BUCKET TEETH & ADAPTERS

Get the worlds most trusted, Hammerless Bucket Tooth system on your Excavator & Loader Buckets - MTG Starmet.

"Never lose a bucket tooth again"

WE STOCK THE LARGEST RANGE OF BUCKET TEETH IN NZ! AVAILABLE TO SUIT ALL MAKES AND MODELS OF EXCAVATORS AND LOADERS, WORKING IN CONSTRUCTION AND MINING APPLICATIONS

MTG STARMET TOOTH SYSTEM

The worlds most trusted hammerless tooth system for 20-400 tonne machines

ESCO CONICAL STYLE TEETH

A range of tooth styles for 1-40 tonne machines

CAT STYLE J-SERIES TEETH

A range of J-Series tooth styles for 5-50 tonne machines

HYUNDAI STYLE TEETH

A range of tooth styles for 10-30 tonne machines

DOOSAN STYLE TEETH

A range of tooth styles for 10-30 tonne machines

KOMATSU STYLE TEETH

A range of tooth styles for 10-70 tonne machines

MTG

No limits innovation

Our Premium range of high quality, self sharpening bucket teeth are made by MTG

MTG STARMET TOOTH SYSTEM

Got Bucket Teeth issues?

G.E.T THEM FIXED FOREVER WITH THE WORLDS MOST TRUSTED MTG STARMET TOOTH SYSTEM ON YOUR BUCKETS

FEATURES & BENEFITS

- Guaranteed no loss of Teeth
- Self Sharpening Teeth design
- Faster change over times
- Slide on adapter wear cap
- No need to weld up adapter noses
- Up to 30% increase in G.E.T wear life
- Increased safety with hammerless pin technology
- The most reliable Bucket Tooth System

Over 300 Excavators and Loaders are successfully using this MTG StarMet tooth system throughout NZ

Bucket Loads of benefits

ULTIMATE SAFETY
The hammerless twist pin mechanism requires no hammering action to install the pins, greatly reducing the risk of flying metal and accidents. The pins are simply pushed into place by hand and turned 90 degrees with a tool to securely fasten them.

NO LOSS OF TEETH
The hammerless locking system uses the twist pin and an elastomet retainer that has excellent retention. This ensures the teeth can never come loose or fall off.

LONGER SERVICE LIFE
All teeth styles are designed to self sharpen as they wear and do not need to be reversed, therefore reducing machine downtime. Adapter geometry is designed to help protect the welded area from washing wear.

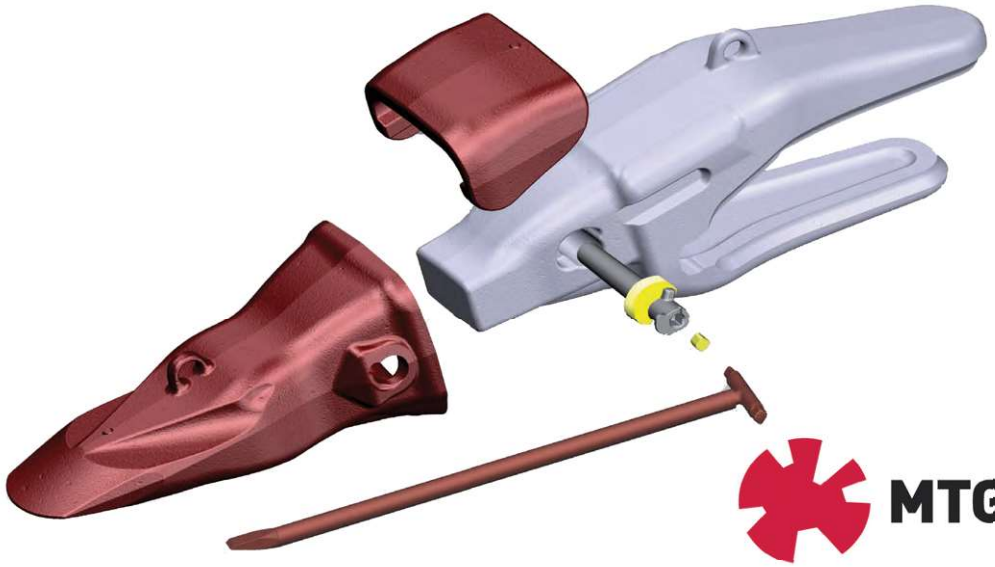
The teeth auto tighten onto the adapter under impact so there is no movement or wear on the adapter nose. Adapter noses do not need to be built up.

ADAPTER WEAR CAP
A slide-on mechanical wear cap is fitted to the top of each adapter to prevent wear and damage. These are held on by the tooth and can last up to 4 teeth changes before needing to be replaced, depending on the abrasiveness of the digging material.

FASTER TIP CHANGES
The teeth and wear caps are very quick and easy to replace on-site by only one person.

WELL PROVEN PRODUCT
This STARMET system has been very well proven, tried and tested in extreme mining applications all over the world. With most large excavators successfully using this system in New Zealand mines and quarries, its the only choice for maximum safety and productivity.

RELIABLE SUPPLY
West-Trak has large stocks of replacement parts on hand at all times to ensure exemplary service and reliability of supply.



MTG SYSTEMS STARMET

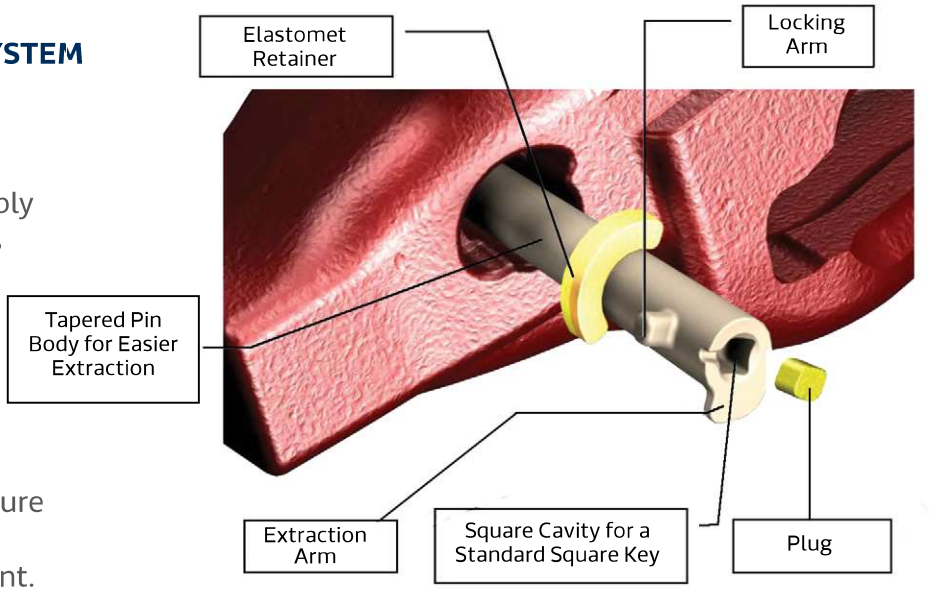
READ OUR CASE STUDIES ONLINE AT WWW.WEST-TRAK.CO.NZ

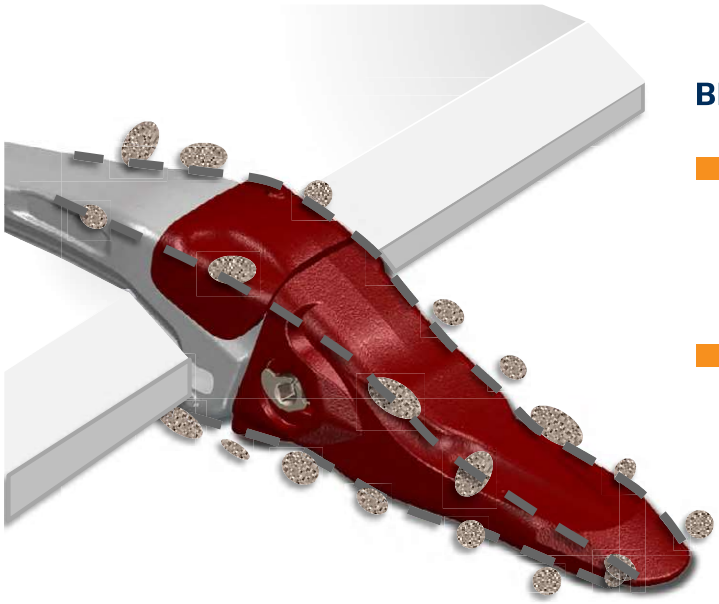
Performance & productivity like none other

MANY IMPORTANT FEATURES AND BENEFITS ARE BUILT INTO THE STARMET TOOTH AND ADAPTER SYSTEM TO INCREASE SAFETY, DURABILITY AND RELIABILITY

HAMMERLESS LOCKING SYSTEM

- The innovative twist pin solution ensures quick assembly and disassembly reducing your machine's downtime.
- Safer holding mechanism with excellent pin retention.
- The pin is tapered to ensure a tight fit in the adapter, preventing any movement.



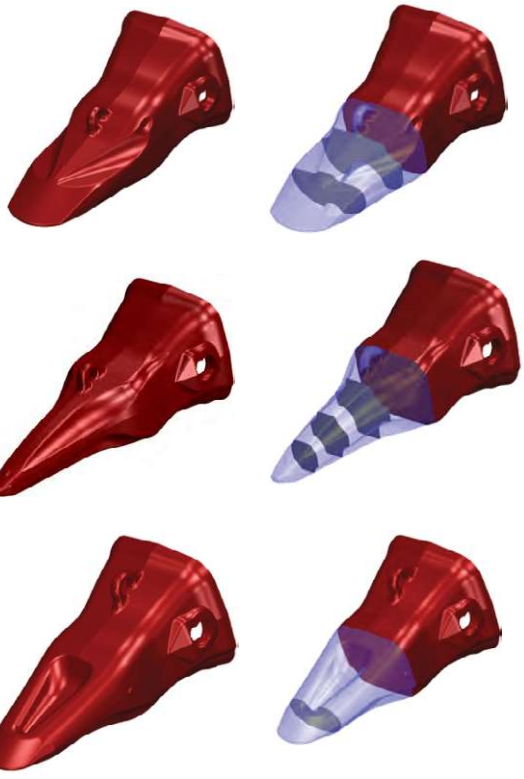


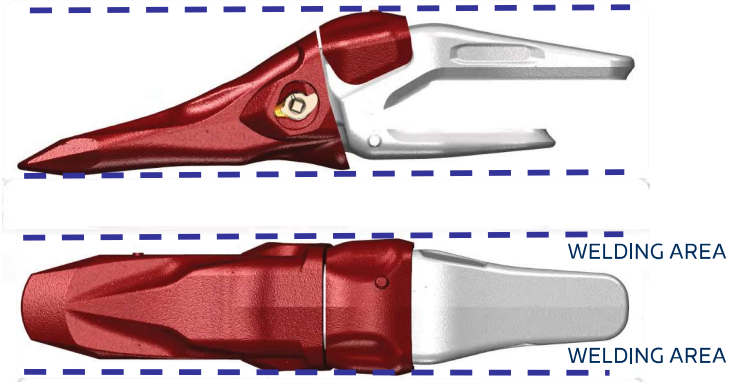
BETTER BUCKET PENETRATION

- The streamline integrated geometry of the Tooth, Wear cap, and Adapter allows for good flow of material and improved bucket penetration.
- The special tooth design ensures even wear throughout its entire life, eliminating the need to turn the teeth over

LONGER ADAPTER LIFE

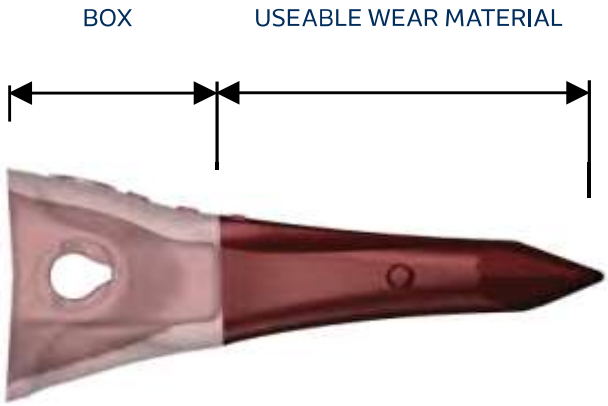
- The unique design of StarMet adapters mean they will last longer and stay stronger as they wear
- The top of the adapters are protected by a slide-on replaceable wear cap to protect it from wear and damage
- The adapter welding areas are protected from excessive wear (one of the primary reasons for adapter breakage)





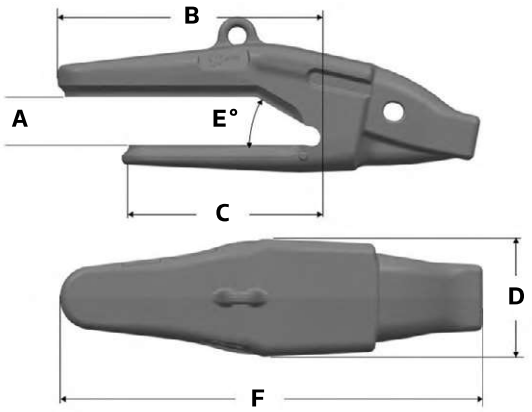
SELF SHARPENING TEETH

- All teeth styles are designed to self sharpen as they wear, providing excellent penetration, long service life and reducing fuel consumption
- Every StarMet tooth is designed to have the maximum amount of wear material possible
- Teeth are available in a range of different styles for all types of applications
- MTG Starmet teeth have more usable wear material than any other tooth system
- MTG teeth & adapters are made from the cleanest, most purified steels resulting in the toughest & hardest wearing components



