



RICAMBI MACCHINE MOVIMENTO TERRA
TROFARELLLO - TORINO



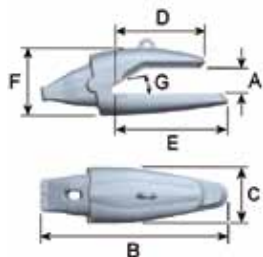
combi wear parts
move the earth

SPECIFICHE

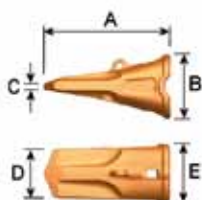
ProClass®



W09 SPECIFICATIONS Teeth, Adapters, Accessories



BE 



GPE 



ML-lock



T-tool



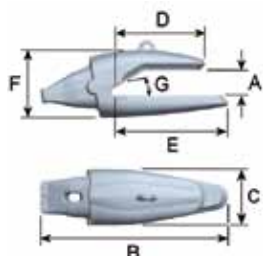
Typical machine weight - Excavator
Maximum breakout force in HD/XHD

25-35 MT
168 kN

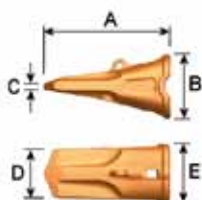
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	709010		14.0	40	42	380	111	131	227	133	10
BE	709011		14.0	50	52	380	111	131	227	133	10
GPE	709100		8.5		286	141	14	103	127		
ML-lock*	709302		0.4		122						
T-tool	700700		1.5								

* Use a 10 mm socket wrench to mount and dismount the mechanical lock 709302.

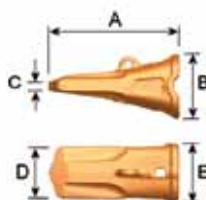
W10 SPECIFICATIONS Teeth, Adapters, Accessories



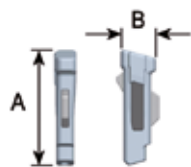
BE 



GPE 



AE 



SL-lock



ML-lock



T-tool



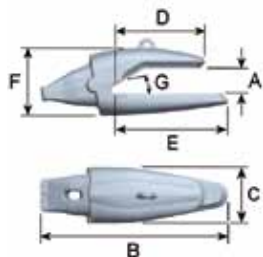
Typical machine weight - Excavator
Maximum breakout force in HD/XHD

35-50 MT
232 kN

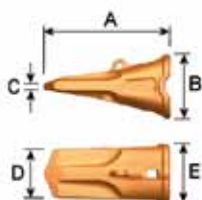
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	710010		25.3	50	52	457	132	184	280	158	10
BE	710011		24.4	60	62	457	132	184	280	158	10
GPE	710100		12.9		324	153	15	120	138		
AE	710110		15.1		334	153	19	129	138		
SL-lock	710301		0.4		124	38					
ML-lock*	710302		0.5		122						
T-tool	700700		1.5								

* Use a 11 mm socket wrench to mount and dismount the mechanical lock 710302.

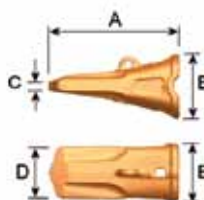
W20 SPECIFICATIONS Teeth, Adapters, Accessories



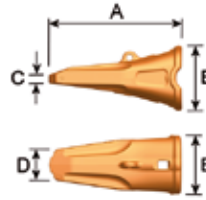
BE



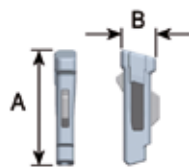
GPE



AE



PE



SL-lock



ML-lock



T-tool

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

40-60 MT
326 kN

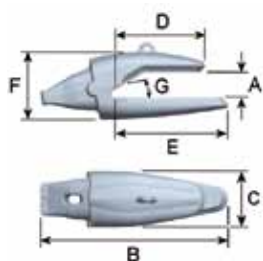
Typical machine weight - Face shovel
Maximum breakout force in HD/XHD

40-80 MT
408 kN

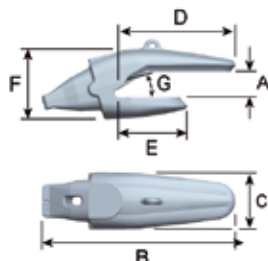
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	720010		41.2	70	72	545	157	227	329	186	10
BE	720011		42.1	60	62	545	157	227	329	186	10
GPE	720100		21.4		376	189	18	139	169		
AE	720110		25.0		387	189	26	148	169		
PE	720120		23.2		404	189	25	87	169		
SL-lock	720301		1.0		146	51					
ML-lock*	720302		0.8		146						
T-tool	700700		1.5								

* Use a 13 mm socket wrench to mount and dismount the mechanical lock 720302.

