FM1220 PN	DRP PN120K	1220	1450

IA

Intermediate Adapter Caps



Kq	Lt	Part#	IA	Size
26	61	FM1100-920 WC	FM100920 A	1100
40	87	FM1300-1120 WC	FM1001120 A	1300
		FM1450-1220 WC	FM1001220 A	1450



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.

HAMMERLESS MINING PIN

HLK



Fits Posilok Plus

Lmm	In	Ø	In	Kq	Lt	Part#	Cross Ref.	Acse	Size
147	5.8	38	1.5	1.6	2.2	FM920 HLK	DRP HLK	920	1100
158	6.2	44	1.7	1.8	1.6	FM1120 HLK	DRP HLK	1120	1300
						FM1220 HLK	DRP HLK	1220	1450

IA

Intermediate Adapter



Kq	Lt	Part#	DRP Pos.	DRP Pos.	DRP Hensley	DRP Caterpillar	Size
134	753	FM1100-920 IA	S10429K	S10429K	800N257		1100
152	477	FM1300-1120 IA	S120412K	S120412K	840N1127	8402567	1300
		FM1450-1220 IA	S1454122K	S1454122K	800N1227		1450

PIAK

Intermediate Adapter Pin



Lmm	In	Ø	In	Kq	Lt	Part#	Cross Ref.	Size
327	12.8	67	2.4	6.3	11.7	FM1100 PIAK	S10429K	1100
378	14.8	61	2.4	6.0	17.6	FM1300 PIAK	S120412K	1300
						FM1450 PIAK	S1454122K	1450
								1600

MINING ADAPTER WEAR CAPS

Fit onto Lisco Adapters. The FM 1100 WC needs a FUTURA hammerless pin.

Kq	Lt	Part#	Cross Ref.	Pin	Size
22	48	FM950 WC	W022		950
25	58	FM1100 WC	W025	FM1100 HLK	1100



LIP SHROUDS

LIP SHROUDS

LS

Lip Shroud BODY



BASE

Lip Shroud BASE



PIN

Lip Shroud PIN

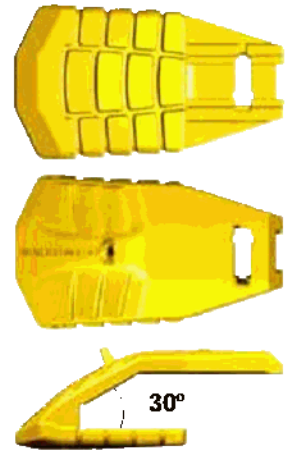


EXTFL



Pin Extractor for mechanical Lip Shrouds

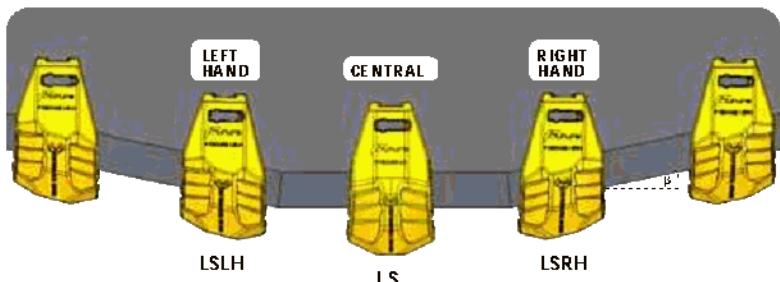
Kg	Lb	W	L	L1	Cross Ref	β°	Part#	Cross Ref	R11	Cross Ref	Base + Pin
45	99	90	3.5"	F90X245 LSLH	TAC90X245-2-A	14	F90X245 LS	TAC90X245-1-A	F90X245 LSRH	TAC90X245-2RA	703
79	174	90	3.5"	F90X320 LSLH	TAC90X320-3	14	F90X320 LS	TAC90X320-5	F90X320 LSRH	TAC90X320-5R	703
85	87	100	3.9"	F100X290 LSLH	T3C100X290-4	14	F100X290 LS	T3C100X290-3	F100X290 LSRH	T3C100X290-4R	703
88	194	100	3.9"	F100X320 LSLH	T3C100X320-2-A	14	F100X320 LS	T3C100X320-3	F100X320 LSRH	T3C100X320-2RA	703
128	277	100	3.9"	F100X410 LSLH	T3C100X410-0-4	14	F100X410 LS	T3C100X410-0-3	F100X410 LSRH	T3C100X410-0-4R	703
131	293	100	3.9"	F100X430 LSLH	T3C100X430-2	14	F100X430 LS	T3C100X430-1	F100X430 LSRH	T3C100X430-2R	703
120	264	120	4.72"	F120X330 LSLH	T3C120X330-2-A	14	F120X330 LS	T3C120X330-1-A	F120X330 LSRH	T3C120X330-2RA	703
154	339	120	4.72"	F120X410 LSLH	T3C120X410-0-3	14	F120X410 LS	T3C120X410-0-4	F120X410 LSRH	T3C120X410-0-3R	703
127	279	120	4.72"	F120X440 LSLH	T3C120X440-2-3	11.5	F120X440 LS	T3C120X440-3	F120X440 LSRH	T3C120X440-2R3	703
174	383	140	5.5"	F140X420 LSLH	T3C140X420-2-A	11.5	F140X420 LS	T3C140X420-1-A	F140X420 LSRH	T3C140X420-2RA	703
230	505	140	5.5"	F140X575 LSLH	T3C140X575-A	11.5	F140X575 LS	T3C140X575-1-A	F140X575 LSRH	T3C140X575-2A	703
236	519	160	5.3"	F160X450 LSLH	T3C160X450-2	14	F160X450 LS	T3C160X450-1	F160X450 LSRH	T3C160X450-2R	703
		160	5.3"	F160X570 LSLH		14	F160X570 LS		F160X570 LSRH		703
360	792	230	9.0"				F230X430 LS	T3C160X430-2B T3C160X430-3 T3C160X430-1C T3C160X430-3A			703



OPTIONAL THRUST BLOCKS



Part#	Lip Shroud
TB140	F100X420 V 44-4
TB160140	F120X410 V 44-4
TB230	F200X430 S

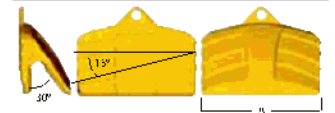


FE

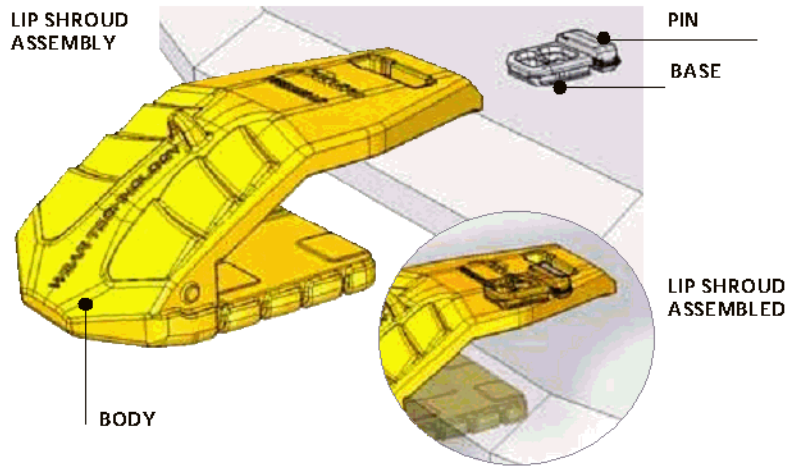
Lip Shroud WLLD-ON TVPL



mm	A	mm	Kg	L	Part#	β°	Cross Ref
345	78				FEB90	80	B9C
356	140				FEB90	100	B9DL
					FEB90 R		B9DR
					42.0 90°		F120 LS
					41.9 90°		F120 LSRH
321	170°				41.9 90°		F120 LSLH