MTG STARMET ADAPTERS

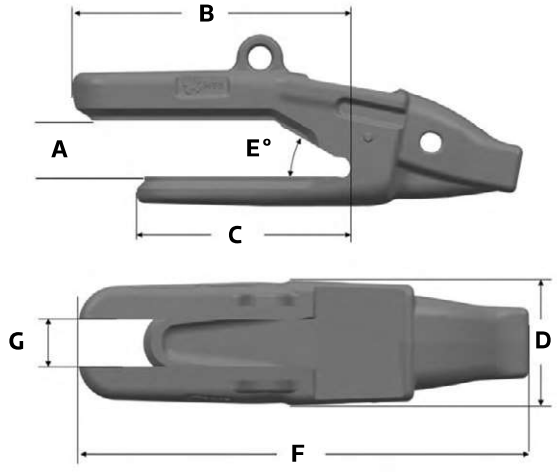
2-STRAP ADAPTERS



Part No	A	B	C	D	E	F	KG	Machine Size
1MA40WC45	45mm	266	198	114	30	409	14	20 - 30 Tonne
1MA50WC50	50mm	297	213	127	30	441	19	35 - 40 Tonne
1MA60WC60	60mm	314	206	145	30	486	29	45 - 55 Tonne
1MA120WC70	70mm	393	321	180	30	640	56	60 - 110 Tonne
1MA120WC80	80mm	433	326	180	30	678	56	60 - 110 Tonne
1MA180WC100	100mm	445	337	200	30	717	77	120 - 140 Tonne
1MA240WC100	100mm	566	421	218	30	877	125	140 - 220 Tonne
1MA240WC120	120mm	566	421	218	30	877	119	140 - 220 Tonne
1MA500WC120	120mm	582	508	246	30	903	177	240 - 400 Tonne
1MA500WC140	140mm	582	508	246	30	903	172	240 - 400 Tonne

All measurements in millimetres

2-STRAP STRADDLE ADAPTERS



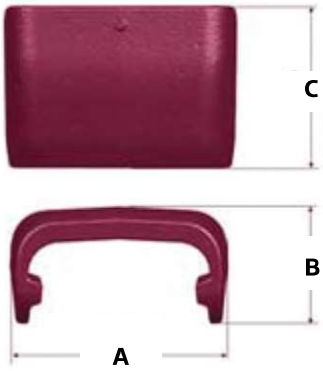
Part No	A	B	C	D	E	F	G	KG	Machine Size
1MA180WS90	90mm	444	341	198	30	720	75	78	120-140 Tonne
1MA240WS100	100mm	574	427	224	30	876	80	127	140 - 220 Tonne
1MA500WS120	120mm	576	506	245	30	920	95	166	240 - 400 Tonne
1MA500WS140	140mm	576	506	245	30	920	95	172	240 - 400 Tonne

All measurements in millimetres

MTG STARMET ADAPTER WEAR CAPS

CENTRE ADAPTER WEAR CAP

Fig.1



STRADDLE ADAPTER WEAR CAP

Fig.2

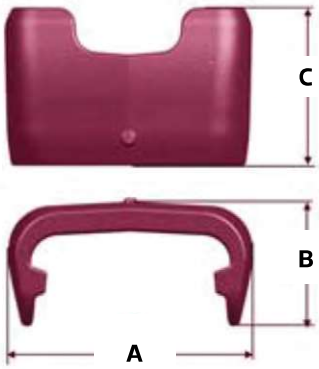


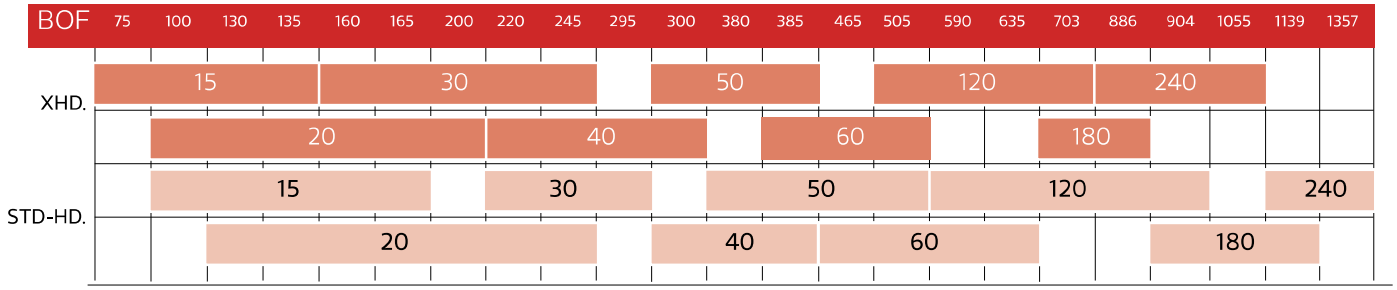
Fig	Part No	A	B	C	KG	Machine Size
1	4MA40M	135	68	95	2.1	20 - 30 Tonne
1	4MA50M	150	75	96	2.3	35 - 40 Tonne
1	4MA60M	178	112	102	4.2	45 - 55 Tonne
1	4MA120M	208	104	129	5.8	60 - 110 Tonne
1	4MA180M	231	148	117	8.5	120 - 140 Tonne
1	4MA240M	245	164	140	11.3	140 - 220 Tonne
1	4MA500M	289	157	203	18.0	240 - 400 Tonne
2	4MA500MS-A	289	157	203	19.0	240 - 400 Tonne

All measurements in millimetres

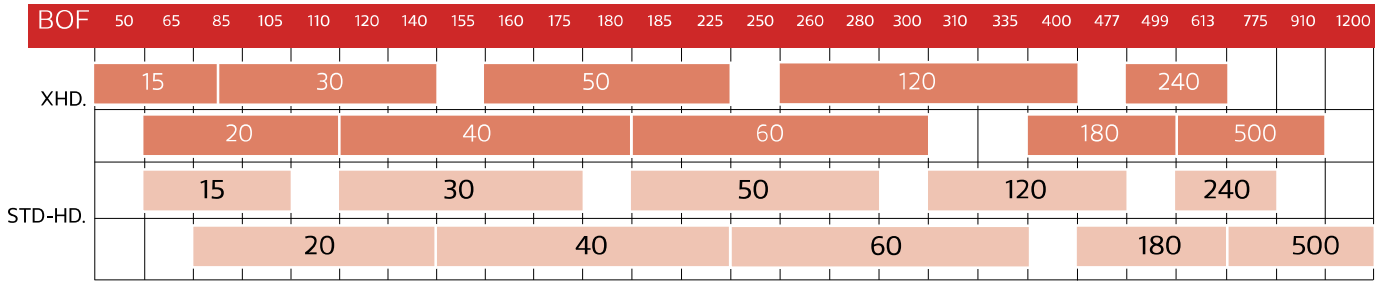
Starmet Tooth
size reference chart

THE CHARTS BELOW SHOW THE RECOMMENDED STARMET TOOTH SIZE FOR THE BREAK OUT FORCE LEVEL OF WHEEL LOADERS & BACKHOE EXCAVATORS.

WHEEL LOADER DIGGING FORCE (KN)



BACKHOE EXCAVATOR DIGGING FORCE (KN)



Get the right tool for the job

EXTRA (E1)

A general purpose design for medium abrasion applications, providing good penetration

VECTOR (V)

For high penetration, low abrasion applications. Ideal for clay and coal

EXTREME (EX)

For highly abrasive and low penetration applications. More wear material than the (E1) design

DOUBLE VECTOR (W)

For high penetration, low abrasion applications. Ideal for clay and coal. Often used on the outside adapters

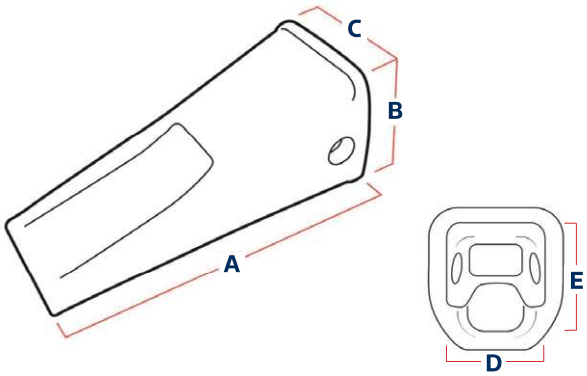
ABRASION (A)

For use on loaders, providing maximum wear material on the bottom side

Using the correct tooth style for the application will maximise your machines performance, productivity and fuel economy

MTG STARMET BUCKET TEETH

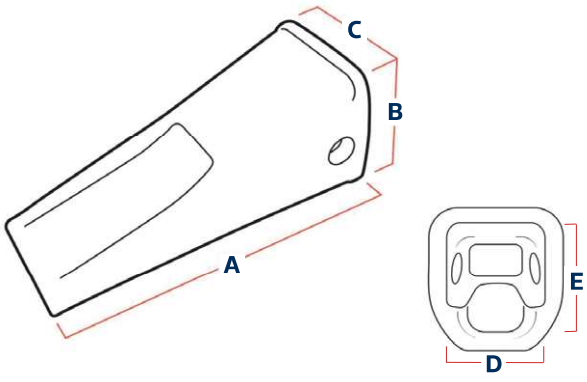
EXTRA TIP (E1) - *Premium quality, self sharpening design*



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MA40E	321	141	126	84	105	10	20 - 30 Tonne
MA50E1	347	153	139	95	115	12.5	35 - 40 Tonne
MA60E1	391	176	161	106	130	20	45 - 55 Tonne
MA120E1	441	202	191	140	155	30	60 - 110 Tonne
MA180E1	492	225	212	150	170	42	120 - 140 Tonne
MA500E1	588	294	277	200	220	78	240-400 Tonne

All measurements in millimetres

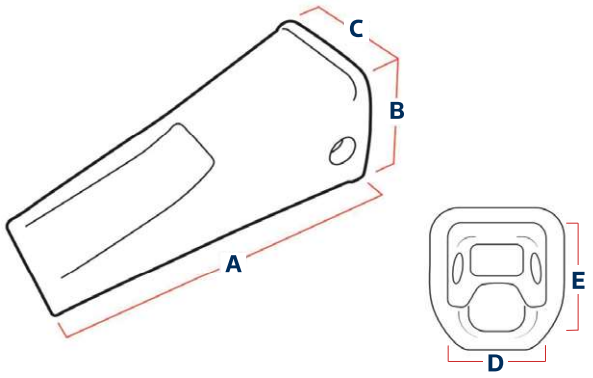
EXTREME TIP (EX) - *Premium quality, self sharpening design*



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MA50EX	367	153	139	95	115	17	35 - 40 Tonne
MA60EX	409	176	161	106	130	24.0	45 - 55 Tonne
MA120EX	443	202	191	140	155	34	60- 110 Tonne
MA180EX	492	225	212	150	170	52	120 - 140 Tonne
MA240EX	524	246	242	175	190	63	140 - 220 Tonne

All measurements in millimetres

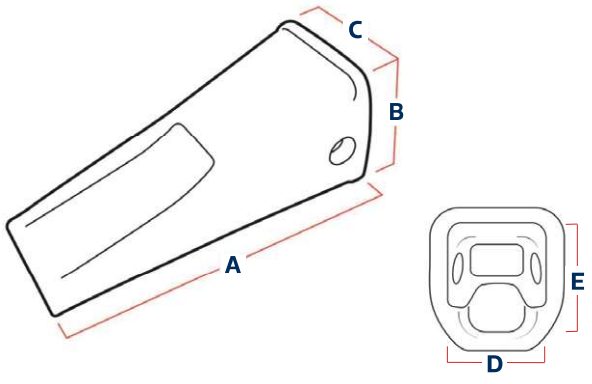
VECTOR TIP (V) - *Premium quality, self sharpening design*



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MA40V	332	141	126	84	105	8	20 - 30 Tonne
MA50V	359	153	139	95	115	10	35 - 40 Tonne
MA60V	407	176	161	106	130	16	45 - 55 Tonne
MA120V	475	202	191	140	155	24	60 - 110 Tonne
MA180V	516	225	212	150	170	33	120 - 140 Tonne
MA240V	567	246	242	175	190	45	140 - 220 Tonne
MA500V	595	294	277	200	220	65	240- 400 Tonne

All measurements in millimetres

DOUBLE VECTOR TIP (W) - *Premium quality, self sharpening design*

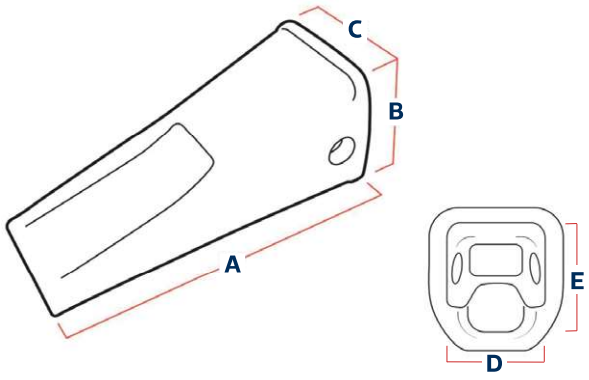


	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MA40W	332	141	126	84	105	10.6	20 - 30 Tonne
MA50W	359	153	139	95	115	14	35 - 40 Tonne
MA120W	475	202	191	140	155	31	60 - 110 Tonne

All measurements in millimetres

MTG STARMET BUCKET TEETH

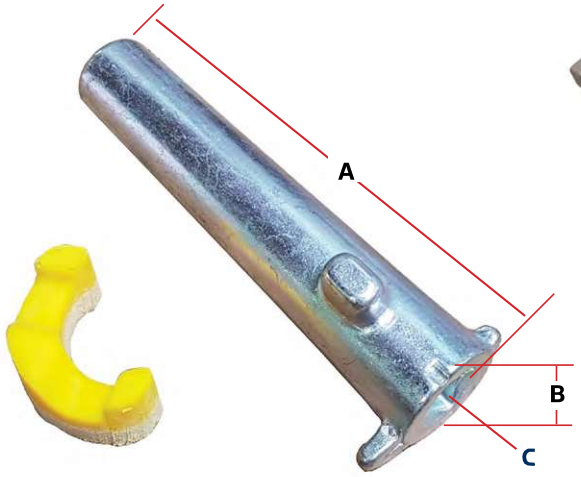
ABRASION TIP (A) - *Premium quality, self sharpening design*



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MA60A	383	176	161	106	130	29	CAT988 / WA600
MA120A	463	202	191	140	155	48	CAT 992 / WA900

All measurements in millimetres

PIN AND RETAINER SET



			Square Drive	
Part No	A	B	C	Twist Tool
2MA40PR	112	25	3/8”	3MTWISTM2
2MA50PR	131	29	1/2”	3MTWISTM2
2MA60PR	152	33	1/2”	3MTWISTM2
2MA120PR	172	32	1/2”	3MTWISTM2
2MA180PR	197	34	1/2”	3MTWISTM2
2MA240PR	210	37	3/4”	3MTWISTX2
2MA500PR	243	42	3/4”	3MTWISTX2

All measurements in millimetres

MTG STARMET TOOTH FITMENT

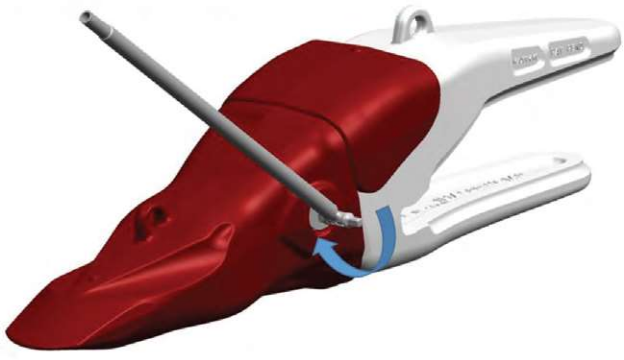
STEP 1:
Insert the retainer into side of Adapter.

