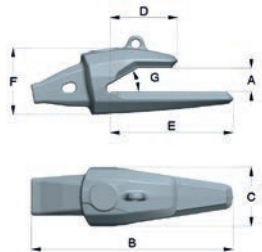
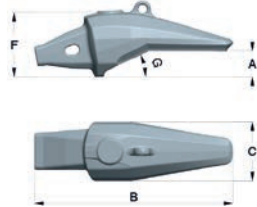




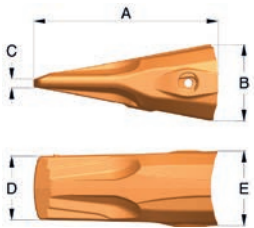
R10 SPECIFICATIONS Teeth, Adapters, Accessories



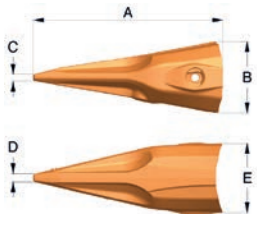
BE 



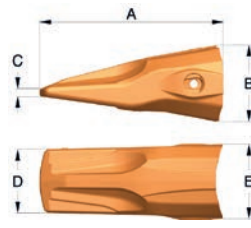
SL  



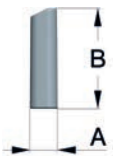
GPE 



VE 



GPL 



LP  















LT  

Typical machine weight - Excavator
Maximum breakout force in HD/XHD

12-14 MT
88 kN

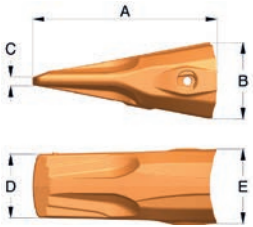
Typical machine weight - Loader
Maximum breakout force in HD/XHD

12-14 MT
158 kN

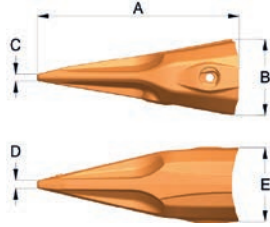
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
BE	R10BE25			1,06	11,06	3,27	3,74	6,73	3,54	30°	12,1
SL	R10SL20			0,79 - 1,18	10,94	3,27	N/A	N/A	3,46	25°	13,7
GPE	R10GPE			8,19	3,39	0,39	2,83	3,31			7
VE	R10VE			8,98	3,39	0,31	0,39	3,31			5,9
GPL	R10GPL			8,19	3,39	0,35	2,83	3,31			7,7
LP	R10LP			0,75	2,72						0,2
LT	R10LT			14,09	2,44						0,9



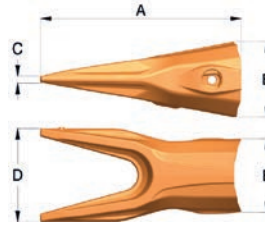
R14 SPECIFICATIONS Teeth



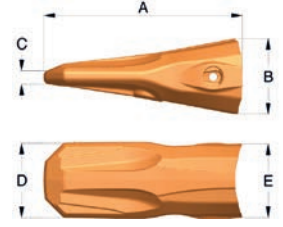
GPE 



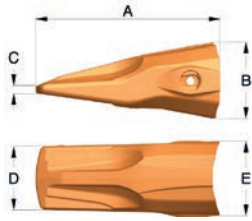
VE 



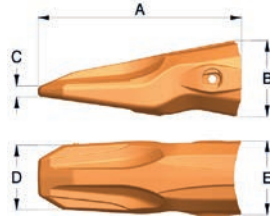
WE 



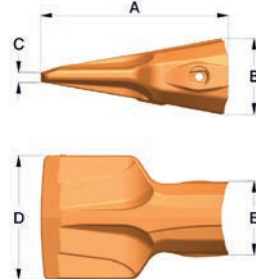
AE 



GPL 



AL 




FE 

Typical machine weight - Excavator
Maximum breakout force in HD/XHD

14-17 MT
112 kN

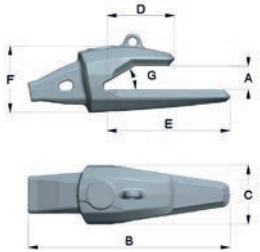
Typical machine weight - Loader
Maximum breakout force in HD/XHD

14-17 MT
202 kN

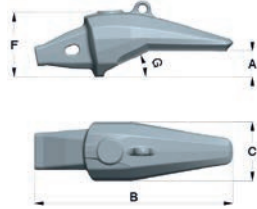
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
GPE	R14GPE			9,45	3,94	0,43	3,27	3,82			10,4
VE	R14VE			10,43	3,94	0,35	0,39	3,82			9,5
WE	R14WE			10,43	3,94	0,35	4,84	3,82			11,2
FE	R14FE			9,45	3,94	0,51	6,14	3,82			14,11
AE	R14AE			10,31	3,94	0,71	3,86	3,82			13,7
GPL	R14GPL			9,45	3,94	0,39	3,27	3,82			12,1
AL	R14AL			10,59	3,94	0,59	3,35	3,82			16,1