LIP SHROUD ASSEMBLY



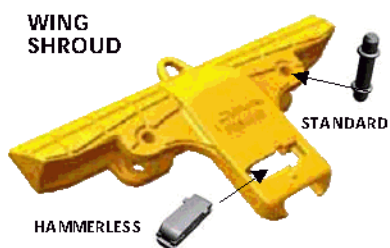
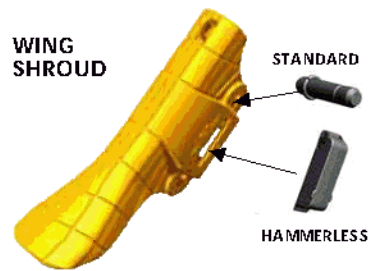
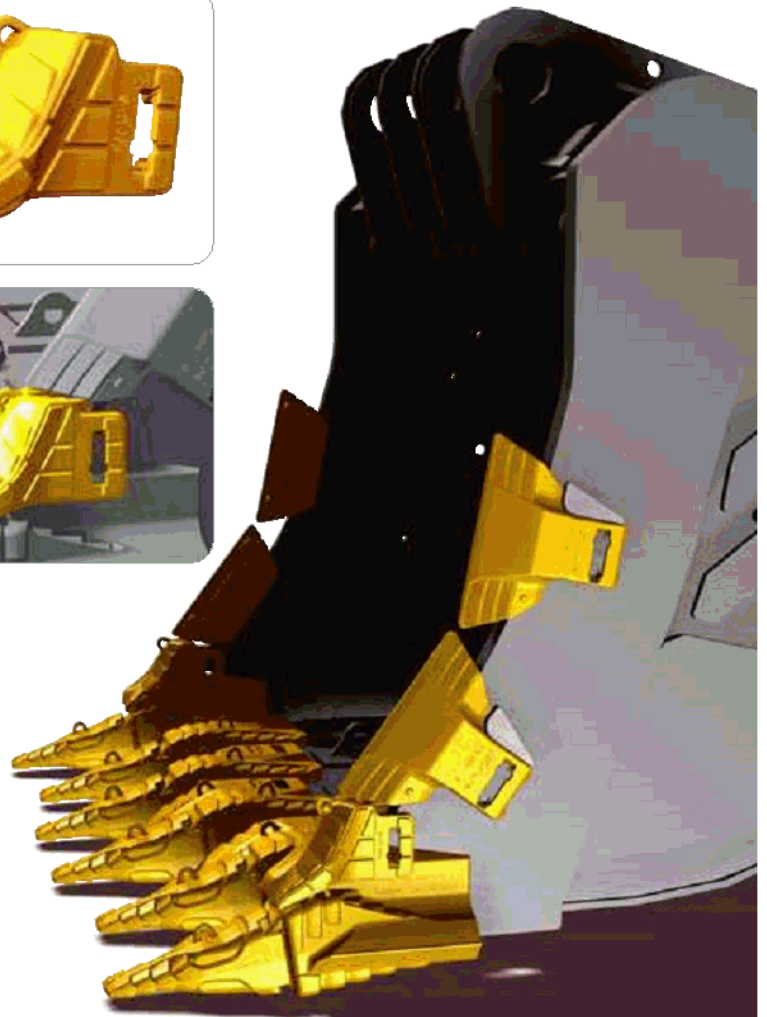
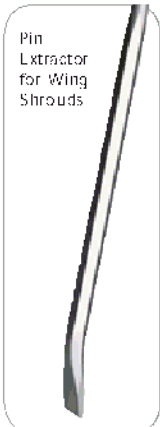
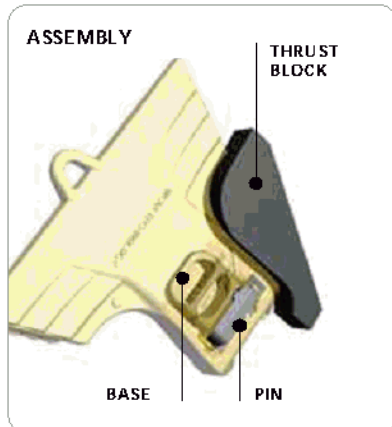
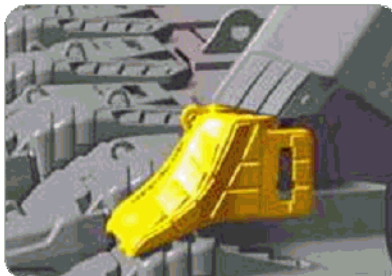
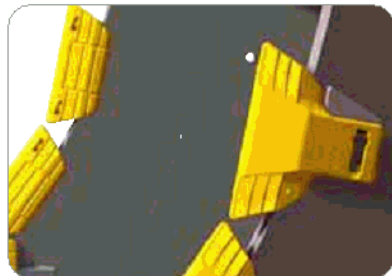
In caso di acquisto di un prodotto, verificare che il prodotto sia conforme alle norme CE e che sia in grado di resistere alle sollecitazioni meccaniche e termiche previste.

FUTURA MINING TOP WING SHROUDS

Lmm	In	Kq	Lt	Part#	Cross Ref	Base	Pin	THRUST BLOCK	Cross Ref
440	17.2	27	52.2	F40X440 UWS	AW50CA40C-1A			FDD33095 TB	11-2233054*
600	23.6	34	72.7	F40X600 UWS	AW50CA60C-1	FAB	FAP	FDE51413 TB	11-2233052*
606	19.9	60	103.1	F50X505 UWS	AW50CA50C-2			FDD32816 TB	11-2233054*
606	19.9	32	69.2	F50X505 B UWS	AW50CA50C-1A	FAB	FAP	FDD32816 TB	11-2233054*
648	21.5	62	114.4	F75X645 UWS	AW75CA45-1A			FDE1987 TBLH FDE1987 TBRH	11-2233074* 11-2233074*
656	25.8	99	117.8	F75X655 UWS	AW75CA55-1	FBB	FBP	FDD32678 TB	11-2233054*
855	22.7	235	517.0	F90X855 UWS	AW90CA55-1A	FBB	FBP	FDD33024 TB	11-2233054*
750	29.5	165	322.0	F120X760 UWS	AW120CA70C-1	FAB	FAP	FDD33024 TB	11-2233054*
800	21.3	218	572.0	F140X800 UWS	AW140CA90C-1	FBB	FBP	FDD33366 TB	11-2233054*

FUTURA MINING LOWER WING SHROUDS

Kq	Lt	Part#	Cross Ref	Base	Pin	THRUST BLOCK	Cross Ref
59	151.8	50 7.0	F50 LWS	AW50C-1	FAB	FAP	
75	187.8	65 7.0	F65 LWS	AW65C-1	FAB	FAP	FDD33808 TB 11-2233005
81	178.8	75 2.0	F75 LWS	AW75C-1	FAB	FAP	FDD33808 TB 11-2233005
85	187.0	90 2.0	F90 LWS	AW90C-1	FAB	FAP	FDD33808 TB 11-2233005
92	202.1	115 1.5	F115 LWS	AW115C-1	FAB	FAP	FDD33312 TB 11-2233074*
113	248.8	135 5.2	F135 LWS	AW135C-1	FAB	FAP	FDD33312 TB 11-2233074*
135	429.0		F165 LWS-RH	130735C-2			
135	429.0		165 8.5		FBB	FBP	FDD33367 TB 11-2233074*
135	429.0		F165 LWS-LH	130735C-1			



Lmm	In	Kq	Lt	Part#	Cross Ref
684	24.8	80 2.1	132.4	FPDE52445	11-223445

Lmm	In	Kq	Lt	Part#	Cross Ref
795	21.2	50 7.0	69.1	FES4410	11-223410



Part#	OEM code	retainers	Size
FC600 HL2P	6-40002 112-60003	6-40002 112-60003	60
FC700 HL2P	4-47003 112-47003	4-47007 112-47003	70
FC800 HL2P	124-18003 103-61001	101-78714 124-18003	80



The HL2P System is **100% compatible** with your current side pin adapter ✓
Increased pin retention ✓
Easy to install and remove ✓



FUTURA CLACK SYSTEM: A UNIVERSAL HAMMERLESS side pin solution 100% compatible with your Caterpillar side pin adapters



Kq	Lt	Part#	Cross Ref	Size
34.0	75	FC600 VTL	107-80003	60
46.0	88	FC700 VTL	4-47007	70



Kq	Lt	Part#	Cross Ref	Size
36.8	85	FC600 RPL	7Y-62007	60



Kq	Lt	Part#	Cross Ref	Size
31.0	68	FC600 L	5-62007	60



Kq	Lt	Part#	Cross Ref	Size
40.5	88	FC600 SYL	59-03007	60



Kq	Lt	Part#	Cross Ref	Size
51.2	114	FC600 RP	6-40002 RC	60
55.2	142	FC700 RP	4-47003 RC	70
100.2	190	FC800 RP	6-48002	80



Kq	Lt	Part#	Cross Ref	Size
50.5	122	FC600 RPHD	125-60000	60
74.1	162	FC700 RPHD	125-67000	70
120.5	205	FC800 RPHD	125-68000	80



Kq	Lt	Part#	Cross Ref	Size
55.5	174	FC600 RPHD2	125-65000	60
74.5	164	FC700 RPHD2	125-67000	70
123.2	221	FC800 RPHD2	125-65000	80