STEP 2:
Slide the Wear Cap on top of Adapter.

STEP 3:
Fit the tooth on the adapter.

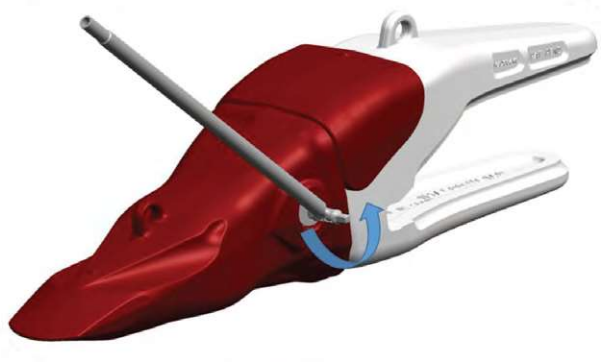
STEP 4:
Insert the Pin into the Tooth hole until it stops.

STEP 5:
Using the Twist Tool, turn the pin 90 degrees clockwise to lock it in place. You are now ready to go.

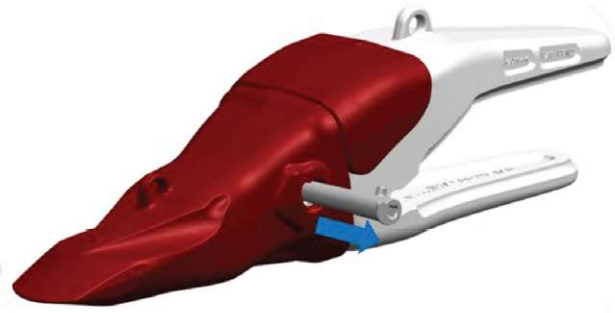


MTG STARMET TOOTH REMOVAL

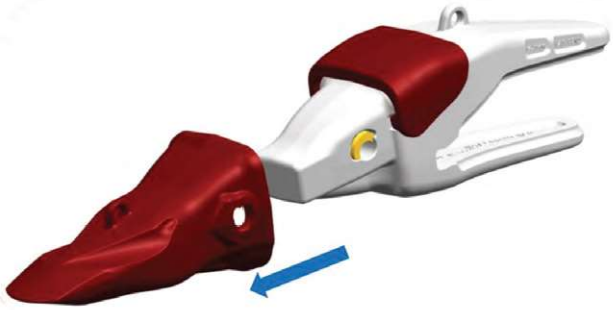
STEP 1:
Using the Twist Tool, turn the pin 90 degrees anti-clockwise to unlock the pin.



STEP 2:
Remove the Pin by gently tapping the other end.



STEP 3:
Remove the Tooth from the Adapter.



STEP 4:
Remove the Wear Cap by sliding it off.

STEP 5:
Remove the Retainer using a screwdriver or similar tool.

MTG STARMET TOOTH CONVERSIONS

EC290 Rock Bucket

PC600 Rock Bucket

5130 Rock Bucket

992 Loader Bucket

EX3600 Rock Bucket

5130 Rock Bucket

Case Study - OceanaGold

INCREASING G.E.T LIFE, SAFETY AND MACHINE PRODUCTIVITY

OceanaGold Corporation is a significant multinational gold producer with a portfolio of operating development and exploration assets.

They have built a strong business in New Zealand, operating the largest open pit gold mine at Macraes Flat, Otago, plus other underground operations.

Situation
The OceanaGold open pit gold mine at Macraes were having problems with their previous GET systems on the mass excavator and loader buckets. With the impacts of high wear rates, cumbersome installation and locking devices, interrupted supply and components coming loose and falling off, were costing OceanaGold unnessecary downtime and money.

Response
West-Trak worked closely with OceanaGold to improve the situation and to provide the ultimate GET solution that worked. By using the most advanced, highest performing and safest GET system in the world, good gains were made for OceanaGold.

Outcome
Significant increases in GET wear life, component fastening, safety of installation and machine productivity has been achieved by using West-Trak's MTG hammerless GET system. OceanaGold has proven the following benefits;

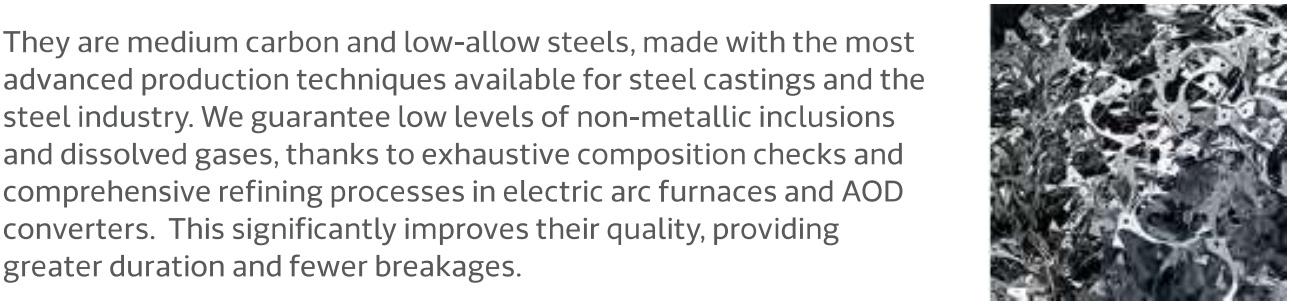
- **Up to 20% increase in GET life with better wear rates than previous systems**
- **Increased safety with the Hammerless pin technology**
- **No loss of GET components**
- **Reduced GET costs and reliable back-up support from West-Trak**
- **The improved safety of personnel during routine GET replacement**

FIND OUT WHAT MAKES A BETTER QUALITY ADAPTER, TOOTH OR G.E.T SYSTEM & WHY MTG IS A PREMIUM QUALITY, HARDER, TOUGHER & LONGER LASTING PRODUCT

MTG's constant commitment to innovation, long tradition in the production of high quality steels, and the support of leading international experts, form the bedrock of MTG Steels.

Specifically designed to withstand the highest levels of mechanical stress when operated, these steels maximize the hardness/ toughness combination due to their low level of impurities and structure which is developed using specific heat treatments.

They are medium carbon and low-allow steels, made with the most advanced production techniques available for steel castings and the steel industry. We guarantee low levels of non-metallic inclusions and dissolved gases, thanks to exhaustive composition checks and comprehensive refining processes in electric arc furnaces and AOD converters. This significantly improves their quality, providing greater duration and fewer breakages.



MTG PREMIUM QUALITY STEELS

MTG STEEL PROPERTIES

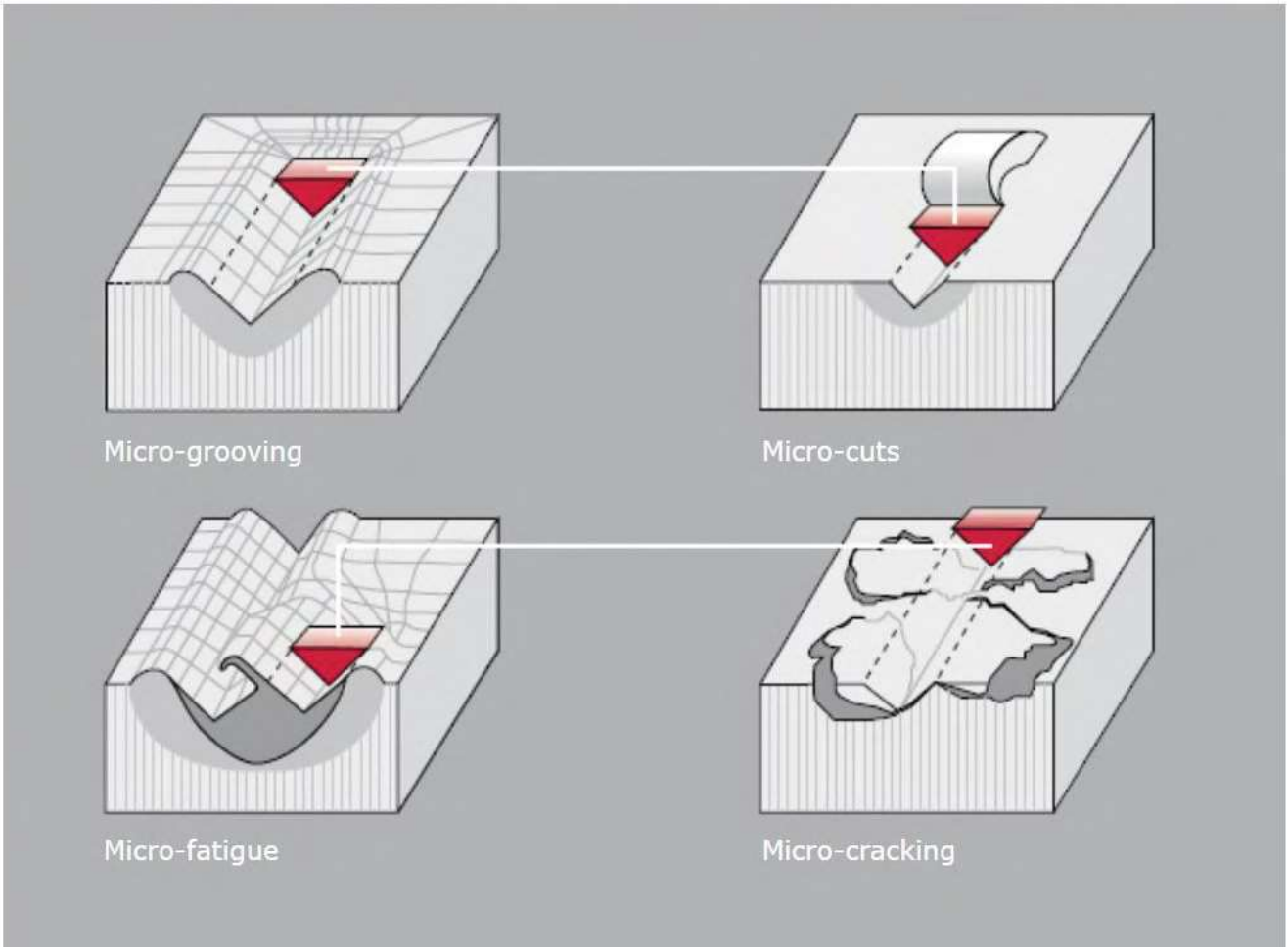
The most important characteristic of MTG Steels is their optimized capacity to withstand wear and impacts. Thanks to these steels, our wear parts last longer and reduce the risk of breakages.

During use, the steel of the teeth is subjected to high static loads and heavy impact at a macroscopic level that can result in breakages, and repetitive mechanical stress that can cause fatigue fracture.

At a microscopic level, and as a result of their interaction with the ground, the outer surface of the parts are subjected to high pressures and temperatures as well as repetitive deformations and impacts that cause their gradual wear.

This wear is a complex phenomenon affected by many variables that are difficult to measure. These variables depend on the type of ground (hardness, compaction, granulometry, angularity, etc....), the type of application or work (geometric shape of the part and the pressure it is subjected to, angle of attack, speed, etc...) and even climatic conditions (corrosion phenomena).

Among the different types of wear that are seen, our parts are mainly subjected to abrasive kinds of wear. When interacting with the ground, the steel of the outer surface of the teeth and adapters is severely deformed until it finally breaks.



Various abrasion mechanisms during interaction of MTG steels with the ground.

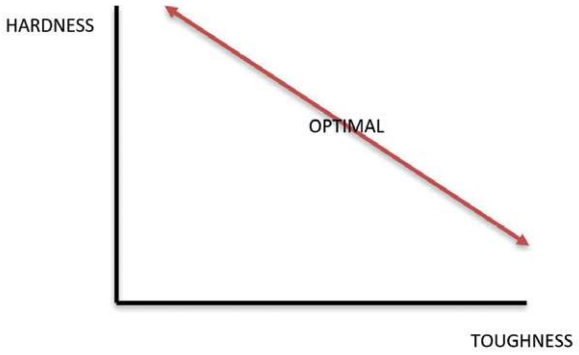
HOW DO MTG STEELS OBTAIN MAXIMUM WEAR RESISTANCE?

Through the optimal balance between its principal properties of hardness, toughness & degree of refinement

Traditionally, the hardness of the steel has been associated with its performance when used in wear parts. The greater the hardness of the steel, the greater the wear resistance and duration of the parts.