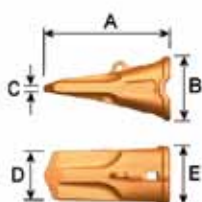
W25 SPECIFICATIONS Teeth, Adapters, Accessories



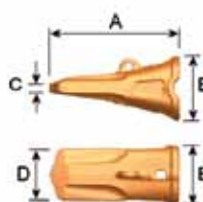
BE



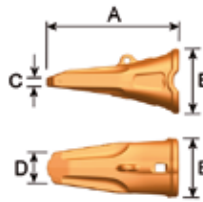
TL



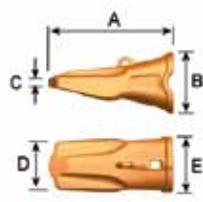
GPE



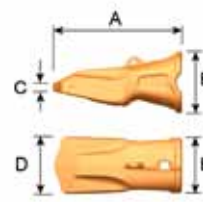
AE



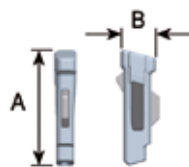
PE



AL



XAL



SL-lock



ML-lock



T-tool



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

50-70 MT
412 kN

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

50-100 MT
515 kN

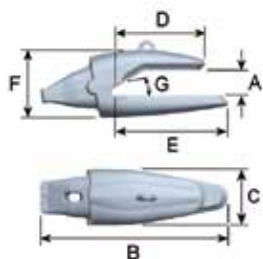
Typical machine weight - Loader
Maximum breakout force in HD/XHD

50-100 MT
736 kN

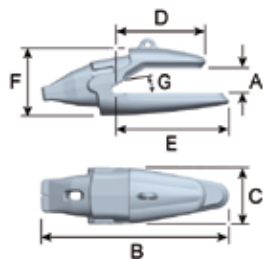
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	725010		52.0	80	82	605	177	204	367	205	10
BE	725011		57.0	70	72	605	177	289	367	207	10
TL	825026		60.5	75	77	619	177	379	216	214	15
GPE	725100		28.0		413	201	20	157	180		
AE	725110		33.5		426	213	28	168	192		
PE	725120		31.5		445	213	28	99	192		
AL	825110		39.0		434	213	28	167	192		
XAL	825111		48.5		443	213	28	197	192		
SL-lock	725301		1.2		160	58					
ML-lock*	725302		1.0		160						
T-tool	700700		1.5								

* Use a 15 mm socket wrench to mount and dismount the mechanical lock 725302.

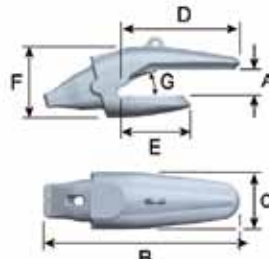
W30 SPECIFICATIONS Teeth, Adapters, Accessories



BE



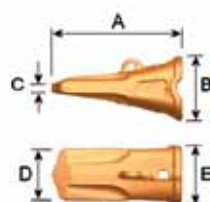
BME



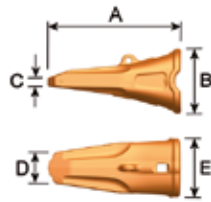
TL



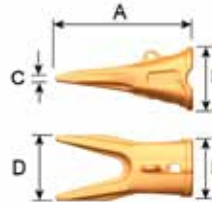
CM



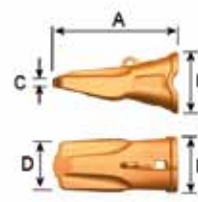
AE



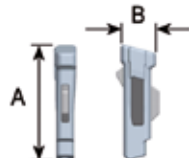
PE



WE



AL



SL-lock



ML-lock



T-tool



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

70-120 MT
506 kN

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

100-120 MT
633 kN

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

100-205 MT
904 kN

Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	730010		85.5	90	92	678	202	317	408	243	10
BME	730012		79.0	90	92	678	202	317	408	238	10
TL	830024		91.0	75	77	695	202	420	244	249	15
TL	830026		91.0	90	92	695	202	420	244	252	15
CM	730501		7.6		213	88	142				
AE	730110		47.3		469	236	31	190	215		
PE	730120		45.5		481	236	30	115	215		
WE	730125		41.0		505	236	20	240	215		
AL	830110		54.5		478	236	31	188	215		
SL-lock	730301		1.5		179	68					
ML-lock*	730302		1.5		180						
T-tool	700700		1.5								

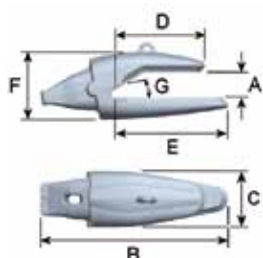
* Use a 17 mm socket wrench to mount and dismount the mechanical lock 730302.