Kq	Lt	Part#	Cross Ref	Size
39.9	88	FC600 WTL	31-3302 WT 35-33008	60
64.2	118	FC700 WTL	4T-47002 WT	70



Kq	Lt	Part#	Cross Ref	Size
40.5	88	FC600 RC	31-3302 RC 35-33009	60
52.2	128	FC700 RC	4T-47003 RC	70
84.2	188	FC800 RC	-	80



Kq	Lt	Part#	Cross Ref	Size
40.5	88	FC600 RE	31-3302 RC 35-33009	60
55.5	127	FC700 RE	4T-47002 RC	70



Kq	Lt	Part#	Cross Ref	Size
27.3	60	FC600 P	7-75005	60
32.4	87	FC700 P	4T-47002	70
54.8	171	FC800 P	117-68000	80

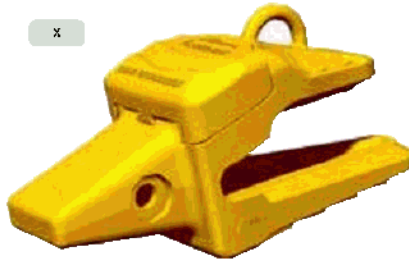


Kq	Lt	Part#	Cross Ref	Size
30.3	67	FC600 TL	31-3302 T 37-33009	60
44.0	67	FC700 TL	4T-47002 T	70

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Wear parts FUTURA up to 250 tons machines

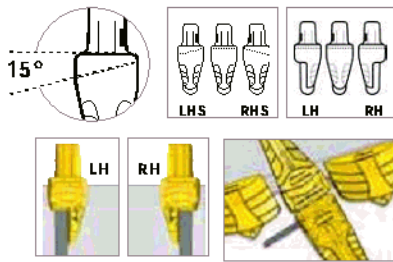
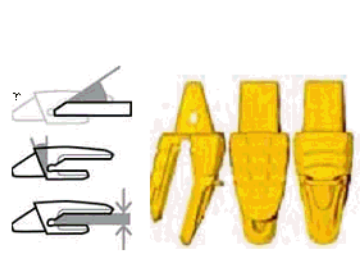
DIRECT REPLACEMENT PARTS FOR CATERPILLAR ADAPTERS



Kq	Lt	B"	α	Part#	OEM	RH	LH	RHS	LHS	Size
54	147	75"	70°	FC600	6-380-1	✓	✓	✓	✓	60
54	147	75"	80°	FC600-80		✓	✓			
67	157	75"	90°	FC700	779-770-0	✓	✓	✓	✓	70
67	157	75"	95°	FC700-95		✓	✓			
122	202	100"	90°	FC800	6-380-1	✓	✓			80



Kq	Lt	B"	α	Part#	OEM	Size
77	165			FC600 S	115-830-1	
76	177	75"	70°	FC600 S RHS	115-830-5	60
				FC600 S LHS	115-830-6	
76	171			FC700 S	122-070-1	
75	172	75"	70°	FC700 S RHS	122-070-5	70
				FC700 S LHS	122-070-6	
124	207	100"	90°	FC800 S	6-380-1	80



WELD-ON CONVERSION NOSES



Kq	Lt	Part#	Size
25.0	57"	WN-600	60
31.2	65"	WN-700	70
41.3	67"	WN-800	80

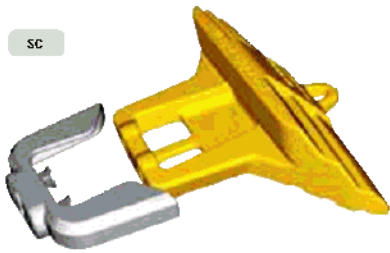
Weld On Noses are the **easiest and quickest** way to convert any proprietary adapter into the **High Performance FUTURA Hammerless** system

WEAR CAPTS

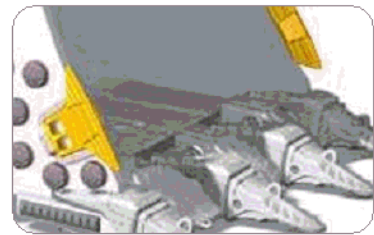


WC					WC7				
Kq	Lt	Part#	Size		Kq	Lt	Part#	Size	
4.7	10"	FC550 WC 55		500HB	4.7	10"	FC550 WC7 55		700HB
6.1	13"	FC600 WC 60			7.9	17"	FC600 WC7 60		
10.2	23"	FC700 WC 70			9.9	23"	FC700 WC7 70		
15.9	25"	FC800 WC 80			15.0	22"	FC800 WC7 80		

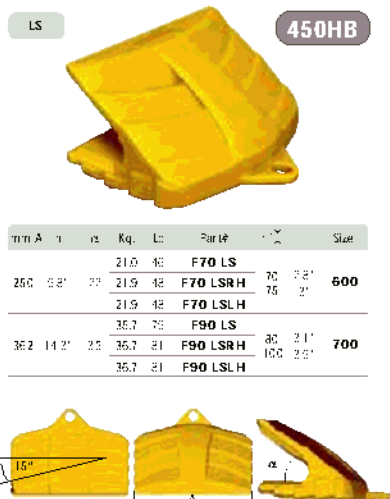
MECHANICALLY ATTACHED SIDE CUTTERS 500HB



A mm	B mm	Kq	Lt	Part#	OEM				
483	13	106	1	28	30	17"	F3050 SC	TAW38 X44C TAW40 X44C TAW50 X50S	
603	24	373	15	69	100	30	21"	F6080 SC	TB W75 X51S TB W75 X55S



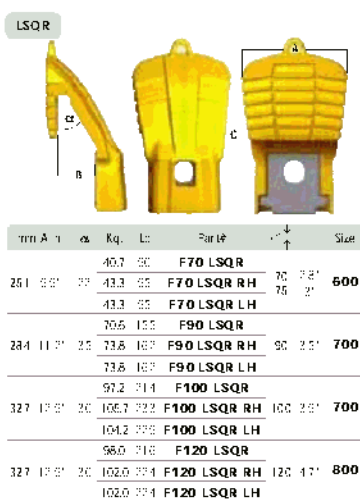
WELD-ON LIP SHROUDS



mm	A	α	Kq	Lt	Part#	Size
250	58"	70°	21.0	48"	F70 LS	60
			21.9	48"	F70 LSRH	
			21.9	48"	F70 LSLH	
			35.7	75"	F90 LS	70
352	142"	90°	35.7	81"	F90 LSRH	70
			35.7	81"	F90 LSLH	



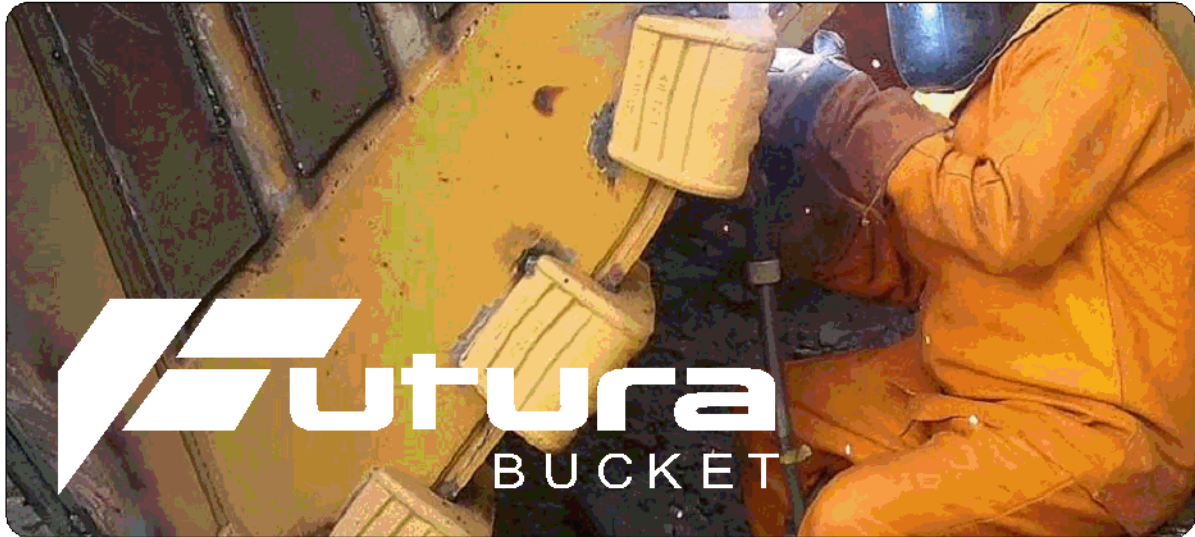
MECHANICALLY ATTACHED LIP SHROUDS 500HB



mm	A	α	Kq	Lt	Part#	Size
			40.7	50"	F70 LSQR	
251	58"	70°	43.3	55"	F70 LSQR RH	60
			43.3	55"	F70 LSQR LH	
			70.6	100"	F90 LSQR	
284	117"	90°	73.8	107"	F90 LSQR RH	70
			73.8	107"	F90 LSQR LH	
			99.2	214"	F100 LSQR	
327	128"	90°	106.7	222"	F100 LSQR RH	70
			104.2	228"	F100 LSQR LH	
			96.0	210"	F120 LSQR	
327	128"	90°	102.0	224"	F120 LSQR RH	80
			102.0	224"	F120 LSQR LH	