This traditional view is accurate in relation to conditions of use in which pressure between the parts and the ground is low and moderate however, numerous site tests and laboratory trials carried out at leading universities and institutions have shown that, in certain conditions of service, other features of the steel are as important as hardness to ensure maximum wear resistance.

In demanding applications in which conditions of use involve high levels of pressure between the parts and the ground, high toughness levels are required in addition to high levels of hardness to ensure maximum wear resistance.



In order to get the best possible characteristics or material composition for GET steels, manufacturing procedures need to incorporate the latest techniques.

This allows an optimal balance of hardness and toughness to be achieved in the manufacturing of GET to give you a product which is resilient to wear & impact.

HYDROGEN content in cast parts is the main reason of breakage of teeth & adapters because it creates cracks that propagate through the steel.

HARDNESS

The hardness of a steel is measured according to its capacity to resist permanent deformation. It is also defined as penetration and scratch resistance.

The maximum level of hardness a steel is capable of attaining is almost entirely determined by its carbon content. Effective heat treatment and sufficiently severe tempering enables the maximum hardness to be developed both on the surface and on the inside of the parts.

MTG Steels guarantee a high level of hardness resulting from a carefully studied composition and a specific treatment especially developed by MTG.

MTG PREMIUM QUALITY STEELS

TOUGHNESS

The toughness of a steel is measured according to its capacity to resist breakage when subjected to impact. In the broadest sense, this also indicates the steel's capactiy to endure plastic deformation without breaking.

The homogeneity of the structure of the steel, as well as the level of inclusions and their morphology, are factors that determine its toughness.

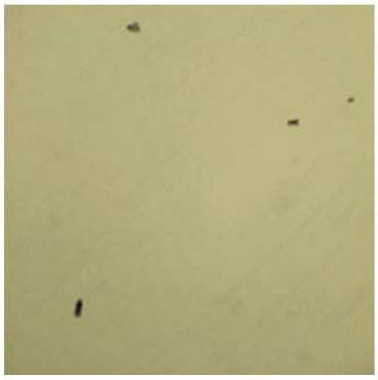
MTG Steels are rugged steels that guarantee that parts will not break and will wear longer in the most demanding situations.

DEGREE OF REFINEMENT

All non-metallic inclusions and dissolved gases that are not removed during production have a negative effect on the steel's toughness.

Thanks to the high quality standards applied in the production of MTG Steels, including extensive refining stages in electric arc furnaces as well as AOD converters, we can guarantee the lowest levels of impurities in our products and the highest levels of toughness.

1. Fragile, dirty, cheap steel due to the amount of long sharp non-metallic inclusions in the grain. This steel has low wear and impact resistance and will break easily.



2. Quality steel. The non-metallic inclusions are fewer and a more globular shape with some sharp edges. This steel does not break (it is tough) although the inclusions will affect the characteristics of the steel structure and toughness.

3. High-quality MTG Steel: The most cleanest, purified steel possible. The number and size of non-metallic inclusions are very small and round in shape. This steel is the toughest and hardest to break.

CAT STYLE J-SERIES BUCKET TEETH

CAT STYLE J-SERIES BUCKET TEETH RANGE

A LARGE RANGE OF AFTERMARKET J-SERIES BUCKET TEETH ARE AVAILABLE FOR ALL MODELS OF EXCAVATORS AND LOADERS UP TO 50 TONNE SIZE

STANDARD

A general purpose tooth with good penetration and wear material

HEAVY DUTY ABRASION

For high impact, high abrasion and low penetration applications.
Ideal for loaders.

ROCK CHISEL

Good for high abrasion and high impact conditions with more wear material

TIGER

Provides maximum penetration for compact soil, clay and coal

HEAVY DUTY

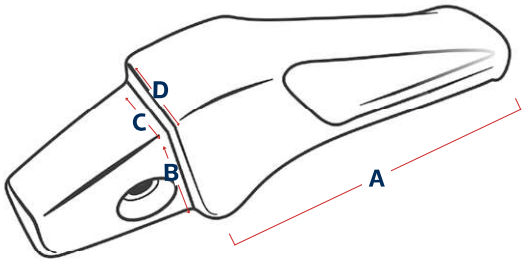
Maximum wear material for high abrasion and low penetration applications

TWIN TIGER

Provides maximum penetration and good ground fracture.
Often used on the outer adapters

CAT STYLE J-SERIES ADAPTERS

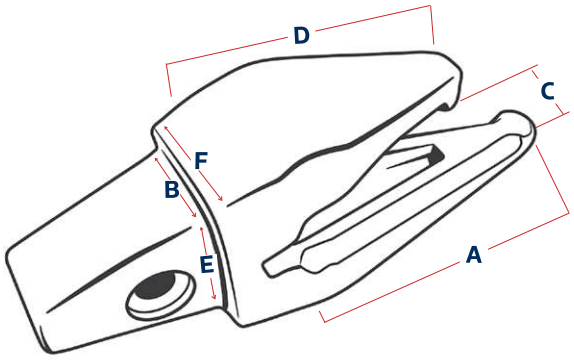
FLUSHMOUNT ADAPTERS



Part No	J-Series	A	B	C	D	KG	Machine Size
4T1204	J200	140	35	45	33	2	2-5 Tonne
IU1254	J250	220	48	65	52	5.5	10-12 Tonne
IU1304	J300	220	60	72	65	8	15-20 Tonne
IU1354	J350	250	67	82	85	14	20-25 Tonne

All measurements in millimetres

2-STRAP ADAPTERS



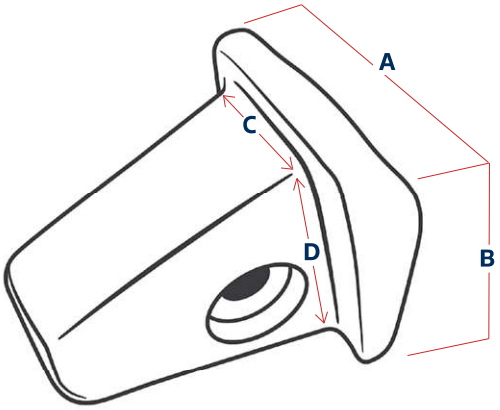
Part No	J-Series	A	B	C	D	E	F	KG	Machine Size
8J7525	J200	90	35	15	20	45	40	1.5	2-5 Tonne
6Y3224	J220	120	43	25	75	57	59	3	6-8 Tonne
6Y3254	J250	140	48	31	95	65	65	4	10-12 Tonne
3G6304	J300	200	60	35	115	72	84	7.5	15-20 Tonne
3G8354	J350	200	67	43	110	82	90	9.5	20-25 Tonne
7T3404	J400	220	90	48	160	77	120	16	25-30 Tonne
8E6464	J460	260	85	53	220	95	125	20	35-40 Tonne
IU1553	J550	300	105	67	250	105	150	34	45-50 Tonne

All measurements in millimetres

CAT STYLE J-SERIES ADAPTERS

ADAPTER REPAIR NOSE

Used for replacing worn or broken adapter noses

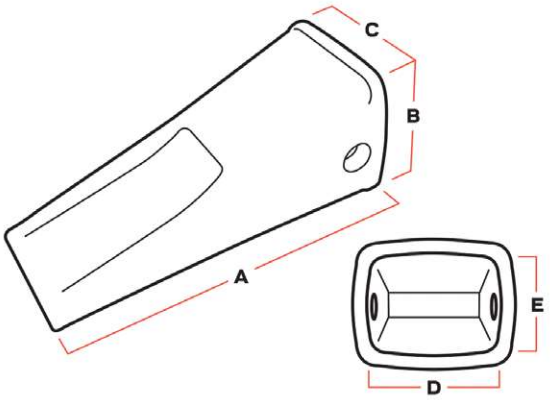


Part No	A	B	C	D	KG	Machine Size
J250WN	70	80	48	65	2.3	10-12 Tonne
J300WN	85	88	60	72	3.4	15-20 Tonne
J350WN	100	110	67	82	4.6	20-25 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

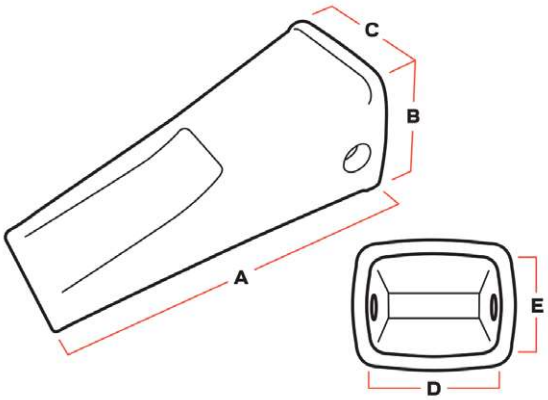
STANDARD TIP



		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
IU3202	J200	145	63	55	44	44	1.4	4-6 Tonne
6Y3222	J220	165	73	63	44	60	2	6-8 Tonne
IU3252	J250	190	85	74	56	67	3.2	10-12 Tonne
IU3302	J300	215	96	89	67	76	4.4	15-20 Tonne
IU3352	J350	244	108	100	75	81	6.0	20-25 Tonne
7T3402	J400	268	127	116	88	89	9.4	25-30 Tonne
9W8452	J450	300	126	128	100	101	11.6	35-40 Tonne
9W8552	J550	330	140	154	119	113	18.5	45-50 Tonne

All measurements in millimetres

STANDARD TIP - *Premium quality, self sharpening design (MTG)*

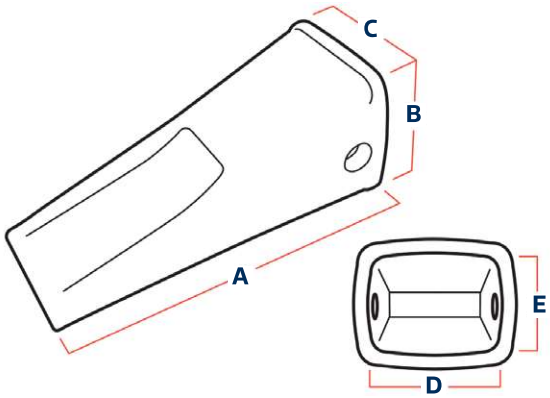


		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
MC30S	J300	235	110	90	67	76	4	15-20 Tonne
MC35S1	J350	260	115	105	75	81	5.8	20-25 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

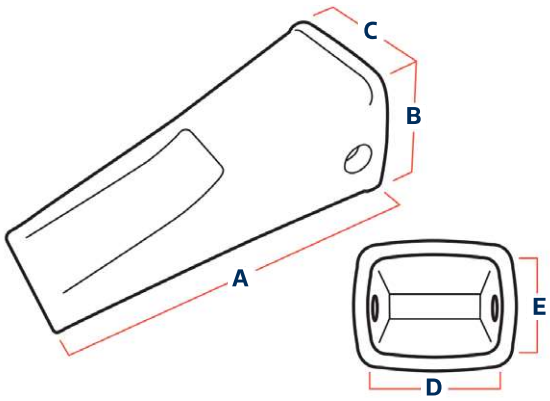
ROCK CHISEL TIP



		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
J300RC	J300	250	100	85	67	76	4.2	15-20 Tonne
J350RC	J350	280	115	104	75	81	8	20-25 Tonne
J400RC	J400	315	130	120	88	89	11	25-30 Tonne
J450RC	J450	330	140	130	100	101	14.3	35-40 Tonne
J550RC	J550	385	157	160	119	113	23	44-50 Tonne

All measurements in millimetres

ROCK CHISEL TIP - *Premium quality, self sharpening design (MTG)*

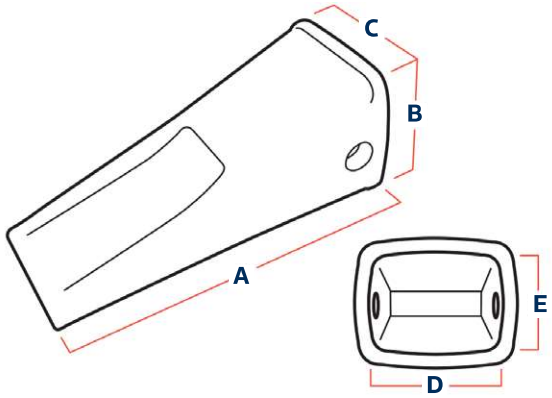


		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
MC35E1	J350	275	120	105	75	81	7.1	20-25 Tonne
MC40E1	J400	310	137	150	88	89	11.2	25-30 Tonne
MC45E1	J450	345	140	134	100	101	15.0	35-40 Tonne
MC55E1	J550	375	155	158	119	113	21	45-50 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

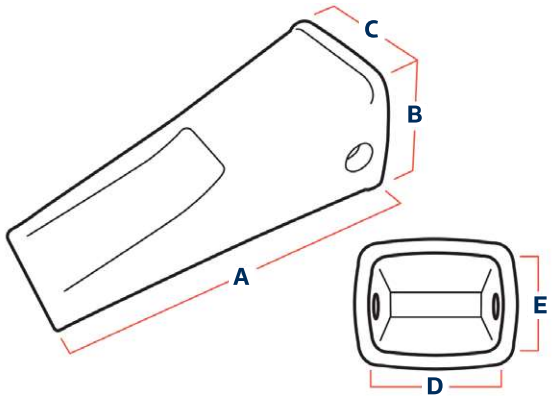
HEAVY DUTY TIP



		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
9N4252	J250	200	94	78	56	67	3.5	10-12 Tonne
9N4302	J300	225	100	85	67	76	5.5	15-20 Tonne