R14 SPECIFICATIONS Adapters, Accessories



BE 












SL  



LP  



LT  

Type	Part. no			A inch	B inch	C inch	D inch	E inch	Weight lb
GPE	R18GPE			10,51	4,37	0,47	3,62	4,25	15
VE	R18VE			11,57	4,37	0,43	0,43	4,25	12,8
WE	R18WE			11,57	4,37	0,43	5,39	4,25	15,4
FE	R18FE			10,75	4,37	0,55	7,16	4,25	20
AE	R18AE			11,42	4,37	0,79	4,29	4,25	18,7
GPL	R18GPL			10,51	4,37	0,43	3,62	4,25	16,7
AL	R18AL			11,73	4,37	0,67	3,7	4,25	22

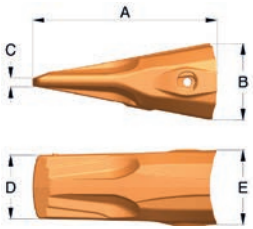
Combi Wear Parts AB
 Box 205, SE-681 24 Kristinehamn, Sweden
 Tel: +46 550 410 550
 combiwearparts.com



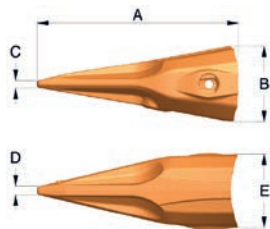
combi wear parts
 move the earth



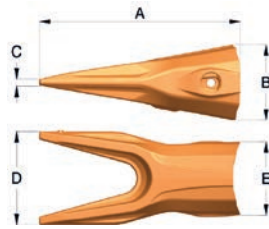
R18 SPECIFICATIONS Teeth



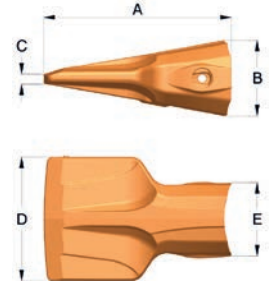
GPE 



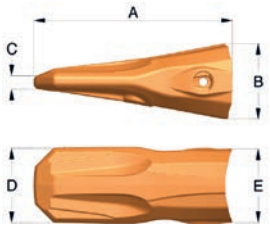
VE 



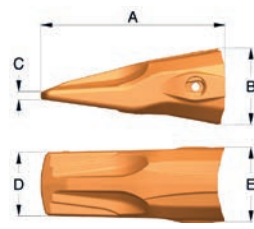
WE 



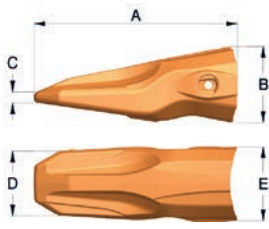
FE 



AE 












GPL 



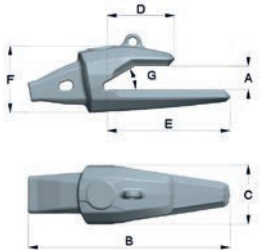
AL 

Typical machine weight - Excavator 17-25 MT
 Maximum breakout force in HD/XHD 147 kN
 Typical machine weight - Loader 17-25 MT
 Maximum breakout force in HD/XHD 265 kN

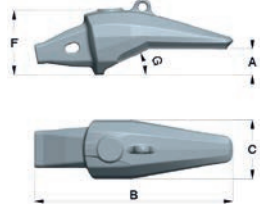
Type	Part. no			A inch	B inch	C inch	D inch	E inch	Weight lb
GPE	R18GPE			10,51	4,37	0,47	3,62	4,25	15
VE	R18VE			11,57	4,37	0,43	0,43	4,25	12,8
WE	R18WE			11,57	4,37	0,43	5,39	4,25	15,4
FE	R18FE			10,75	4,37	0,55	7,16	4,25	20
AE	R18AE			11,42	4,37	0,79	4,29	4,25	18,7
GPL	R18GPL			10,51	4,37	0,43	3,62	4,25	16,7
AL	R18AL			11,73	4,37	0,67	3,7	4,25	22



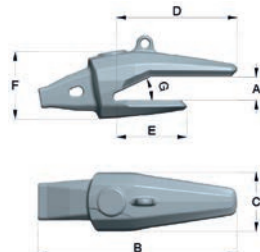
R18 SPECIFICATIONS Adapters, Accessories



BE 



SL  














TL 



LP  



LT  

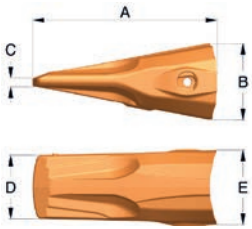
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
BE	R18BE40			1,65	14,21	4,17	4,72	8,66	4,69	30°	26,2
BE	R18BE45			1,85	14,25	4,17	4,72	8,66	4,69	30°	26,7
SL	R18SL30			1,18 - 1,57	14,06	4,17	N/A	N/A	4,49	25°	28,2
TL	R18TL40			1,65	14,02	4,17	8,46	4,92	4,76	25°	28,2
LP	R18LP			0,98	3,54						0,4
LT	R18LT			16,06	2,56						1,3

Combi Wear Parts AB
 Box 205, SE-681 24 Kristinehamn, Sweden
 Tel: +46 550 410 550
 combiwearparts.com