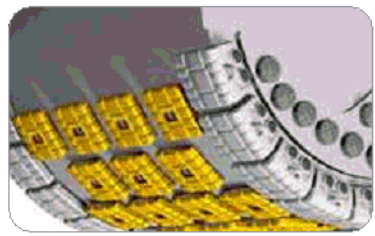
All the items shown in this catalog are available in different quantities and configurations. For more information, please contact us.



WR Wear Runner

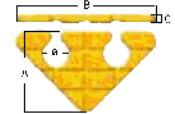


500HB



mm	A	B	Kq.	L	Part#	Cross Ref
206	21*	39	1.5*	9.9	F39 WR	KLRC1MC
206	21*	49	1.5*	12.2	F49 WR	KLRC2MC B8K9WR176
266	10.1*	69	2.2*	22.9	F59 WR	KLRC1MB
266	10.1*	79	2.1*	31.1	F79 WR	KLRC2MB B1CX1WR276

PTV



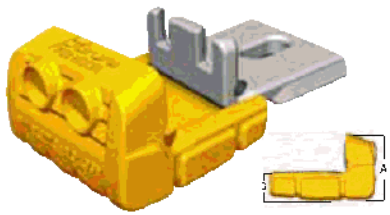
450HB

Universal
Weld-on
Wear Pad



mm	A	B	C	Ø	Kq.	L	Part#
158	67*	275	10.2*	16.0*	60	70*	2.0 1 PTV-01

HSQR Heel Shroud



500HB

mm	A	B	Kq.	L	Part#	Cross Ref
123	42*	49	1.5*	19.6	F49 HSQR	ES9097-4 ES9097-4HX
133	57*	60	2.2*	21.6	F59 HSQR	ES9097-3 ES9097-3HX
183	72*	69	2.2*	40.3	F69 HSQR	ES9097-2 ES9097-2HX
233	97*	80	2.5*	62.2	F89 HSQR	ES9097-6 ES9097-6HX

HS



450HB

mm	A	B	Kq.	L	Part#	Cross Ref
183	72*	38	1.5*	9.6	F10 HS	ES9097-1 ES9097-1HX
204	80*	43	1.7*	11.9	F12 HS	ES9097-3 ES9097-3HX
266	10.5*	64	2.5*	23.2	F24 HS	ES9097-2 ES9097-2HX
307	12.1*	64	2.5*	40.6	F40 HS	ES9097-6 ES9097-6HX
361	14.7*	11.6	4.5*	67.9	F90 HS	ES9097-7



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Chrome white iron parts

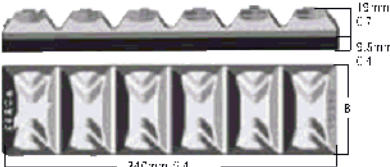
RB 700HB Roll Bar 700IIB



mm	A inc	B	Ø	Kq.	Lt.	Part#	Cross Ref
225	9"	28	1 1/4"	35	1.4"	F35 RB	280-409E
305	12"	42	1 7/8"	55	2.2"	F55 RB	280-409F
305	12"	55	2 1/4"	80	2.1"	F80 RB	280-409A



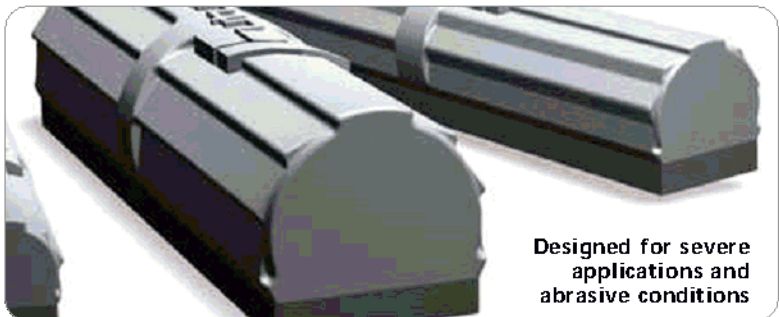
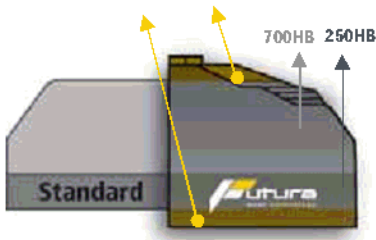
CB 700HB Chocky Bars 700IIB



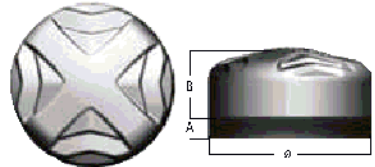
mm	B inc	Kq.	Lt.	Part#	Cross Ref
25	1.0"	1.0	7	F25 CB	D25CB
40	1.6"	1.6	4	F40 CB	D38CB, CB40N, 1098NA
50	2.0"	2.1	5	F50 CB	D51CB, CB50N
65	2.6"	2.8	6	F65 CB	D64CB, CB65N, 10A8AA
100	3.9"	4.3	8	F100 CB	D100CB, CB100N
150	5.9"	6.7	12	F150 CB	D130CB, CB130N, 699AA



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.



WB 700HB Wear Buttons 700IIB



mm	A inc	B	Ø	Kq.	Lt.	Part#	Cross Ref	
9.5	0.4"	21	0.2"	60	2.4"	0.5	F60 WB	D60BA, WB60
9.5	0.4"	28	1.1"	75	2.0"	1.1	F75 WB	D75BA, WB75
9.5	0.4"	34	1.2"	90	2.5"	1.4	F90 WB	D90BA, WB90
13	0.5"	35	1.4"	115	4.0"	3.3	F115 WB	D115BA
16	0.6"	45	1.8"	150	5.0"	7.2	F150 WB	D150BA, WB150



Extremely hard

Available in different sizes and shapes, the FUTURA Chrome white iron part is extremely hard, laminated bi-metallic, wear resistant composite with chrome-molly 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 brinnel 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, adaptor, attachment protection, dredging equipment, screen feed distribution and feed hopper wear areas.

Chromium carbide overlay plate

OVERLAY WEAR PLATE

is welded by chromium carbide overlay on a mild steel backing plate. Manufactured by our own design's welding machine with exclusive technique. OVLRLAY-PLATE has excellent performance in abrasion resistant.

CHEMICAL COMPOSITION

C 4.0-5.5% Cr 21-27%

BACKING PLATE

Standard: S5400 mild steel or equivalent
Stainless or others upon request

HARDNESS

HV600=

TOLERANCES

= 1mm

HEAT RESISTANCE

Maxim. in: 400°C.