All measurements in millimetres

HEAVY DUTY ABRASION TIP

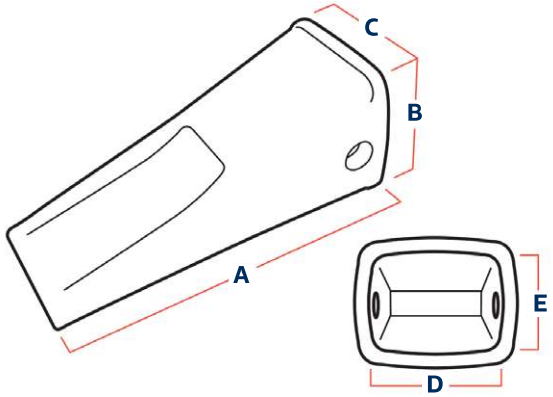


		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
J300HDAL	J300	220	108	94	67	76	8	15-20 Tonne
J350HDAL	J350	240	118	104	75	81	10	20-25 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

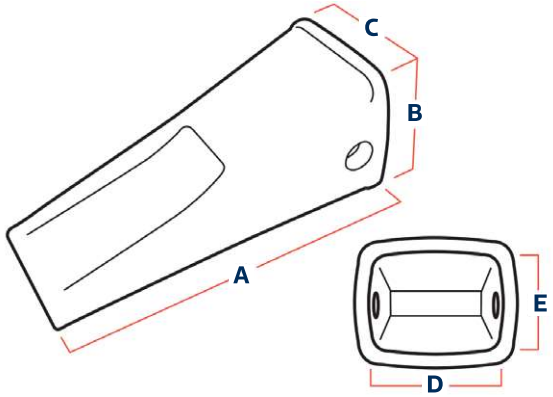
TIGER TIP



		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
J250TIGER	J250	203	90	78	56	67	3.0	10-12 Tonne
J300TIGER	J300	240	105	86	67	76	4.4	15-20 Tonne
J350TIGER	J350	286	112	105	75	81	6.2	20-25 Tonne
J400TIGER	J400	320	130	120	88	89	10.5	25-30 Tonne
J450TIGER	J450	360	138	135	100	101	13.4	35-40 Tonne
J550TIGER	J550	380	145	158	119	113	16.0	45-50 Tonne
J600TIGER	J600	457	185	200	146	137	36.0	60-70 Tonne

All measurements in millimetres

TIGER TIP - *Premium quality, self sharpening design (MTG)*

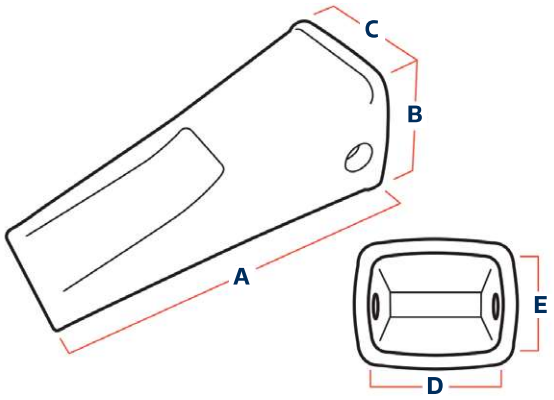


		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
MC30V	J300	260	110	90	67	76	4.4	15-20 Tonne
MC35V1	J350	258	115	105	75	81	5.6	20-25 Tonne
MC40V1	J400	310	130	122	88	89	7.3	25-30 Tonne
MC45V1	J450	340	140	134	100	101	9.4	35-40 Tonne
MC55V1	J550	390	150	158	119	113	13.5	45-55 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

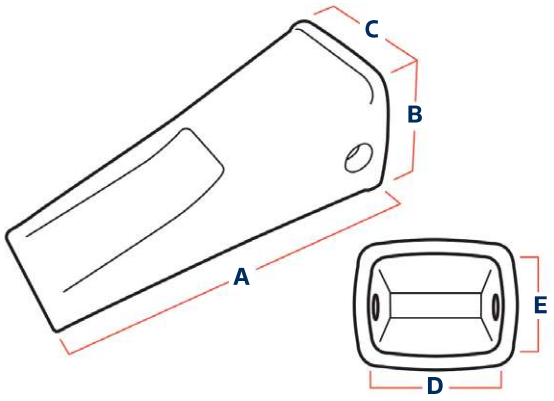
TWIN TIGER TIP



		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
J250TWIN	J250	213	87	76	56	67	2.8	10-12 Tonne
J300TWIN	J300	242	104	85	67	76	5.6	15-20 Tonne
J350TWIN	J350	286	111	105	75	81	7.0	20-25 Tonne
J400TWIN	J400	320	130	120	88	89	11	25-30 Tonne
J450TWIN	J450	360	138	135	100	101	14.4	35-40 Tonne
J550TWIN	J550	400	150	160	119	113	19	45-50 Tonne

All measurements in millimetres

TWIN TIGER TIP - *Premium quality, self sharpening design (MTG)*

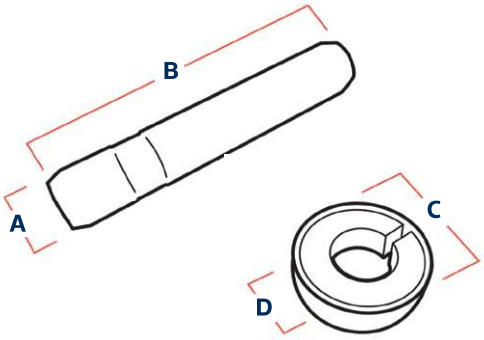


		External			Internal			
Part No	J-Series	A	B	C	D	E	KG	Machine Size
MC30W	J300	260	110	90	67	76	5	15-20 Tonne
MC35W1	J350	280	120	106	75	81	7	20-25 Tonne
MC40W1	J400	305	137	120	88	89	9.2	25-30 Tonne
MC45W1	J450	340	140	134	100	101	13	35-40 Tonne
MC55W1	J550	370	155	158	119	113	19	45-50 Tonne

All measurements in millimetres

CAT STYLE J-SERIES BUCKET TEETH

PINS AND RETAINERS



Pin No	Retainer No	A	B	C	D	J-Series
8E6208	8E6209	11	60	22	10.6	J200
6Y3228	8E6259	14	67	30	13.6	J220
9J2258	8E6259	14	77	30	13.6	J250
9J2308	8E6259	14	92	30	13.6	J300
9W2678	8E6359	19	106	40	18.5	J350
7T3408	7T3409	22	118	42	21.5	J400
8E0468	8E0469	24	134	44	23..3	J450/J460
1U1558	8E5559	25	162	53	24.5	J550
616608	616609	30	192	59	29	J600

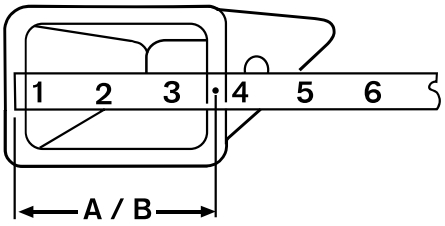
All measurements in millimetres

HOW TO IDENTIFY A CAT STYLE TIP

To determine the size or J-family of a CAT style tip. Take the dimensions shown below.

A(mm)	B(“)	J-Series
51mm	2.0”	J200
64mm	2.5”	J250
76mm	3.0”	J300
89mm	3.5”	J350
102mm	4.0”	J400
114mm	4.5”	J450
140mm	5.5”	J550
152mm	6.0”	J600

Place a tape measure across the back of the tip at the midpoint of the side walls.

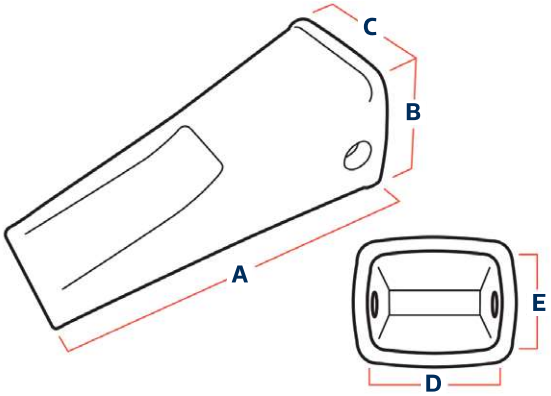


In addition, the second and third digits in the CAT part number often refer to the series. ***Example: IU3352 = J350 series.***

DOOSAN STYLE BUCKET TEETH

DOOSAN STYLE BUCKET TEETH

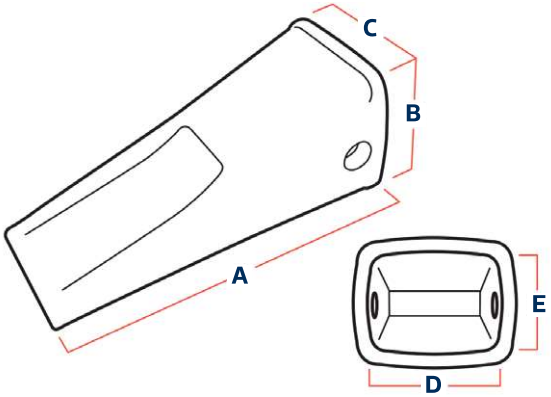
STANDARD TIP



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
2713-1221	200	85	85	65	65	3.8	10-15 Tonne
K1005018	280	126	126	97	97	11	31-35 Tonne

All measurements in millimetres

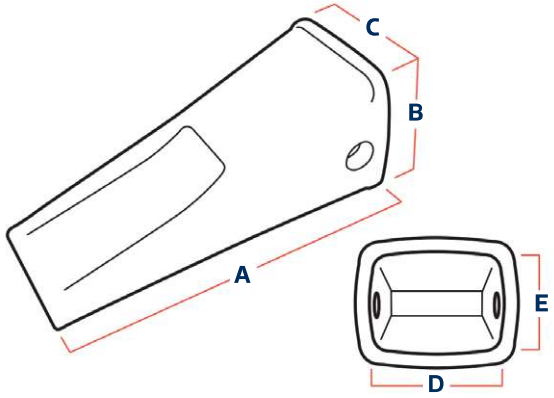
ROCK CHISEL TIP



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
K1000344RC	255	100	95	74	74	6	20-25 Tonne
71300054ARC	280	115	110	80	80	8.5	26-30 Tonne

All measurements in millimetres

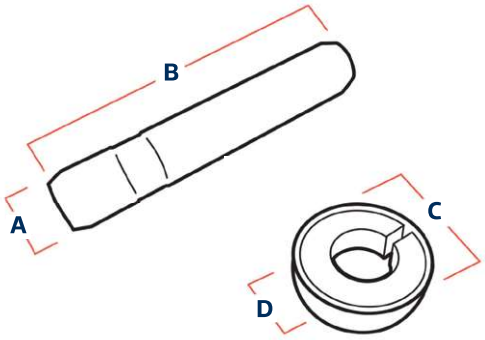
TIGER TIP



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
71300054AT	295	116	110	80	80	7.3	26-30 Tonne

All measurements in millimetres

PINS AND RETAINERS



Machine	Pin No	Retainer No	A	B	C	D
DX140	2705-1022	2114-1859	18	85	31	17
DX225	2705-1020	2114-1848A	20	99	35	19
DX300	2705-1021	2114-1849A	22	110	37	21
DX340	8E0468	8E0469	24	134	44	23.3

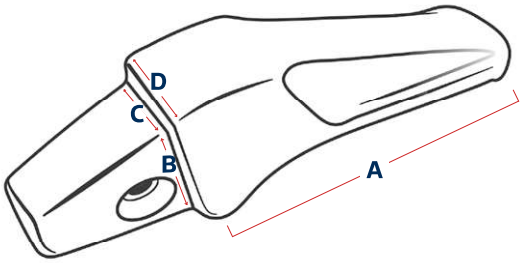
All measurements in millimetres

ESCO CONICAL STYLE BUCKET TEETH

ESCO CONICAL STYLE ADAPTERS

FLUSHMOUNT ADAPTERS

Fig. 1



2-STRAP ADAPTERS

Fig.2

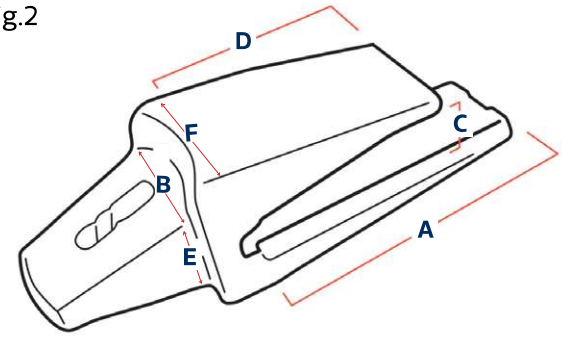


Fig.3

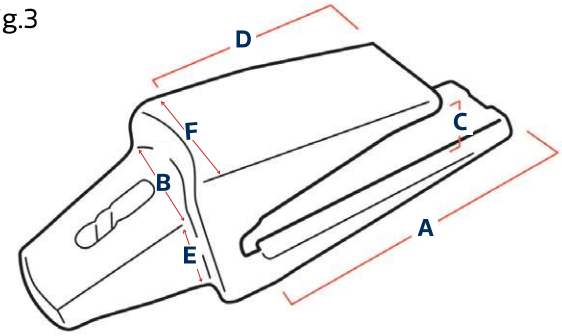
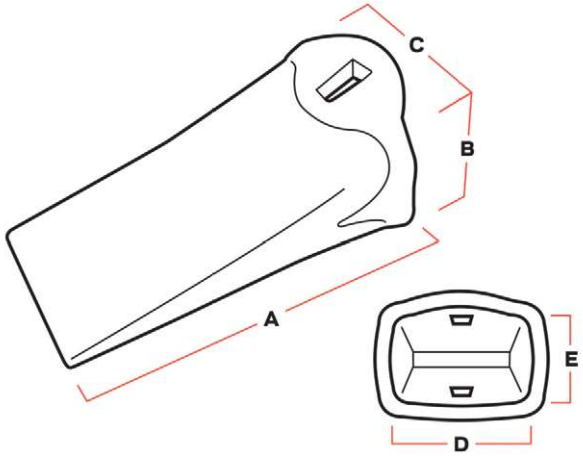