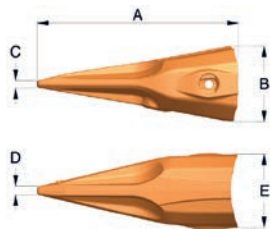




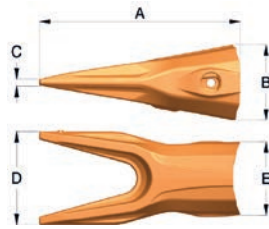
R23 SPECIFICATIONS Teeth



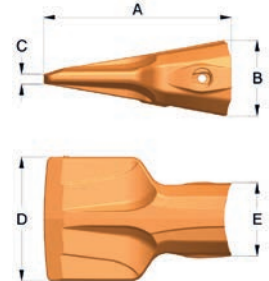
GPE 



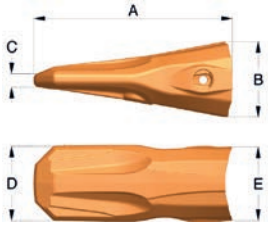
VE 



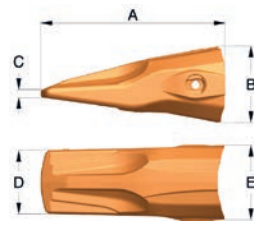
WE 



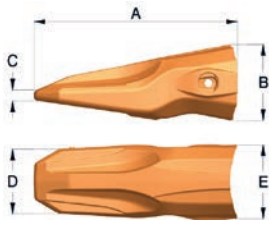
FE 



AE 












GPL 



AL 

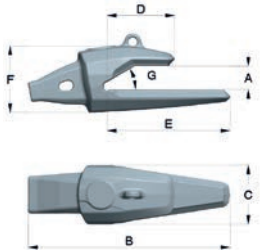
Typical machine weight - Excavator 25-35 MT
Maximum breakout force in HD/XHD 184 kN

Typical machine weight - Loader 25-35 MT
Maximum breakout force in HD/XHD 331 kN

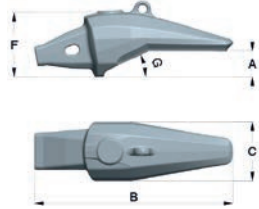
Type	Part. no			A inch	B inch	C inch	D inch	E inch	Weight lb
GPE	R23GPE			11,85	4,92	0,55	4,09	4,8	21,1
VE	R23VE			13,07	4,92	0,47	0,51	4,8	18,5
WE	R23WE			13,07	4,92	0,47	6,1	4,8	21,8
FE	R23FE			12,17	4,92	0,63	8,07	4,8	28,9
AE	R23AE			12,91	4,92	0,87	4,84	4,8	27,3
GPL	R23GPL			11,85	4,92	0,51	4,09	4,8	23,8
AL	R23AL			13,27	4,92	0,75	4,21	4,8	31,7



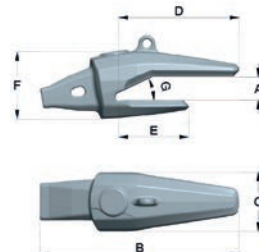
R23 SPECIFICATIONS Adapters, Accessories



BE 



SL  














TL 



LP  

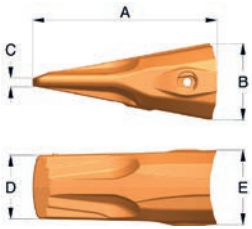


LT  

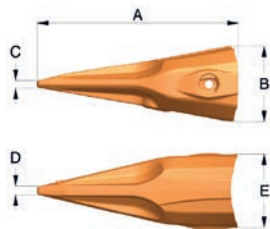
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
BE	R23BE40			1,65	16,06	4,72	5,39	9,8	5,12	30°	38,5
BE	R23BE50			2,05	16,06	4,72	5,39	9,8	5,12	30°	37,9
SL	R23SL40			1,57 - 1,97	15,91	4,72	N/A	N/A	5	25°	40,3
TL	R23TL40			1,65	15,87	4,72	9,61	5,51	5,12	25°	40,3
LP	R23LP			1,1	4,02						0,7
LT	R23LT			17,13	2,72						2



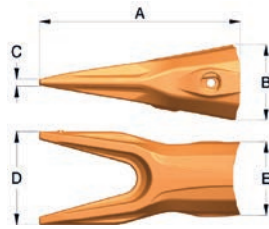
R29 SPECIFICATIONS Teeth



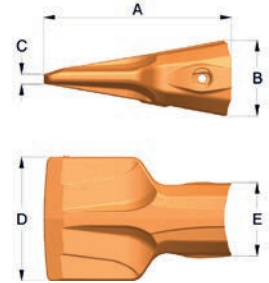
GPE 



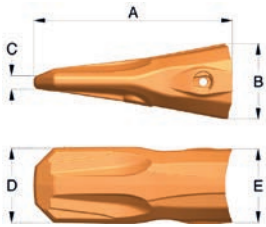
VE 



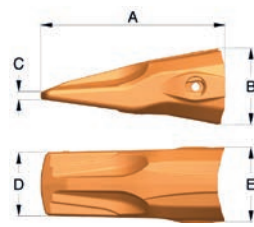
WE 



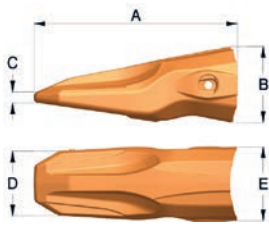
FE 



AE 












GPL 



AL 

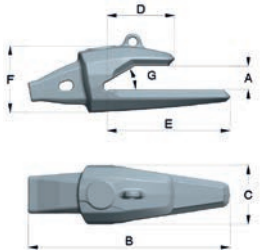
Typical machine weight - Excavator 35-45 MT
Maximum breakout force in HD/XHD 233 kN