MICROSTRUCTURE

Mixture of high volume hexagonal shaped chromium carbide in tough austenitic and martensitic matrix (CRADL 2355)

PENETRATION TO THE BASE METAL

1.5mm

COLD FORMING

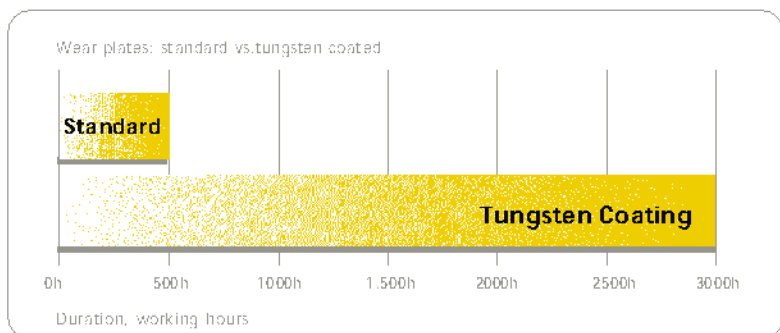
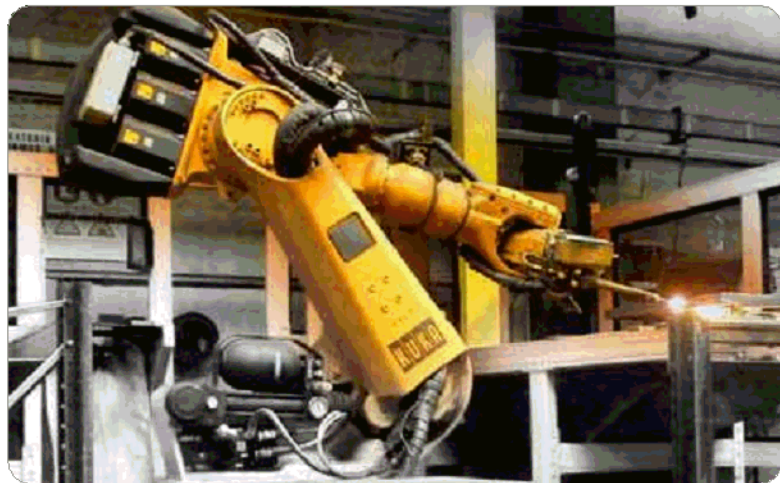
Minimum Radius: 150mm (for 6-4) Suggested: using hydraulic press to band plate

CUTTING

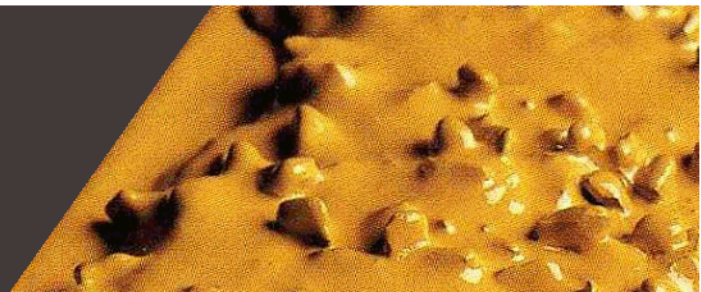
Plasma (from backing plate side) / Laser Cutting / Water Jet Knife

APPLICATIONS

Ash liners, Blast furnace bell & burden, Lilbow, Sinner plant, Bucket & Lips, Drag liners, Dust, Chute & Hopper liners, Classifier, Fan blades & Housings, Mine car liners, Cyclones, Ore chutes, Discharge funnels, Slag chutes, Dradge pump side plates, Lxtension ring, Cement kilns, Crizzly bars, vibrator pan feeder liner, Sinter breaker bar, Conveyor casings, Green walt crushers, Steel plant, etc...



Arm hardfacing service



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 by BYC.

ARM applications

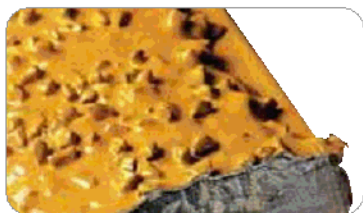
Tungsten coating is recommended for applications where **sand, gravel and other abrasive materials** severely diminish wear parts life.

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.



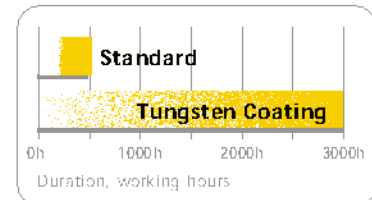
ARM hardfacing is a great way to extend life in areas with high wear but low impact conditions.

Economy

BYC 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.

Bolt-on edges: standard vs.tungsten coated



BYC offers the ARM harfacing service for any of its listed parts on demand. Please consult.



Tungsten protects components from wear in critical areas

Tungsten coated ripper tooth





BYC: From failure to success, excavators, cranes, 3-4 arm analysers etc. and for other: see purpose.co.uk



Ripper

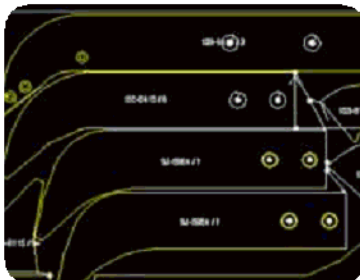
ONE-PIECE MACHINE FINISHED RIPPER SHANKS

RIPPERS

HARDNESS, Brinell HB	350 HBW
THICKNESSES	40-120mm
TYPICAL VALUES of...	
Impact Strength Charpy V notch longitudinal test piece at 40°C	
to <70mm thick plate	25J
to >70mm thick plate	70J
Tensile Strength	
to <70mm thick plate	850 MPa
to >70mm thick plate	600 MPa

Hardox HiTuf

Hardox 400



BYG manufactures 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, BYG shanks have better dimensional stability because they maintain the same thickness along the shank and thus sustain a smaller amount of permanent deformation.

BYG 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. BYG offers a complete range of shanks for main O.L.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

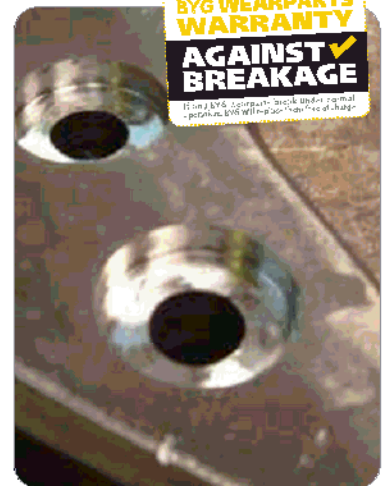
with same thickness of material.



Machine finished ripper shanks

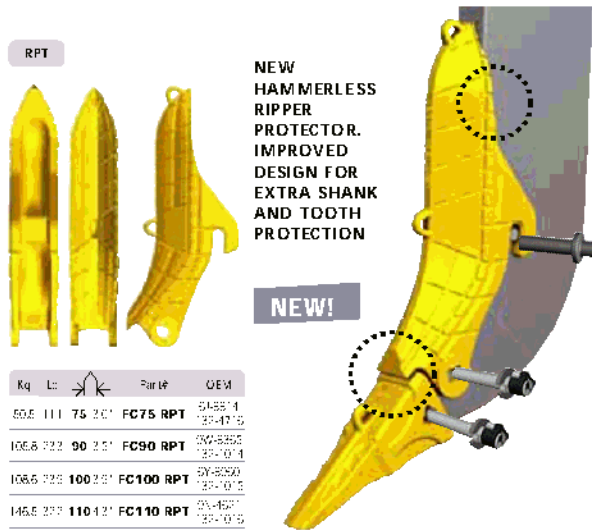
Manufactured in one piece for superior strength

BYG WEARPARTS WARRANTY AGAINST BREAKAGE



CLACK SYSTEM: THE FULLY HAMMERLESS RIPPER SYSTEM

RPT



NEW HAMMERLESS RIPPER PROTECTOR. IMPROVED DESIGN FOR EXTRA SHANK AND TOOTH PROTECTION

NEW!

Kq	Lt	Part#	OEM	Size
69.6	111	75 2.0'	FC75 RPT	8455 1 25-47.5
106.8	222	90 2.5'	FC90 RPT	890-8555 25-57.0
108.5	225	100 2.5'	FC100 RPT	890-8550 25-57.0
145.6	237	110 4.2'	FC110 RPT	890-4551 25-57.0

HP



CLACK SYSTEM 100% compatible with your current Caterpillar ripper shanks



κ	Inch	Kq	Lt	Part#	Size
20.5	0.8	0.3	0.8	FCR300HP	R300
25.5	0.8	0.4	0.8	FCR350HP	R350
29.0	1.0	0.7	1.0	FCR450HP	R450
33.0	1.3	1.2	1.3	FCR500HP	R500
37.5	1.5	1.7	2.0	FCR550HP	R550


Hammerless

R1
Short




Kq	Lt	Part#	OEM	Size
19.3	40	FC450 R1	890-7451 4-154.1	R450
32.0	70	FC500 R1	4-155.1 4-155.1	R500
51.1	117	FC550 R1	890-155	R550

R2
Medium



Kq	Lt	Part#	OEM	Size
5.3	14	FC300 R2	4-450.7 890-250.8	R300
14.5	27	FC350 R2	890-250.7 890-250.8	R350
20.8	40	FC450 R2	890-745.7 4-155.2	R450
30.0	68	FC500 R2	4-155.2	R500
55.4	127	FC550 R2	890-255.7	R550

R2S
Medium Centerline



Kq	Lt	Part#	OEM	Size
35.3	80	FC500 R2S	41-450.7	R500
67.0	170	FC550 R2S	890-455.7	R550

R2ST
Medium Star




Kq	Lt	Part#	OEM	Size
14.3	21	FC350 R2ST	890-250.5	R350
19.6	41	FC450 R2ST	890-745.5	R450
32.7	77	FC500 R2ST	4-155.5	R500

R3
Long



Kq	Lt	Part#	OEM	Size
22.9	50	FC450 R3	114-045.2	R450
37.9	82	FC500 R3	4-155.2 4-155.2	R500

R3ST
Long Star



Kq	Lt	Part#	OEM	Size
35.5	81	FC500 R3ST	4-155.2 4-155.2	R500

HAMMERLESS RIPPER TOOTH WITH REPLACEABLE TIP



Kq	Lt	Part#	Size
12.4	37	FC500 TXR2	R500

Kq	Lt	Part#	OEM	Size
37.8	82	FC500 R2P	4-155.1 4-155.1	R500


TUNGSTEN COATED RIPPER TEETH



new!