Fig	Part No	Series	A	B	C	D	E	F	KG	Machine Size
1	MB81	N/A	72	29	40	45	-	-	0.8	1-3 Tonne
2	833-18	18s	124	40	22	60	32	55	1.5	4-6 Tonne
3	23574-22	22s	120	42	26	65	42	56	3	7-8 Tonne
3	A1306-25	25s	160	60	27	110	45	72	4	8-10 Tonne
3	B3210T-30	30s	185	70	35	140	40	86	6	12-15 Tonne
3	B3210T-35	35s	220	85	33	160	45	102	10	15-25 Tonne

All measurements in millimetres

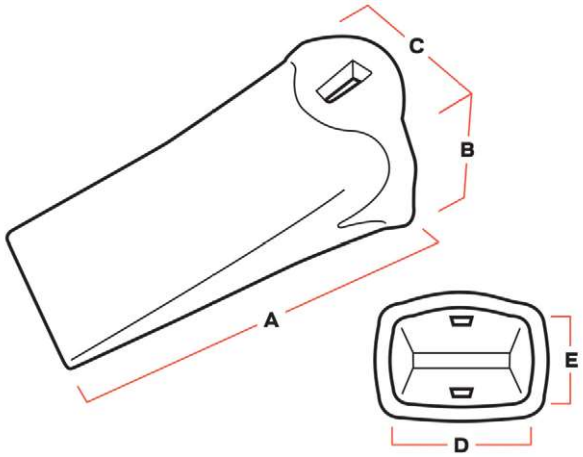
ESCO CONICAL STYLE BUCKET TEETH

MINI TIP RANGE



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MB4F	95	46	46	33	35	0.7	1-3 Tonne

All measurements in millimetres

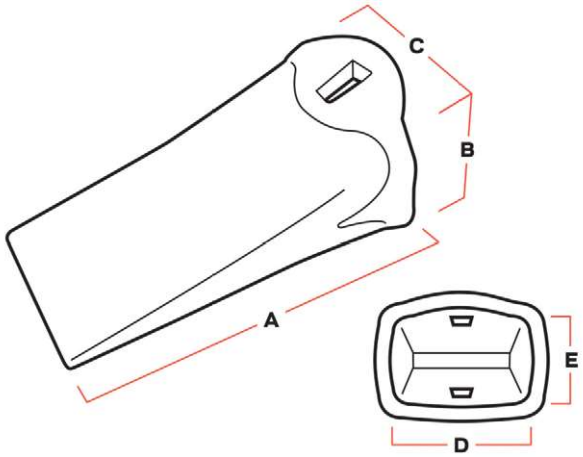


	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
MN18L	120	51	60	40	35	1	4-6 Tonne

All measurements in millimetres

ESCO CONICAL STYLE BUCKET TEETH

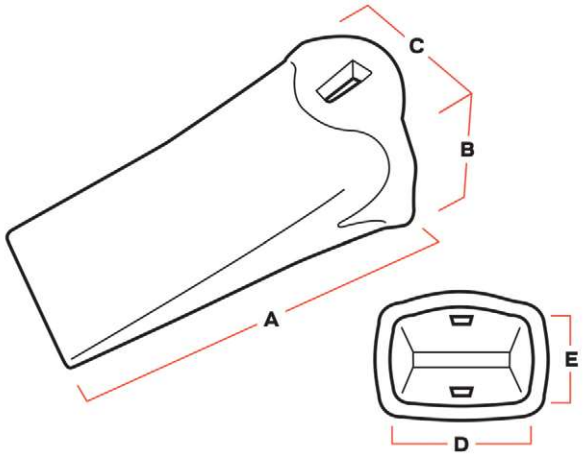
STANDARD TIP



		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
BC18S	18S	140	52	62	40	35	1	4-6 Tonne
BC22S	22S	138	64	62	45	45	1.3	7 Tonne
BC25S	25S	178	75	85	62	55	1.7	8-10 Tonne
BC30S	30S	178	78	95	72	50	2.7	10-15 Tonne
BC35S	35S	215	95	112	82	65	4.5	15-25 Tonne
BC40S	40S	225	110	130	98	72	6.4	26-35 Tonne
BC45S	45S	230	120	140	112	75	9.2	36-40 Tonne

All measurements in millimetres

STANDARD TIP - *Premium quality, self sharpening design (MTG)*

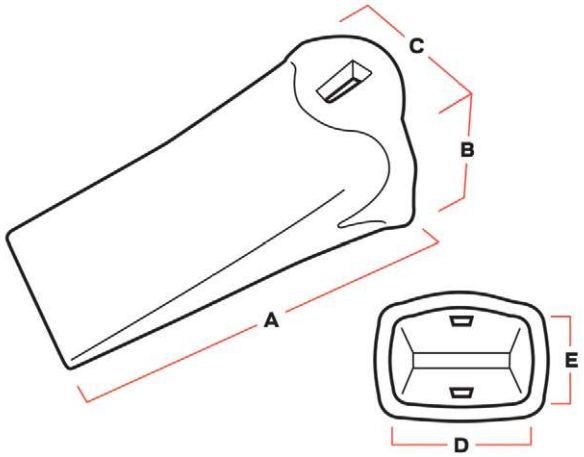


		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
MN25S	25S	175	78	80	62	55	2	8-10 Tonne
MN30S	30S	180	80	95	72	50	2.5	10-15 Tonne
MN35S	35S	200	90	114	82	65	3.4	15-25 Tonne
MN40S	40S	240	105	125	98	72	5.5	26-35 Tonne

All measurements in millimetres

ESCO CONICAL STYLE BUCKET TEETH

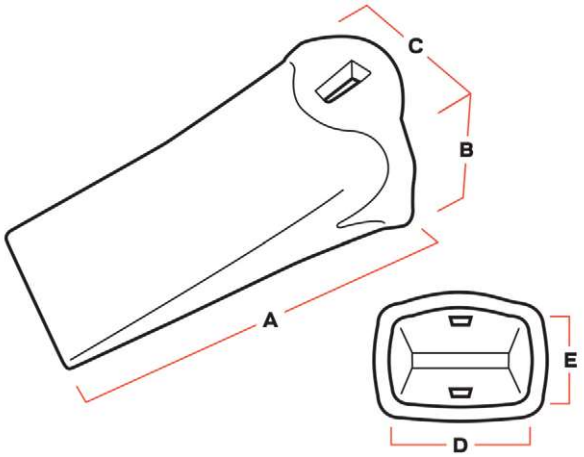
TIGER TIP



		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
25VIP	25S	228	80	90	62	55	3	8-10 Tonne
30VIP	30S	215	78	100	72	50	3	10-15 Tonne
35VIP	35S	265	110	120	82	65	6.2	15-25 Tonne

All measurements in millimetres

TWIN TIGER TIP

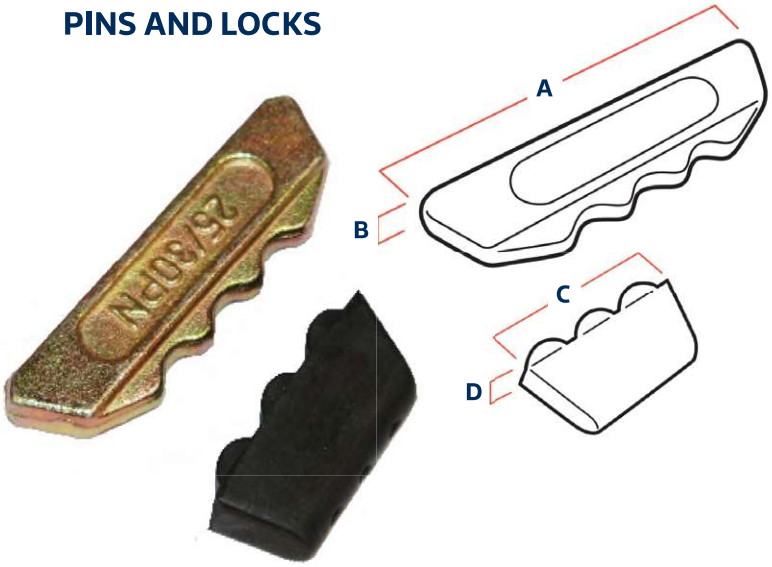


		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
18TVIP	18S	150	50	60	40	35	1.1	4-6 Tonne
25TVIP	25S	228	80	89	62	55	3	8-10 Tonne
30TVIP	30S	215	78	100	72	50	3	10-15 Tonne
35TVIP	35S	265	110	120	82	65	6.2	15-25 Tonne

All measurements in millimetres

ESCO CONICAL STYLE PINS & LOCKS

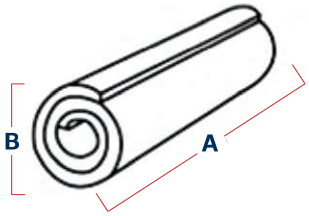
PINS AND LOCKS



Pin	Lock	A	B	C	D
18PN	18LK	55	7	35	13
22PN	22LK	68	7	44	13
25PN	25LK	72	10	37	11
30PN	30LK	72	10	37	11
35PN	35LK	84	10	47	14
40PN	40LK	100	13	47	14
45PN	45LK	104	13	59	16

All measurements in millimetres

ROLL PINS

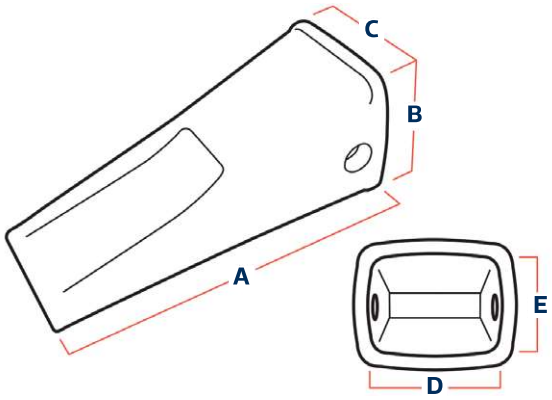


Pin	A	B
MB8	51	8

All measurements in millimetres

HYUNDAI STYLE BUCKET TEETH

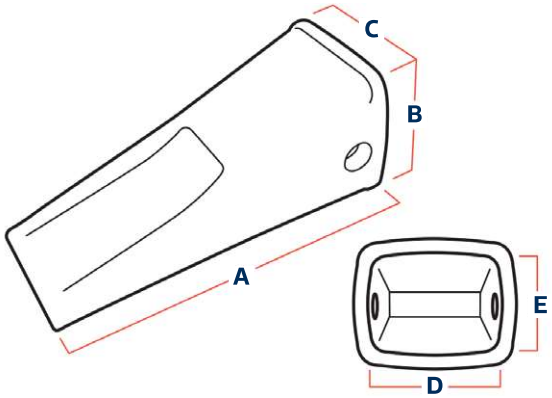
STANDARD TIP



	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
E161-3027	212	90	98	72	60	4	12-21 Tonne
61Q6-31310	107	106	225	72	72	6.5	R210-9
E262-3046	255	105	115	82	80	7.5	26-32 Tonne

All measurements in millimetres

ROCK CHISEL TIP

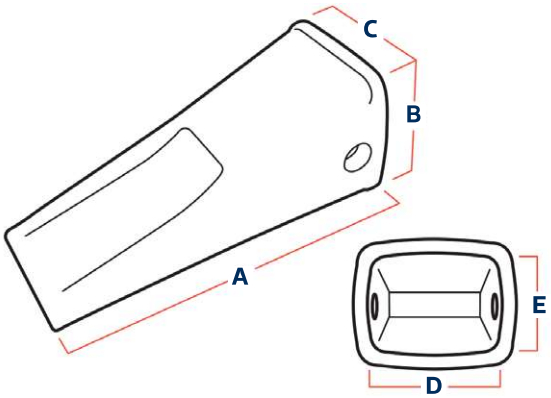


	External			Internal			
Part No	A	B	C	D	E	KG	Machine Size
E161-3027RC	255	90	98	72	60	6	12-21 Tonne
E262-3046RC	295	110	120	82	80	10	26-32 Tonne

All measurements in millimetres

HYUNDAI STYLE BUCKET TEETH

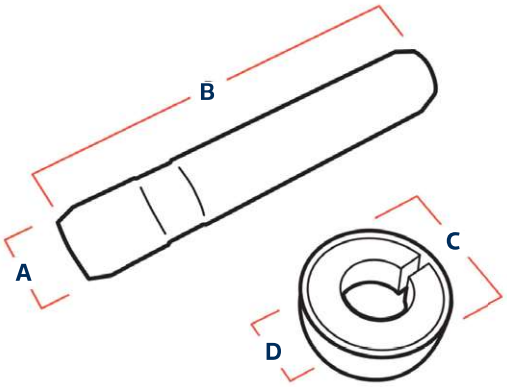
TIGER TIP



	External			Internal			
Part No	**A**	**B**	**C**	**D**	**E**	**KG**	**Machine Size**
E161-3027T	220	90	98	72	60	4.3	12-21 Tonne
E262-3046T	295	110	120	82	80	9.3	26-32 Tonne

All measurements in millimetres

PINS AND RETAINERS



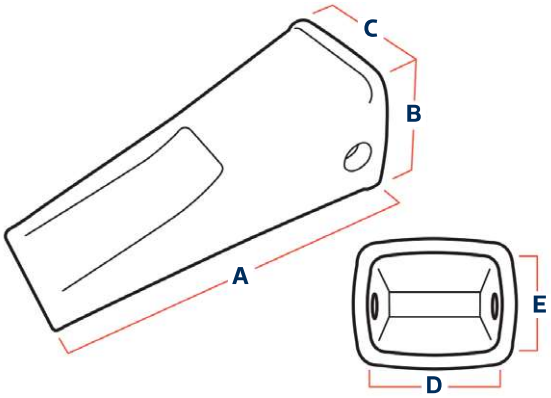
Pin No	Retainer No	A	B	C	D	Machine
SB80PN	SB80/235WS	19	101	32	18.6	12-21 Tonne
SB235PN	SB80/235WS	19	116	34	18.6	26-32 Tonne