Typical machine weight - Loader 35-45 MT
Maximum breakout force in HD/XHD 419 kN

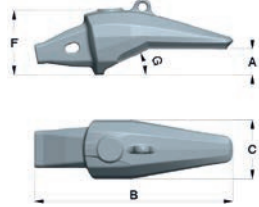
Type	Part. no			A inch	B inch	C inch	D inch	E inch	Weight lb
GPE	R29GPE			13,03	5,43	0,59	4,53	5,28	27,8
VE	R29VE			14,37	5,43	0,51	0,55	5,28	25,1
WE	R29WE			14,37	5,43	0,51	6,69	5,28	29,7
FE	R29FE			13,39	5,43	0,71	8,9	5,28	38,3
AE	R29AE			14,21	5,43	0,94	5,35	5,28	35,7
GPL	R29GPL			13,03	5,43	0,55	4,53	5,28	31,9
AL	R29AL			14,61	5,43	0,83	4,61	5,28	42,3



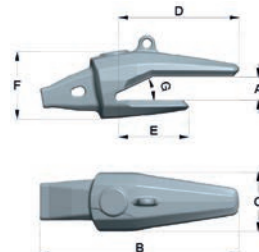
R29 SPECIFICATIONS Adapters, Accessories



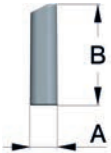
BE 



SL  














TL 



LP  



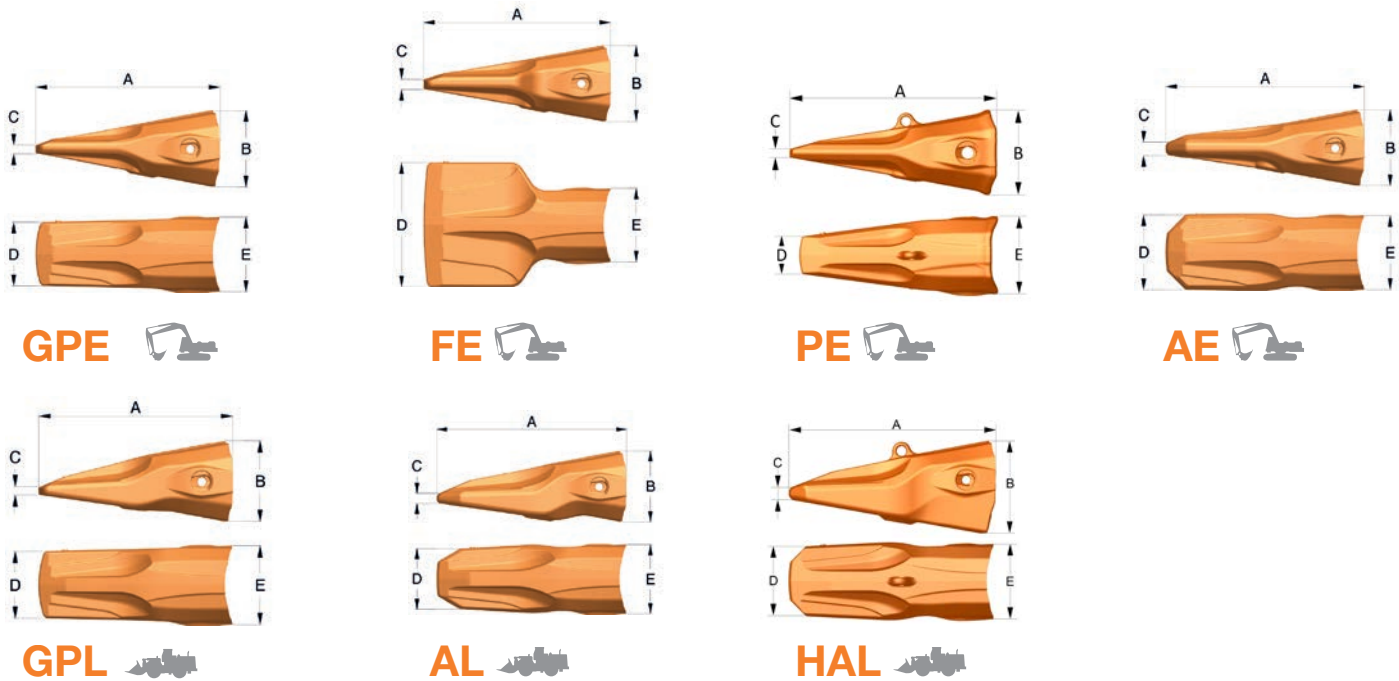
LT  

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
BE	R29BE50			2,05	17,68	5,2	5,91	10,79	5,83	30°	52,2
BE	R29BE60			2,44	17,68	5,2	5,83	10,79	5,83	30°	52
SL	R29SL50			1,97 - 2,56	17,48	5,2	N/A	N/A	5,67	25°	46,3
TL	R29TL50			2,05	17,44	5,2	10,55	6,14	5,91	25°	54,2
LP	R29LP			1,22	4,41						0,9
LT	R29LT			18,11	2,76						2,2