DIRECT REPLACEMENT PARTS FOR KOMATSU

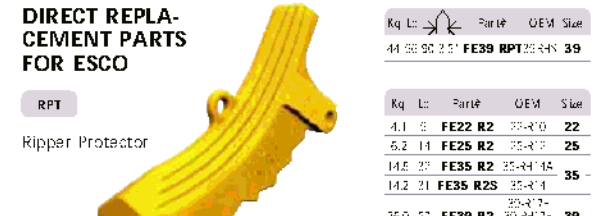
R2
Medium



Kq	Lt	Part#	OEM	Size
15.8		FK155 R2	75-79-3-230 75-79-3-232	155
21.0	48	FK355 R2	95-79-2-331 95-79-2-333	355
30.9	68	FK375 R2	95-79-7-320 95-79-7-330	375
38.2	84	FK475 R2	99-79-2-420 99-79-2-390	475

DIRECT REPLACEMENT PARTS FOR ESCO


RPT
Ripper Protector




Kq	Lt	Part#	OEM	Size	
44	90	2.5'	FE39 RPT	84N	39

Kq	Lt	Part#	OEM	Size
4.1	8	FE22 R2	25-47.0	22
5.2	14	FE25 R2	25-47.0	25
14.8	27	FE35 R2	25-44-1A	35
14.2	21	FE35 R2S	35-47-1	
25.0	57	FE39 R2	25-47-7 25-44-7 25-44-5A	39

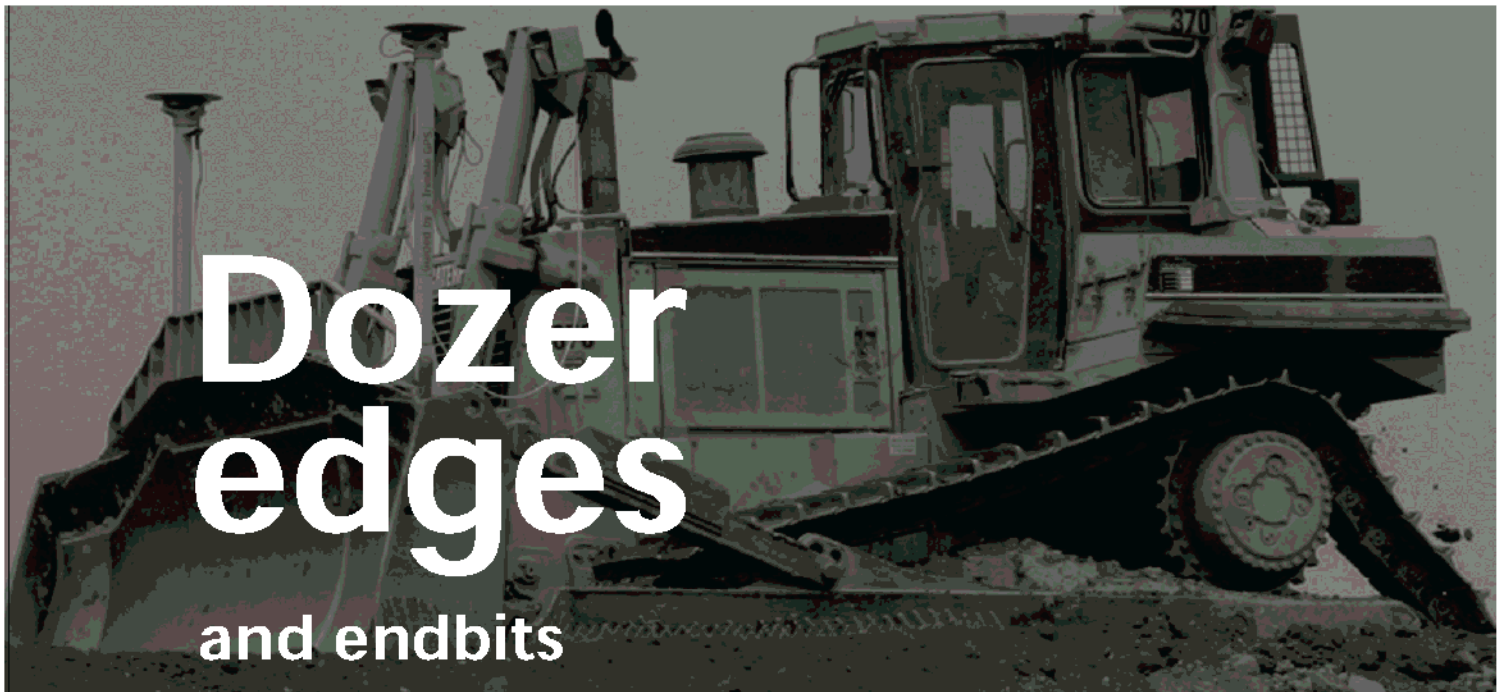
R2
Medium



R2S
Medium Star



Other manufacturer's systems that comply with the above part numbers are also available for reference purposes only.



Dozer edges and endbits

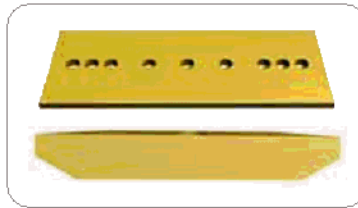
BYG blades for Bulldozer

BYG offers cutting edges of different sections for ease of installation, maintenance, handling and storage. As these sections can be replaced, or rotated individually, they are more economical, so that each can be utilized to the maximum amount of wear.

They are 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. Available in different thicknesses to suit the work being done.

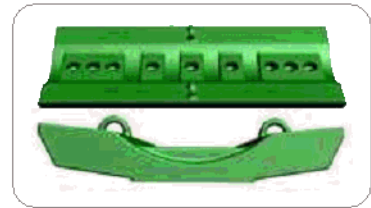
Rolled steel blades

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



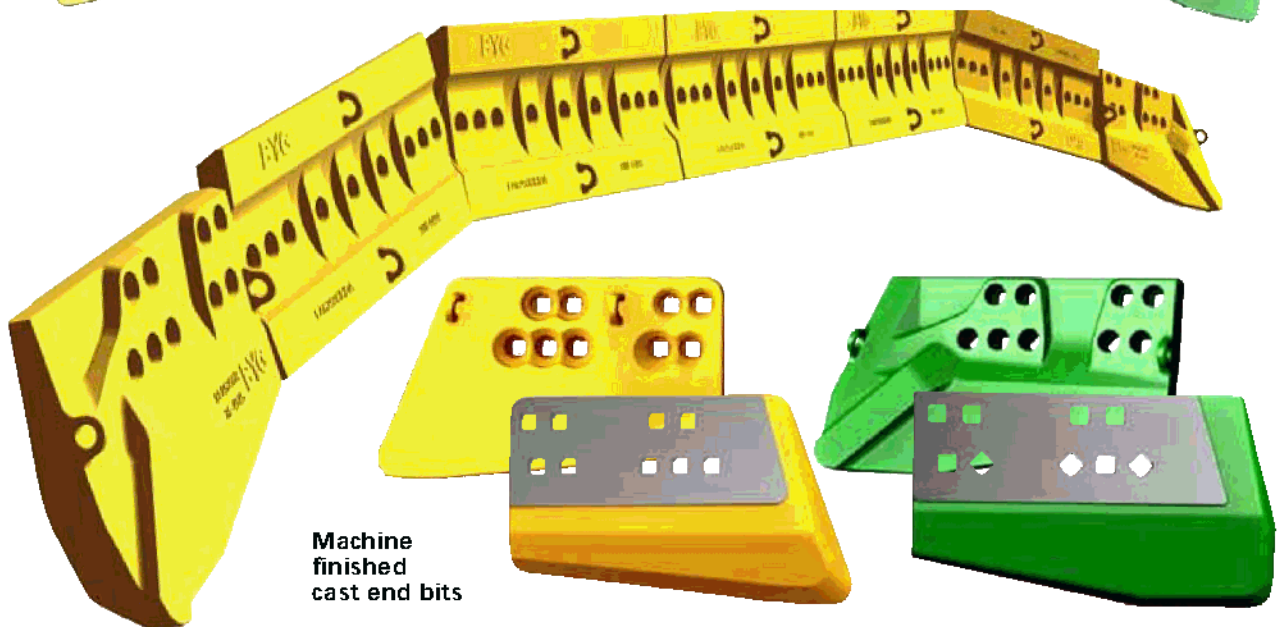
Cast blades

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.