All measurements in millimetres

KOMATSU STYLE BUCKET TEETH

KOMATSU STYLE BUCKET TEETH

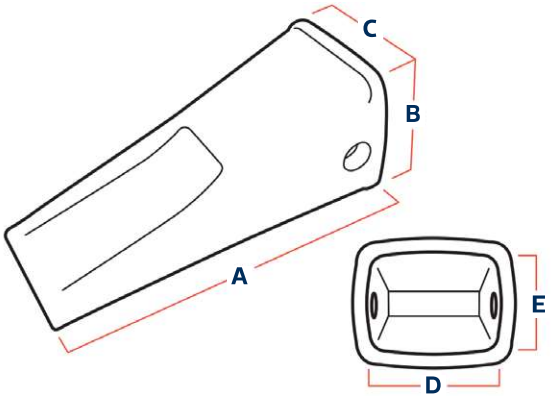
STANDARD TIP



		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
205-70-19570	PC120/200	222	100	95	72	82	4.2	10-25 Tonne
207-70-14151	PC300	240	115	120	92	85	6.5	25-35 Tonne
208-70-14152	PC400	275	122	150	110	92	9.6	35-42 Tonne

All measurements in millimetres

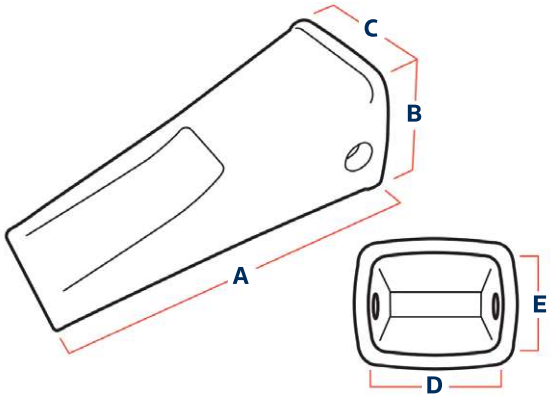
ROCK CHISEL TIP



		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
PC650RC	PC650	430	200	185	133	136	47	60-70 Tonne

All measurements in millimetres

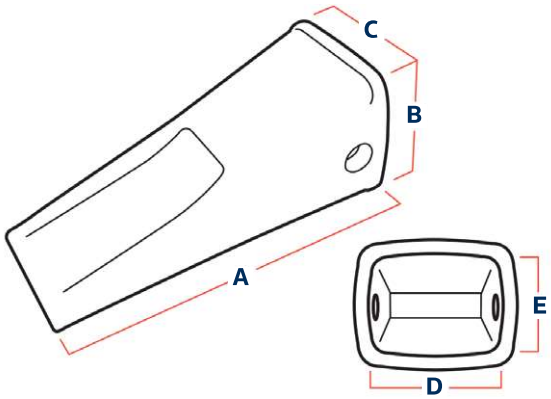
TIGER TIP



		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
PC200TL	PC120/200	280	100	95	72	82	6	10-25 Tonne
PC300TL	PC300	330	118	126	92	85	9	25-35 Tonne
PC400TL	PC400	375	130	150	110	95	14	35-42 Tonne

All measurements in millimetres

TIGER TIP - *Premium quality, self sharpening design (MTG)*

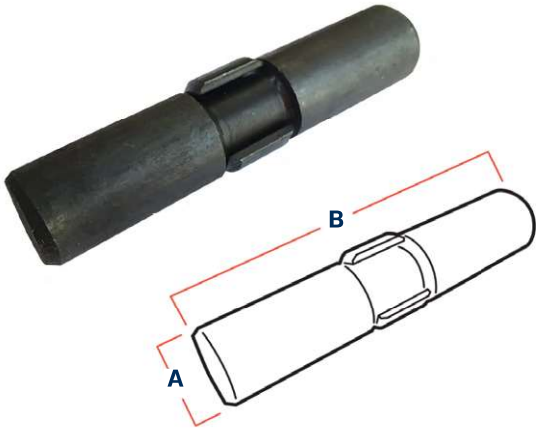


		External			Internal			
Part No	Series	A	B	C	D	E	KG	Machine Size
MK200V	PC120/200	270	114	98	72	82	4.7	15-25 Tonne
MK300V	PC300	300	122	122	92	85	6.5	25-35 Tonne
MK400V	PC400	340	135	148	110	92	9.4	35-42 Tonne

All measurements in millimetres

KOMATSU STYLE BUCKET TEETH

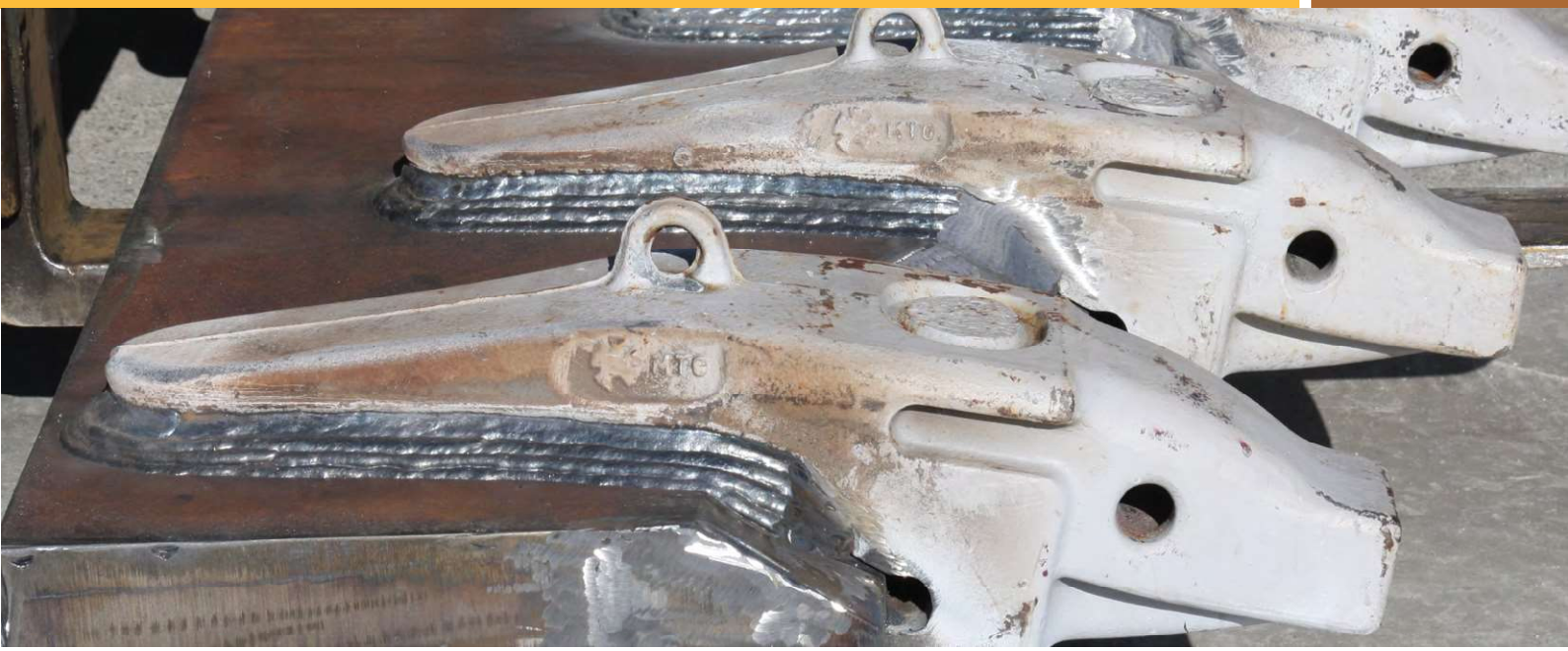
PIN ASSEMBLY



Pin No	A	B	Machine Size
09244-02496	25	97	PC200
175-78-21810	25	118	PC300
09244-03036	30	138	PC400
209-70-54240	36	168	PC650

All measurements in millimetres

PRE-FABRICATED BUCKET EDGES



SAVE YOURSELF THE HASSLE OF WELDING AND GET WEST-TRAK TO SUPPLY A PRE-FABRICATED CUTTING EDGE, WITH ADAPTERS FITTED, READY TO WELD IN YOUR BUCKET

You'll get 100% guaranteed quality with correct adapter fitment and welding procedures when fabricated by West-Trak!

ADAPTER WELDING INSTRUCTIONS

WELDING INSTRUCTIONS FOR MTG ADAPTERS

This "Welding Guide" is intended to assist customers with welding GET products. It is a general welding guide and is not all inclusive. Your specific application may require different welding practices. This welding guide is not intended to be used for joint design of buckets or other attachments. West-Trak accepts no responsibility for the misuse or misinterpretation of this information.

Welding Instructions

Processes - Welding may be done by any of the following processes:

- **Shielded metal arc welding (SMAW)**
- **Gas metal arc welding (GMAW)**
- **Flux-cored arc welding (FCAW)**

Consumable - Welding unalloyed and low alloyed consumables.

Unalloyed and low-alloyed consumables with tensile strength of up to 500 MPa should be used. Such welding consumables reduce the residual level in the joint and thus reduces the possibility of hydrogen cracking.

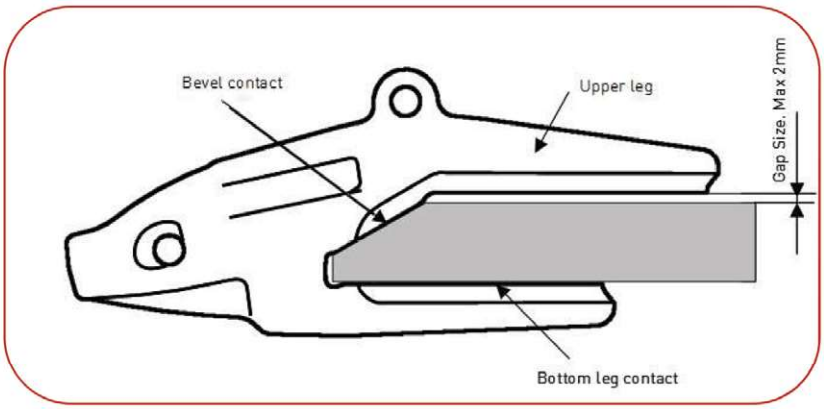
WELDING UNALLOYED & LOW ALLOYED FILLER CONSUMABLES		
PROCESS	**EN CLASS**	**AWS CLASS**
SMAW	EN ISO 2560-A E42X	E70X according to A5.1 or equivalent under A5.5
GMAW	EN ISO 14341-A G42X EN ISO 14341-A G46X	E70C-X according to A5.18 or equivalent under A5.28
		ER70S-X according to A5.18 or equivalent under A5.28
FCAW	EN ISO 16834-A T42X	E7XT-X according to A5.20 or equivalent under A5.29

Note that 'X' may stand for one or several characters

ADAPTER WELDING INSTRUCTIONS

STEP 1:
All mill scale, rust, paint, oil grease, arc air slag or moisture must be removed from the surfaces of any weld location. The surfaces must be sufficiently clean so that there is nothing that might contain moisture or hydrocarbons, which break down in the heat of the arc producing hydrogen, which can be absorbed in the weld and cause cracks. Removal may be accomplished by shot blasting, sand blasting, grinding or machining. Any porosity, burned-in sand or other defects visible on the weld prep surfaces must be removed by grinding or arc air gouging.

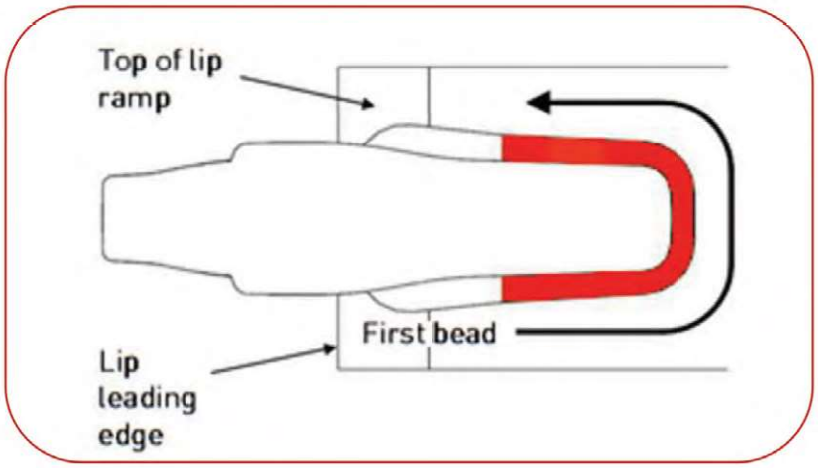
STEP 2:
Place adapter on the lip at the desired location from side to side. Bottom leg and bevel angle should be in full contact with the lip; as shown in figure below. Pack out the top leg if the gap is more than 2mm.



STEP 3:
Preheat the top and bottom of Adapter/Lip to a temperature between 150C and 180C degrees and maintain this temperature throughout the whole welding process..

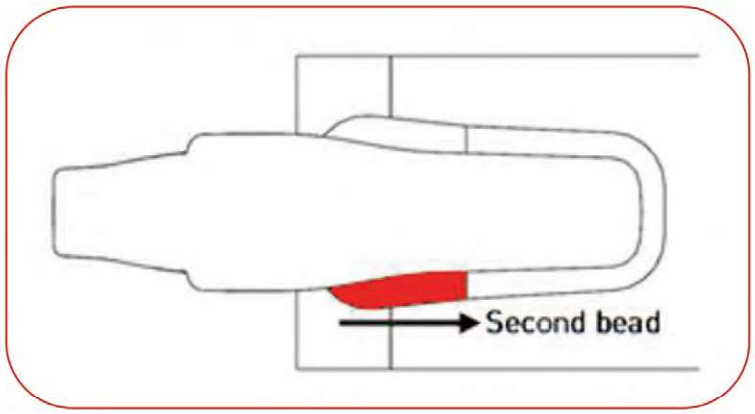
STEP 4:
Apply one 25mm long tack weld at the root of the weld groove on each side of the top leg, midway between the end of the leg and the trailing edge of the lip bevel.