R35 SPECIFICATIONS Teeth

TS C-rex-001 US, Feb 2023



Typical machine weight - Excavator
Maximum breakout force in HD/XHD

40-50 MT
296 kN

Typical machine weight - Loader
Maximum breakout force in HD/XHD

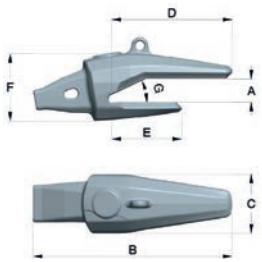
45-55 MT
510 kN

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
GPE	R35GPE			14,72	6,14	0,71	5,12	5,94			41,1
FE	R35FE			15,16	6,14	0,83	10,04	5,94			55,2
PE	R35PE			16,14	6,14	0,83	3,54	5,94			46,6
AE	R35AE			16,02	6,14	1,06	6,02	5,94			52,4
GPL	R35GPL			14,76	6,14	0,63	5,12	5,94			46
AL	R35AL			16,5	6,18	0,91	5,24	5,94			61,2
HAL	R35HAL			16,5	7,32	1,06	6,18	5,94			79,9

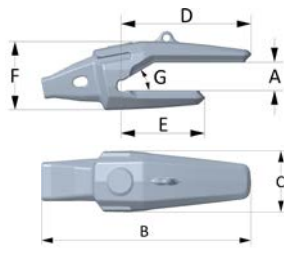


R35 SPECIFICATIONS Adapters, Accessories

TS C-rex-001 US, Feb 2023



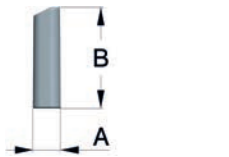
TL



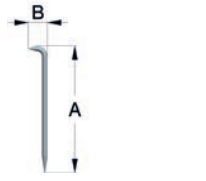
UA



WC



LP



LT

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
TL	R35TL65			2,64	19,72	5,87	11,93	6,85	6,69	30°	75,5
UA	R35UA60			2,44	19,68	5,87	12,05	7,8	6,42	30°	72,4
UA	R35UA65			2,64	19,68	5,87	11,97	7,8	6,42	30°	72,4
UA	R35UA70			2,83	19,68	5,87	11,85	7,56	6,42	30°	71,3
WC	R35WC			6,42	2,87	4,96					7
LP	R35LP			1,34	5						1,3
LT	R35LT			19,09	2,95						2,4

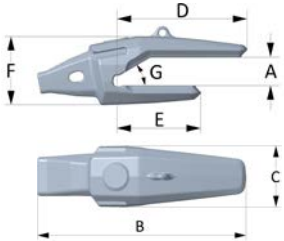
Combi Wear Parts AB
 Box 205, SE-681 24 Kristinehamn, Sweden
 Tel: +46 550 410 550
 combiwearparts.com



combi wear parts
 move the earth



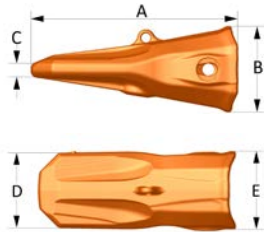
R50 SPECIFICATIONS Teeth, Adapters, Accessories



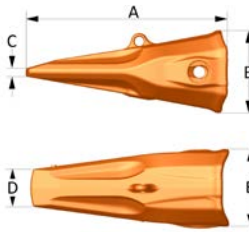
UA



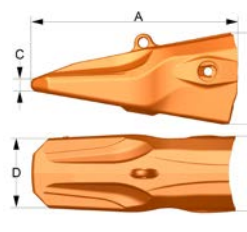
WC



AE



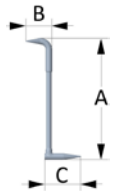
PE



HAL



LP



LT

Typical machine weight - Excavator
Maximum breakout force in HD/XHD

50-80 MT
400 kN

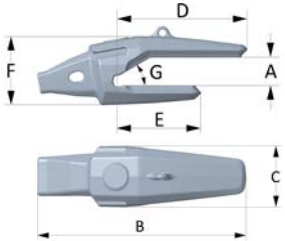
Typical machine weight - Loader
Maximum breakout force in HD/XHD