Rolled blade

Cast blade

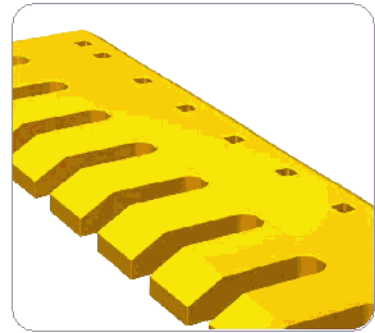


Machine finished cast end bits

Other manufacturers' names, designs and pictures are for identification purposes only.

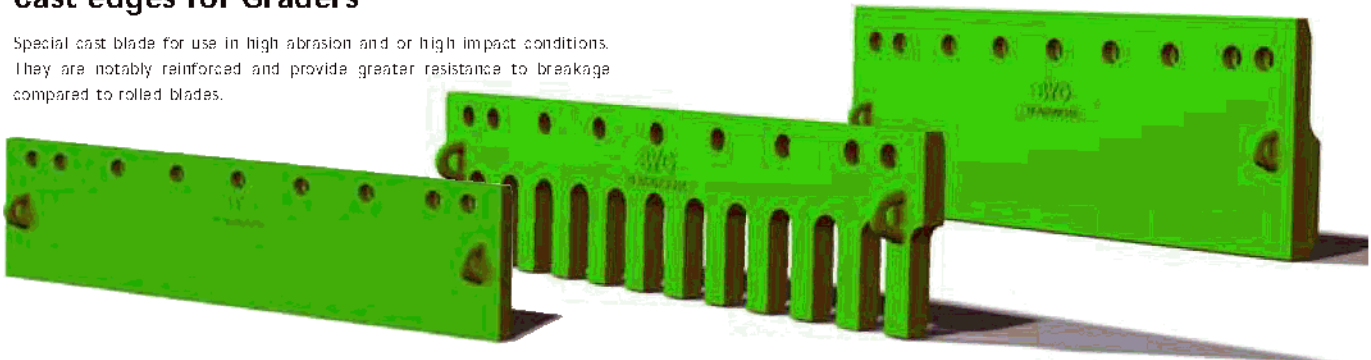


Rolled steel edges for Graders

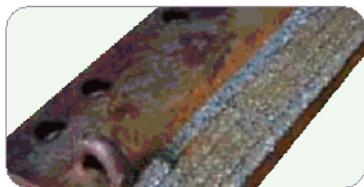


Cast edges for Graders

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.

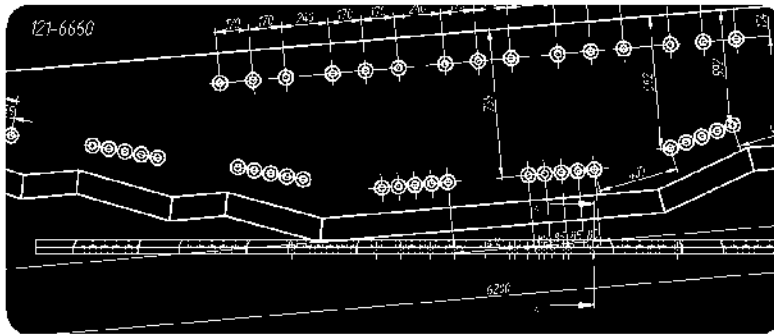


Carbide overlay cast edges for Graders





Fabricated steel lips



Fabricated steel lips for excavators and loaders



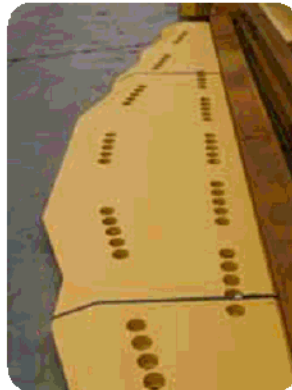
Lips up to 6,3" (160mm.)

OPTIONS:

Hardox 400

Hardox HiTuf

Weldox 700

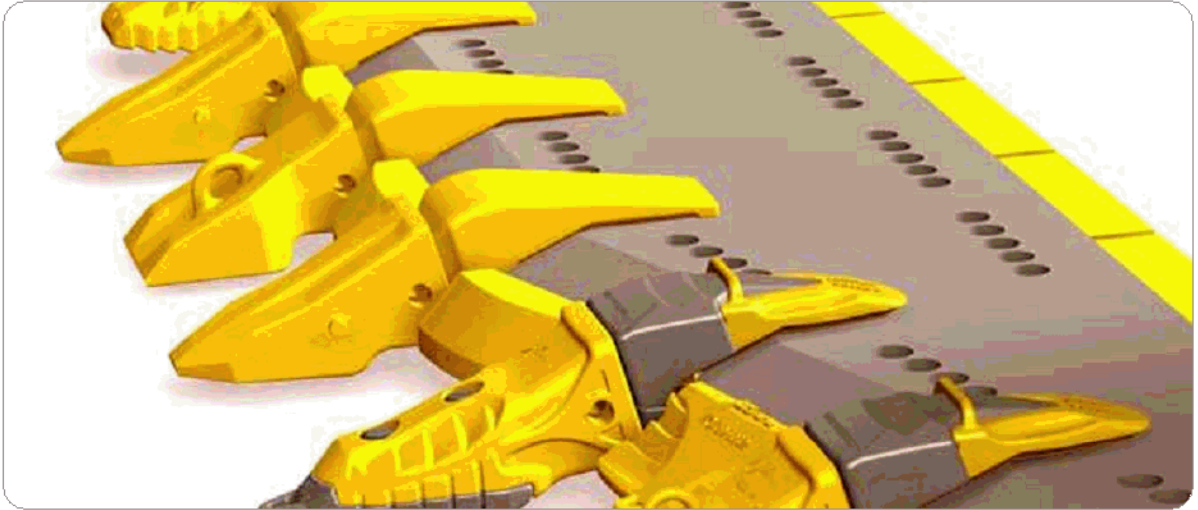


Cast lip protectors for loaders



Other manufacturer's names, designations and trademarks are used for reference purposes only.

Loader lips, Futura Hammerless, DRP BYG Classic or TWISTER



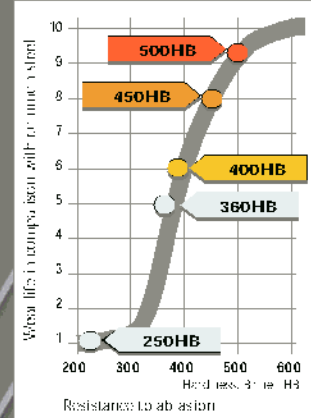
TWISTER LIPS Excavator lips up to 5,5" (140mm)



FUTURA MINING lips Excavator lips up to 6,3" (160mm)



Wear Plates



Mechanical properties	steel 400HB	steel 450HB	steel 500HB
HARDNESS, Brinell HB	370-450 HB	425-475 HB	450-560 HB
THICKNESSES	10-100mm	5-80mm	5-80mm
TYPICAL VALUES of...			
Impact Strength	30J	35J	25J
Strength			
Yield strength $R_{p0.2}$	1000 R_p	174 165	188 679
Ultimate tensile strength R_{m}	1275 R_{m}	203 193	224 963
Elongation A_5	12%	10,0%	8,0%
Carbon equiv. value (CEV)	0,38	0,48	0,58