STEP 5:
Begin welding at the center of top leg and weld one pass around the back of the leg to the centre of the opposite side.



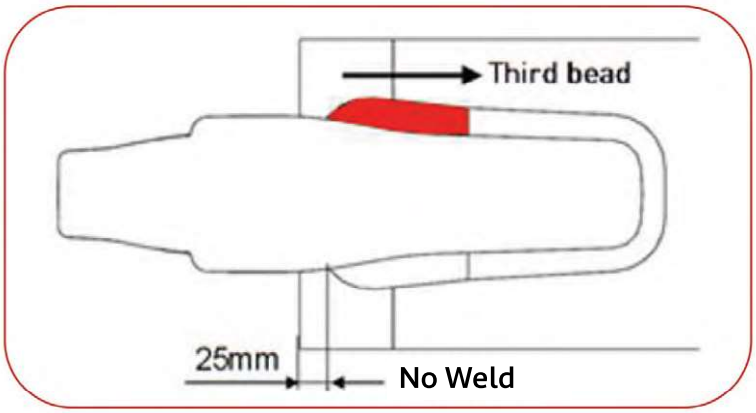
ADAPTER WELDING INSTRUCTIONS

STEP 6:
On the initially welded side, begin welding at the front of the weld groove and proceed to the starting point of the first bead. Do not weld within 25mm of the lip leading edge.



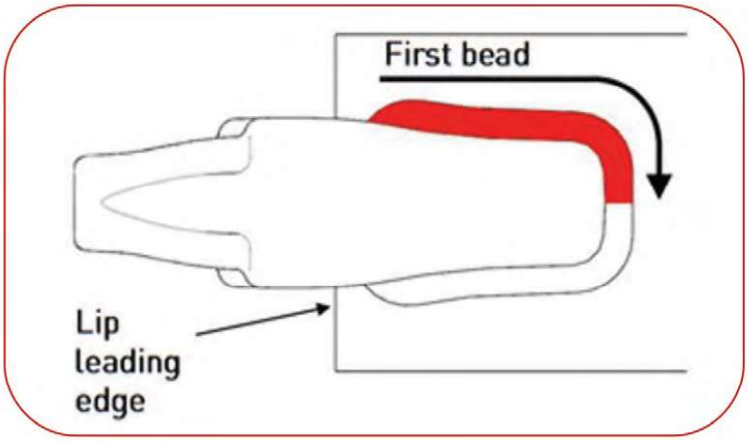
STEP 7:
Place a similar bead on the opposite side of the top leg.

STEP 8:
Repeat this sequence (steps 5, 6 and 7) three times. Vary the lengths of the weld beads slightly so that the start/stop positions are not at exactly the same location.



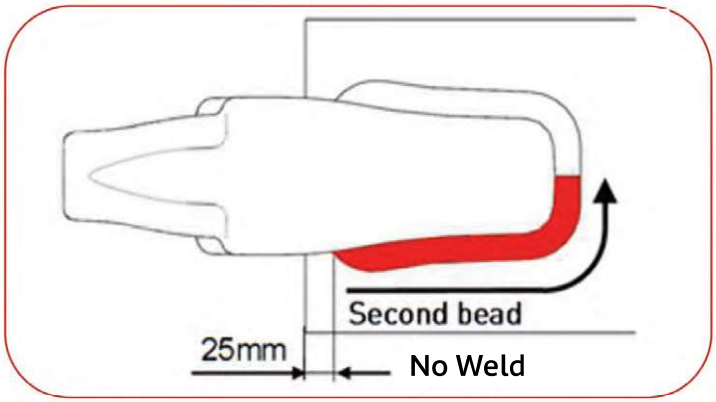
STEP 9:
Turn the lip over

STEP 10:
Begin welding at the front of the weld groove on the bottom leg and weld to the back of the leg. Do not weld within 25mm of the lip leading edge.



ADAPTER WELDING INSTRUCTIONS

STEP 11:
Begin welding at the front of the weld groove on the opposite side of the leg, joining the initial bead at the back of the leg. Do not weld within 25mm of the lip leading edge.



STEP 12:
Repeat this sequence (steps 10 and 11) three times. Vary the lengths of the beads slightly so that the start/stop positions are not at exactly the same location.

STEP 13:
If the adapter size requires additional weld layers, turn the lip over and weld three layers according to the sequence for the top leg (steps 5, 6 and 7).

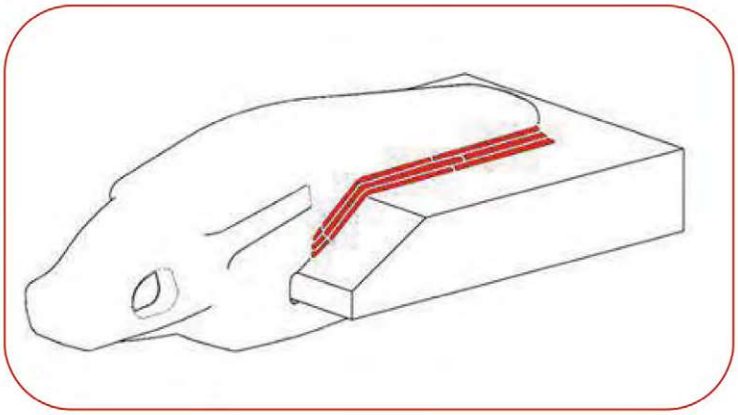
STEP 14:
Turn the lip over again and apply three layers according to the sequence for the bottom leg. (steps 10 and 11)

STEP 15:
The leg sizes of the weld fillet must be flush and less than 3mm above the edge of the cast weld groove. In some adapter patterns, the weld groove height decreases near the leading edge of the lip.

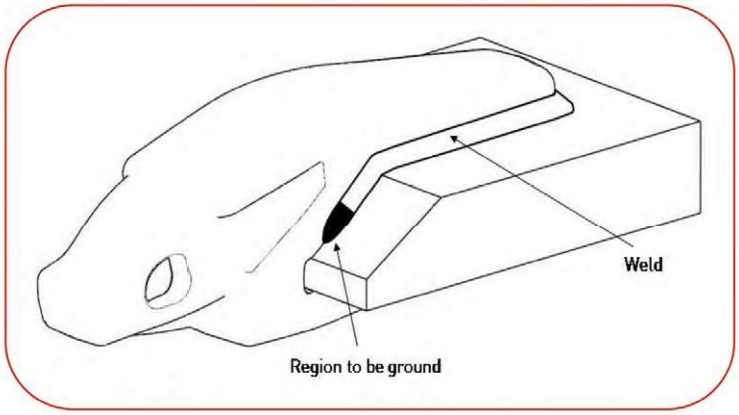
STEP 16:
Once welding is completed, cover all adapters with a thick welding blanket to allow slow cooling. Once adapters have cooled to below 50 degrees, post heat the lip and all adapters back up to 230-250 degrees to destress the welds. Cover adapters with welding blankets again to allow slow cooling.

ADAPTER WELDING INSTRUCTIONS

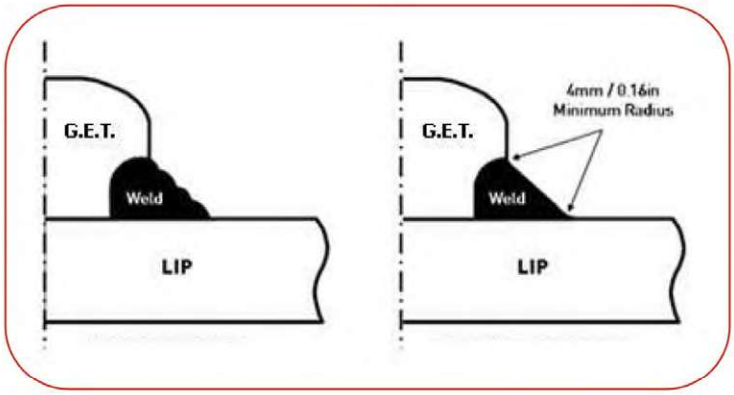
STEP 17:
When welding large adapters, considerable grinding effort can be saved by carefully positioning the starting points of the beads near the leading edge. Start each weld bead slightly behind those of the preceding layer so as to produce a "rounded" weld end.



STEP 18:
All adapter welds need to be ground smooth 65-75mm back from the front edge as indicated in the figure. All welds on both the top and bottom sides should be ground in this area to reduce fatigue cracking. (Air-arcing the weld toes off will also help reduce cracking)



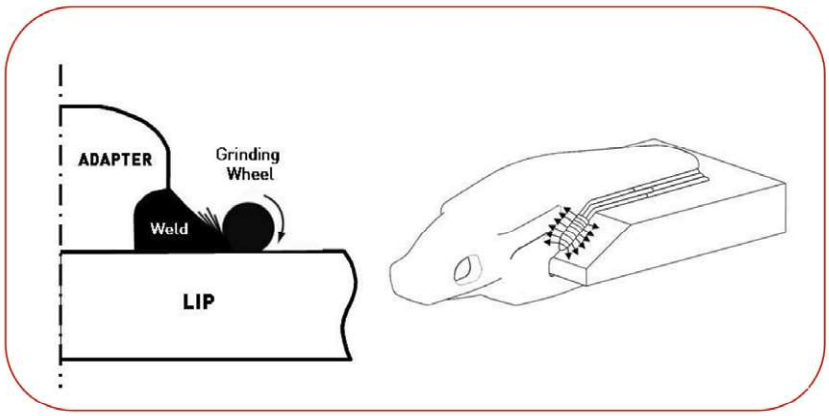
STEP 19:
Grinding shall produce a smooth surface free of roughness and uneveness associated with the weld beads. The toes of the welds shall merge smoothly with the lip and the adapter with a minimum radius of 45mm.



ADAPTER WELDING INSTRUCTIONS

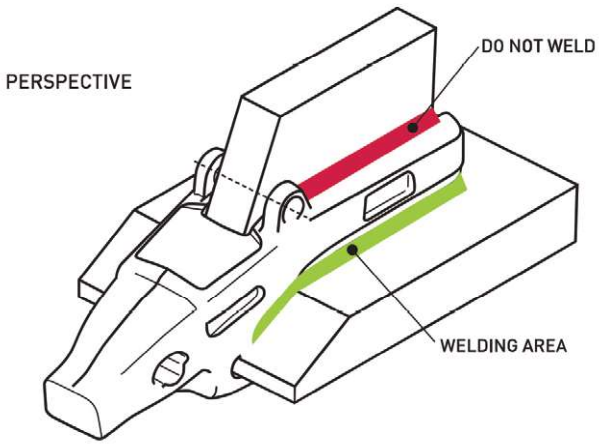
Grinding shall be done with the perimeter of the wheel and not the face. The grinding direction must be perpendicular to the toes of the welds as in the illustration.

Grinding at the toes of the welds can be done by the use of cone-shaped grinding wheels. For final grinding, the abrasive may be no coarser than 24 Grit.



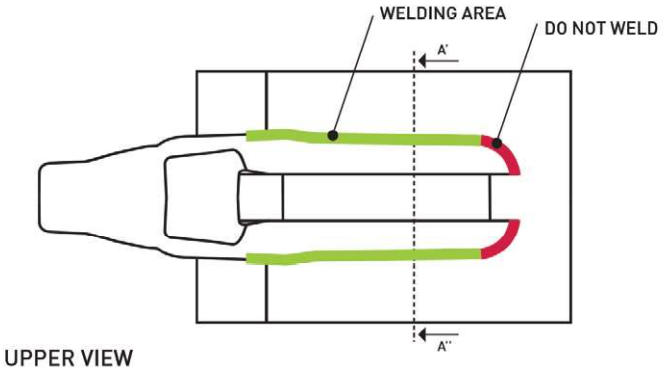
ADAPTER WELDING INSTRUCTIONS

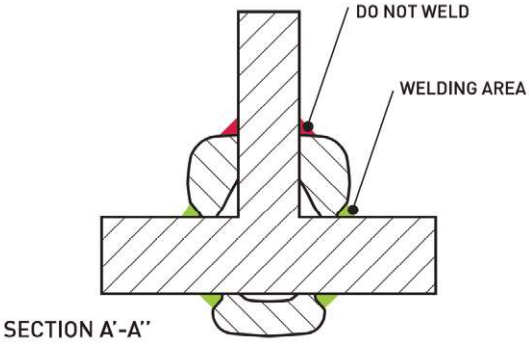
WELDING INSTRUCTIONS FOR STRADDLE LEG ADAPTERS



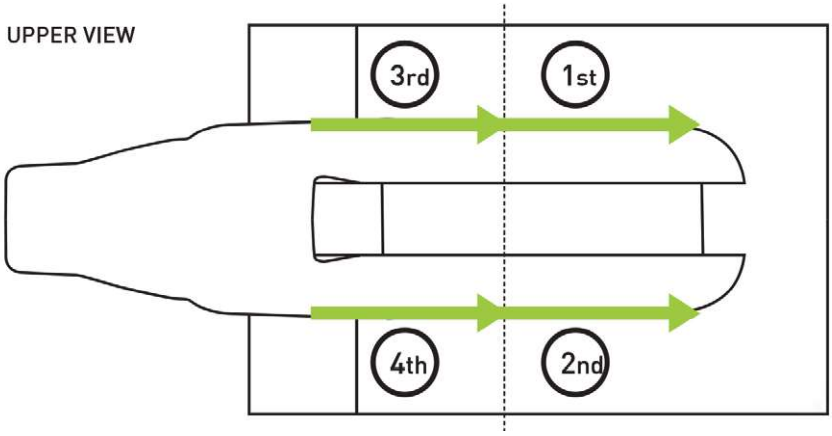
WELDING AREAS

1. Place the adapter on the lip and ensure a good fit with the lip bevel
2. Follow the Adapter Welding instructions as on previous pages
3. Weld the bottom leg in the same way as specified for two strap adapters
4. Weld the top leg as specified in the following figures





Welding process




MTG
MTG