80-100 MT
720 kN

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
UA	R50UA70			2,84	22,95	6,73	14,25	9,17	7,48	30°	113,5
UA	R50UA75			3,03	22,95	6,73	14,13	9,05	7,48	30°	112,9
UA	R50UA80			3,23	22,95	6,73	14,02	8,94	7,48	30°	11,15
WC	R50WC			7,24	3,23	5,59					8,6
AE	R50AE			17,64	7,32	1,26	6,73	7,01			73,5
PE	R50PE			17,87	7,32	0,79	3,42	7,01			62,5
HAL	R50HAL			18,15	8,82	1,22	6,3	7,01			116,8
LP	R50LP			1,58	5,75						2,2
LT	R50LT			16,61	3,58	4,92					2,4



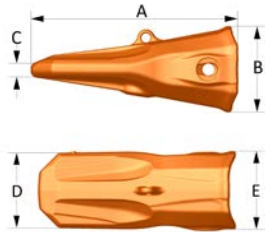
R70 SPECIFICATIONS Teeth, Adapters, Accessories



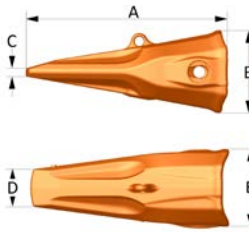
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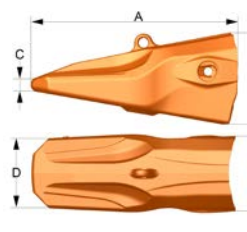
WC  



AE 



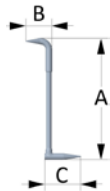
PE 



HAL 



LP  





















LT  

Typical machine weight - Excavator 80-120 MT
Maximum breakout force in HD/XHD 576 kN

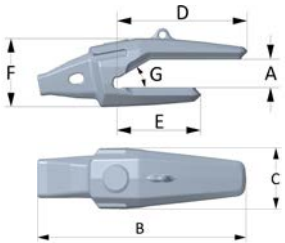
Typical machine weight - Face shovel 80-120 MT
Maximum breakout force in HD/XHD 720 kN

Typical machine weight - Loader 100-150 MT
Maximum breakout force in HD/XHD 1037 kN

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
UA	R70UA75			3,03	27,84	7,84	16,1	10,35	8,46	30°	200,9
UA	R70UA90			3,62	27,84	7,84	16,1	10,35	8,82	30°	198,7
WC	R70WC			8,54	3,82	6,97					16,1
AE	R70AE			19,88	8,66	1,38	7,8	8,27			110,7
PE	R70PE			20,08	8,66	1,26	4,57	8,27			100,8
HAL	R70HAL			20,2	10,16	1,38	7,36	8,27			171,6
LP	R70LP			1,81	6,65						3,1
LT	R70LT			16,61	3,58	4,92					2,4



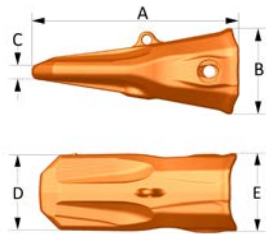
R90 SPECIFICATIONS Teeth, Adapters, Accessories



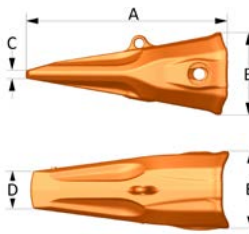
UA  



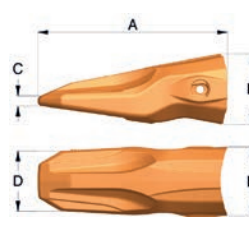
WC  



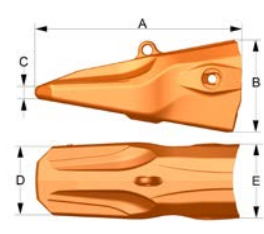
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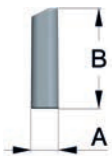
PE 



AL 



HAL 



LP  
















LT  

Typical machine weight - Excavator 120-200 MT
Maximum breakout force in HD/XHD 720 kN

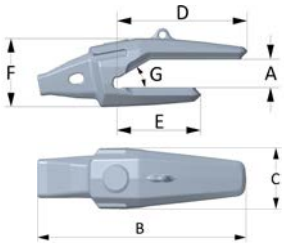
Typical machine weight - Face shovel 120-200 MT
Maximum breakout force in HD/XHD 900 kN

Typical machine weight - Loader 200-250 MT
Maximum breakout force in HD/XHD 1296 kN

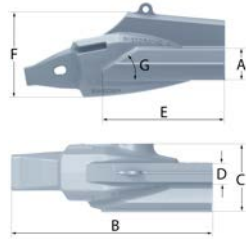
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
UA	R90UA100			4,02	30,87	8,7	17,87	11,5	10,28	30°	264
WC	R90WC			9,72	4,41	7,76					
AE	R90AE			21,58	9,37	1,5	8,66	9,06			149,6
PE	R90PE			21,77	9,37	1,38	5,16	9,06			136,4
AL	R90AL			21,97	9,37	1,38	7,72	9,06			178,2
HAL	R90HAL			21,97	11,1	1,5	8,19	9,06			231
LP	R90LP			2	7,4						4,4
LT	R90LT			16,61	3,58	6,5					2,64