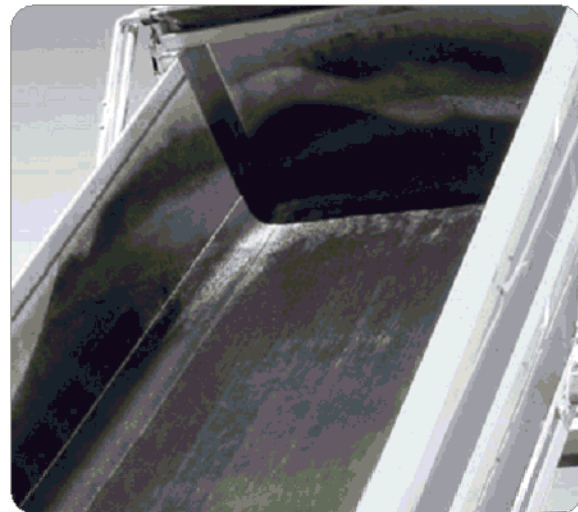
Selection guide	steel 400HB	steel 450HB	steel 500HB
Wear resistance	✓✓	✓✓✓	✓✓✓
Weldability	✓✓✓	✓✓	✓
Cold forming capacity	✓✓	✓✓	✓
Hot forming capacity	-	-	-
Machinability	✓✓	✓	-
Toughness	✓✓	✓✓	-
	✓✓✓: very good	✓✓: good	✓: satisfactory
			-: not advisable



Complete wear plates or cutouts

Plates cut to any shape

Available widths from 4mm (0,16") to 160mm (6,3")



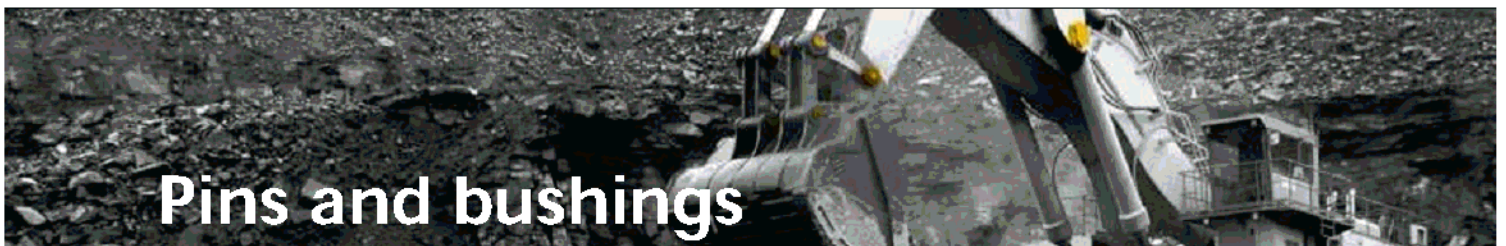
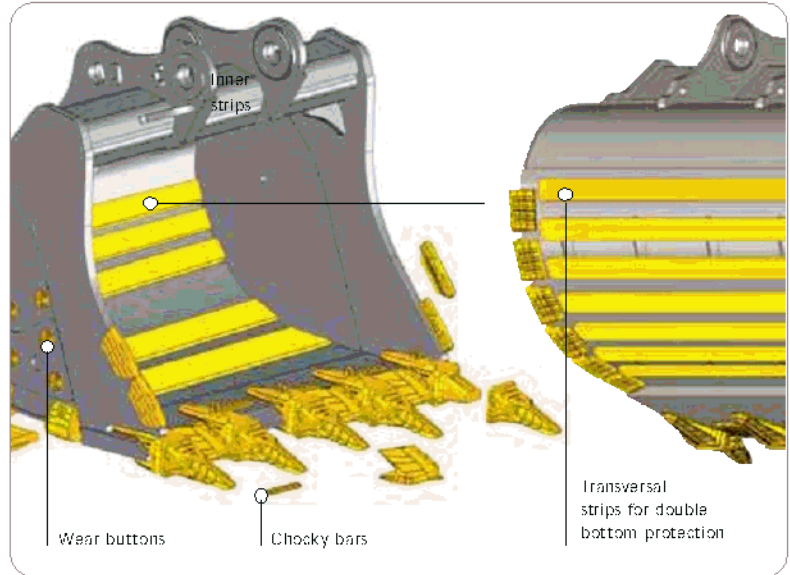


Mining Buckets

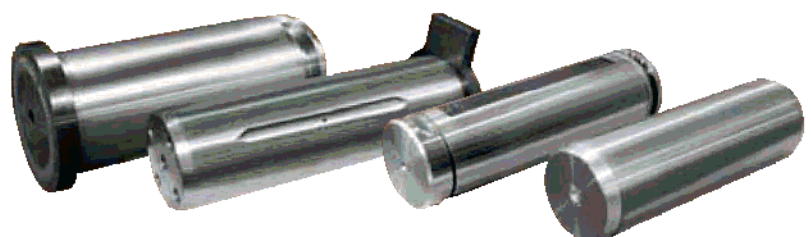
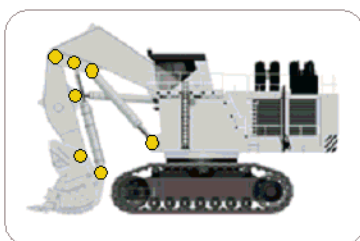
HDVX

Buckets designed for heavy duty, it can withstand huge penetration stresses and it is suitable for extreme strains as in quarry works, demolition, excavation and loading of highly abrasive materials.

It is manufactured with thicknesses, reinforcements and components suitable to increase its sturdiness and durability, employing additional internal and external reinforcing bands on the bottom on the in and outside, and with the addition of inserts made of hard composite material having 700 HB hardness on the sides and on the blades.



Pins and bushings





Fasteners for mining equipment

Fasteners quality 12.9

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

The radial marks indicate the grade of SAE strength for better identification. 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

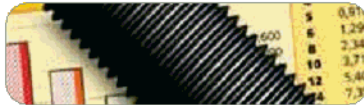
Laminated with the maximum precision BYC bolts and nuts provide a strong hold eliminating the risk of breakage.

Fine Grade Steel

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

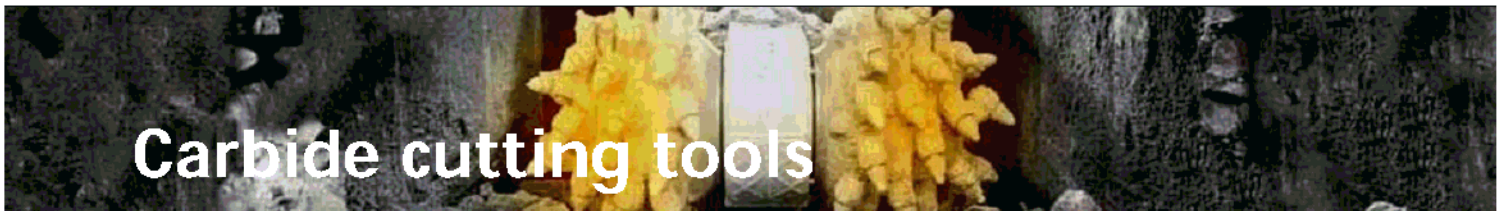
Complete Fastening System

For better assurance and to get the maximum resistance and duration use BYC IID nuts and washers in combination with BYC fasteners.



BYC standard fasteners meet or exceed the requirements ISO 12.9:

- Pretensile strength 120.000 lbf/pulg²
- Elastic load limit 150.000 lbf/pulg²
- Hardness (hexagonal fasteners): 33 to 38 Rockwell C
- Hardness (pilot and track bolts): 37 to 42 Rockwell C



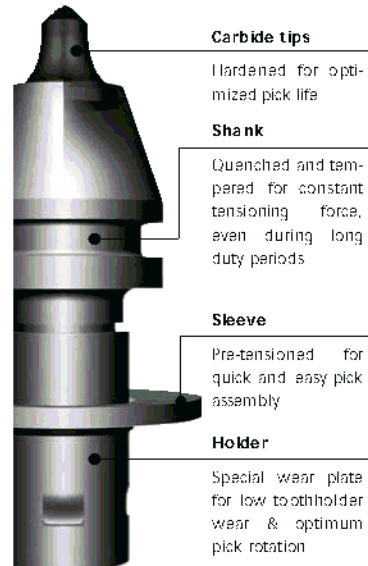
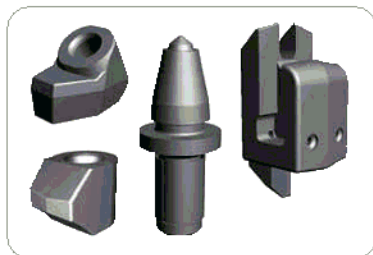
Carbide cutting tools

BYC offers carbide tools for Roadheaders and mining equipment.

BYC has invested in this line to complete the product range offered to a growing number of clients.

BYC carbide tools are manufactured for both domestic and export markets.

All BYC 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

CP-510 06/2015



Brandt

Futura
MINING