R110 SPECIFICATIONS Teeth, Adapters, Accessories



UA



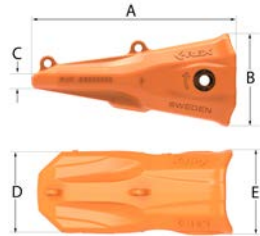
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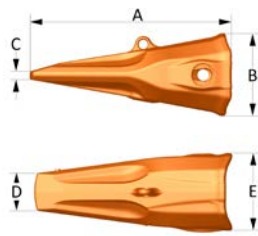
WC



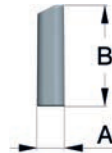
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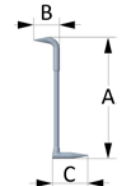
AE



PE



LP



LT

Typical machine weight - Excavator
Maximum breakout force in HD/XHD 1

200–250 MT
880 kN

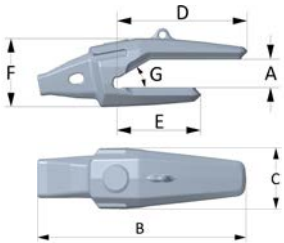
Typical machine weight - Face shovel
Maximum breakout force in HD/XHD

200–250 MT
1100 kN

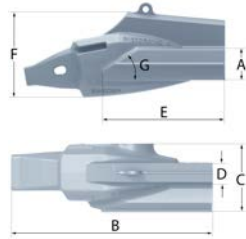
Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb	
UA	R110UA120			4,8	33,98	9,57	19,41	12,4	11,3	30°	345,4	
CLA	R110CLA120			UNDER DEVELOPMENT								
CRA	R110CRA120			UNDER DEVELOPMENT								
WC	R110WC			10,71	4,8	8,54					34,1	
WCC	R110WCC			UNDER DEVELOPMENT								
AE	R110AE			23,74	10,32	1,65	9,53	9,96			199,1	
PE	R110PE			23,94	10,32	1,54	5,67	9,96			5,5	
LP	R110LP			2,2	8,15						2,6	
LT	R110LT			16,81	3,58	6,5						



R130 SPECIFICATIONS Teeth, Adapters, Accessories



UA



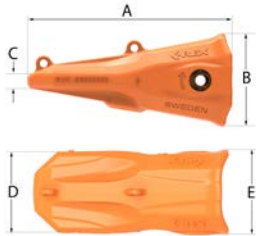
CLA CRA



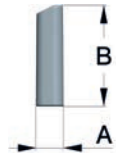
WC



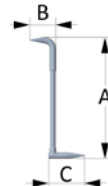
WCC



AE



LP



LT

Typical machine weight - Excavator
Maximum breakout force in HD/XHD 1

250–350 MT
1050 kN

Typical machine weight - Face shovel
Maximum breakout force in HD/XHD

250–390 MT
1300 kN

Type	Part. no			A inch	B inch	C inch	D inch	E inch	F inch	G bevel	Weight lb
UA	R130UA140			5,59	36,26	10,16	21,81	14,65	12,87	30°	443,3
CLA	R130CLA140			5,51	37,28	12,6	3,54	22,84	15,75	30°	814
CRA	R130CRA140			5,51	37,28	12,6	3,54	1,69	15,75	30°	814
WC	R130WC			11,65	5,08	9,49					39,8
WCC	R130WCC			11,65	5,08	9,33					37,8
AE	R130AE			25,83	11,65	1,93	10,63	11,14			275
LP	R130LP			2,36	9,17						6,8
LT	R130LT			16,81	3,58	6,5					2,6



EXCAVATOR TEETH AND ADAPTERS

ADAPTER

BE

A 1 1/2 bottom leg adapter. Designed for both general and tough excavation in different types of ground.

SL

Top mounted single leg adapter designed for use in general conditions whenever a smooth surface is required.

UA

A 1 1/2 top leg adapter. Designed for both excavators and loaders. Can be used with or without a wear cap.

WEAR CAP

WC/WCC

Mechanical wear cap protects the adapter topside in high abrasion and impact applications.

LOCK

LP

Reusable locking pin of forged steel also usable in hot slag applications.

LR

Locking ring integrated in the tooth. Secures the locking function and simplifies teeth exchange.

TOOTH

GPE

Standard tooth with slim design for optimal penetration and durability in general purpose applications.

VE

The tooth for maximum penetration. Makes light work of hard surface layers and frozen ground.

WE

Used primarily in a corner position in combination with VE, this tooth provides the penetration demanded by hard surfaces.

FE

An extra-wide tooth for excavating and cleaning – penetration and straight-edge performance from a single solution.

TOOTH

AE

Abrasion tooth for highly abrasive soils and rocks such as granite, basalt and sandstone. The design provides maximal wear material with maintained good penetration.

TOOTH

PE

Penetration tooth with added body mass and narrow tip combines penetration with impact and abrasion resistance.

TOOL

LT

Tool for turning the locking ring in locked and unlocked position.



LOADER TEETH AND ADAPTERS

ADAPTER

SL

Top mounted single leg adapter designed for use in general conditions whenever a smooth surface is required.

TL

A 1 1/2 top leg adapter. Designed for both general and tough loading in different types of ground conditions.

UA

A 1 1/2 top leg adapter. Designed for both excavators and loaders. Can be used with or without a wear cap.

WEAR CAP

WC

Mechanical wear cap protects the adapter topside in high abrasion and impact applications.

LOCK

LP

Reusable locking pin of forged steel also usable in hot slag applications.

LR

Locking ring integrated in the tooth. Secures the locking function and simplifies teeth exchange.

TOOTH

GPL

In both general and highly abrasive environments. This all-round tooth is popular for its excellent penetration.

AL

Abrasion tooth with a high level of penetration. Recommended in blasted rock application.

HAL

Outstanding wear resistance combined with a high level of penetration. This tooth provides extra protection for the lower part of the adapter and is ideal where ground conditions are highly abrasive.

TOOL

LT

Tool for turning the locking ring in locked and unlocked position.



APPLICATION TABLE

APPLICATION TABLE Based on DIN 18300 ground classification

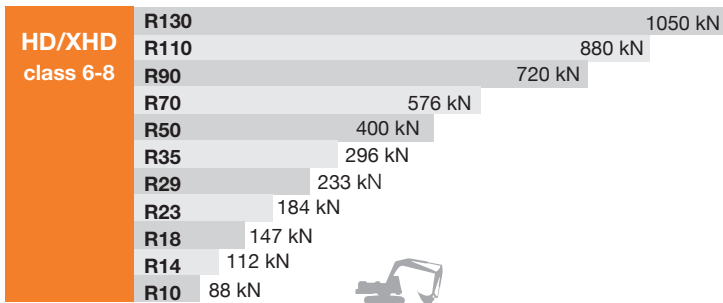
Ground classification	Description of ground conditions	Working conditions	Application
Class 1 Top soil without stones	Top layer of soil.	Very little wear. Very little penetration resistance. No impact resistance.	GP
Class 2 Wet ground	Sludge, mud, peat.	Little wear. Very little penetration resistance. No impact resistance.	GP
Class 3 Light ground	Sand, fine gravel, sandy soil. Stone size up to approx. 2,4 inch.	Moderate wear. Little penetration resistance. No impact resistance.	GP
Class 4 Moderately heavy ground	Very stony ground, gravel, stones. Stone size above 2,4 inch.	Considerable wear. Some penetration resistance. Moderate impact resistance.	GP / HD
Class 5 Dense, moderately heavy ground	Till, rigid clay, sand-clay mix, moraine, marl.	Considerable wear. Moderate penetration resistance. Little impact, some break through resistance.	HD
Class 6 Dense, heavy ground	Hard marl and clay, hard sandy ground, hard stony soil. Stone size up to approx. 7,9 inch.	Considerable wear. Considerable penetration resistance. Considerable impact and break through resistance.	HD
Class 7 Lighter rock	Loose rock, crumbled rock, slate. Very hard ground with stones, approx. 7,9 inch or bigger.	Usually considerable wear. Considerable penetration resistance. Considerable impact and break through resistance.	XHD
Class 8 Heavy rock	Blasted rock, size over 3,5 ft ³ .	Very significant wear. Considerable penetration resistance. Very significant impact and break through resistance.	XHD

For further information on welding, assembly and maintenance, see welding and assembly instructions.

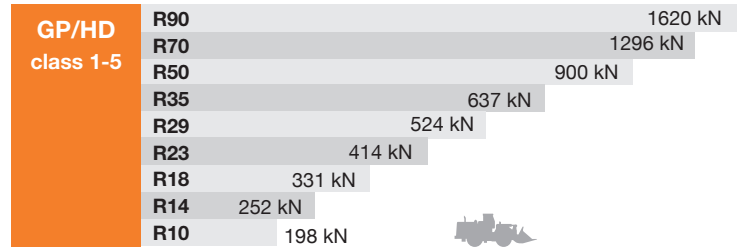
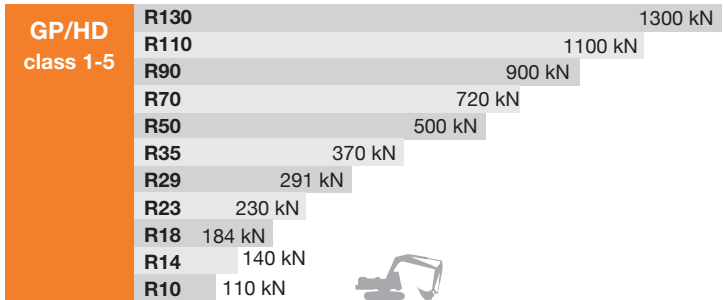
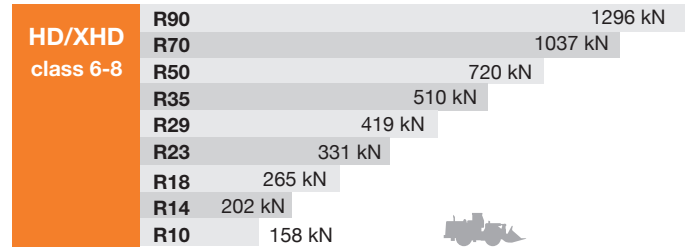


SELECTION GUIDE

Breakout force diagram – Backhoe



Breakout force diagram – Loader



Breakout force diagram – Face shovel