Combi Wear Parts AB
Hantverkargatan 3, Box 205
SE-681 24 Kristinehamn, Sweden
Tel: +46 550 410 550. Fax: +46 550 410 589
www.combiwearparts.com

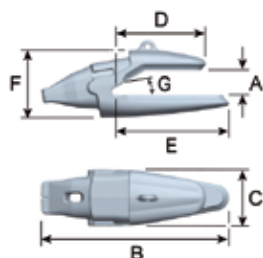


combi wear parts
move the earth

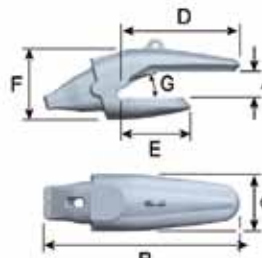
W40 SPECIFICATIONS Teeth, Adapters, Accessories



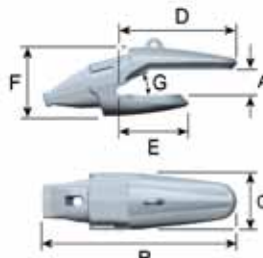
BE



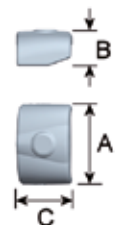
BME



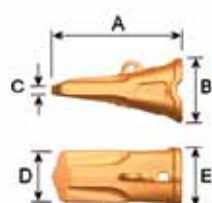
TL



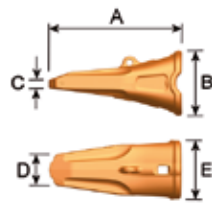
MTL



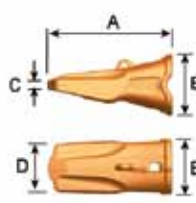
CM



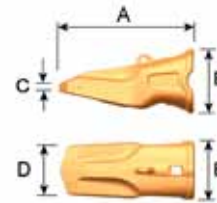
AE



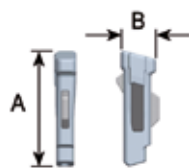
PE



AL



XAL



SL-lock



ML-lock



T-tool

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

120-200 MT
623 kN

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

120-300 MT
779 kN

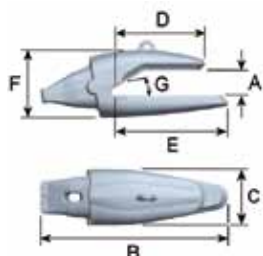
Typical machine weight - Loader
Maximum breakout force in HD/XHD

>205 MT
1113 kN

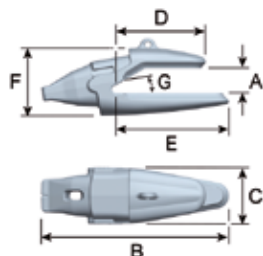
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	740010		122.0	100	102	760	226	364	457	274	10
BME	740012		114.0	100	102	760	226	364	457	274	10
BE	740014		146.0	120	123	814	226	394	498	294	10
BME	740015		137.0	120	123	814	226	394	498	294	10
TL	840026		127.0	100	103	774	226	465	273	281	15
MTL	840027		122.0	100	103	774	226	465	273	282	15
CM	740501		12.9		238	100	161				
AE	740110		64.3		521	262	34	210	238		
PE	740120		59.5		534	262	33	129	238		
AL	840110		74.0		531	262	34	208	238		
XAL	840111		85.9		543	262	34	201	238		
SL-lock	740301		2.0		200	75					
ML-lock*	740302		2.3		200						
T-tool	700700		1.5								

* Use a 19 mm socket wrench to mount and dismount the mechanical lock 740302.

W50 SPECIFICATIONS Teeth, Adapters, Accessories



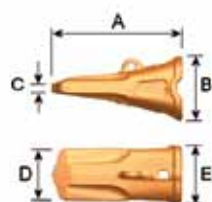
BE



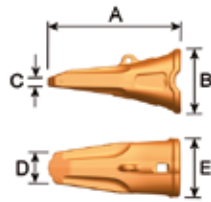
BME



CM



AE



PE



ML-lock



T-tool



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

180-250 MT
761 kN

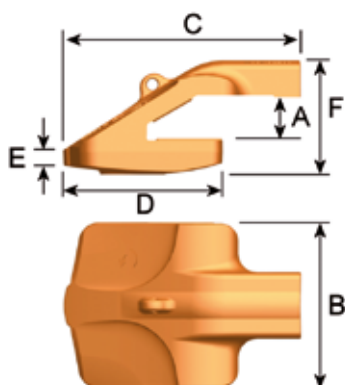
Typical machine weight - Face shovel
Maximum breakout force in HD/XHD

180-360 MT
951 kN

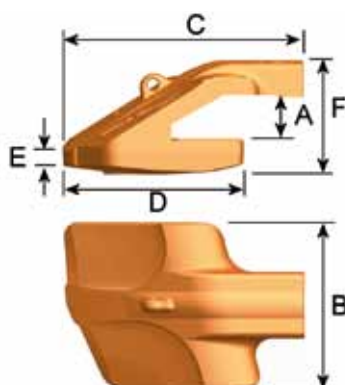
Type	Part. no		Weight kg	Lip thickness mm	A mm	B mm	C mm	D mm	E mm	F mm	G nose angle°
BE	750010		171	120	123	831	248	394	498	301	10
BME	750012		161	120	123	831	248	394	498	301	10
CM	750501		16		261	110	181				
AE	750110		87		570	287	37	231	262		
PE	750120		81		584	287	36	142	262		
ML-lock*	750302		2.8		220						
T-tool	700700		1.5								

* Use a 19 mm socket wrench to mount and dismount the mechanical lock 750302.

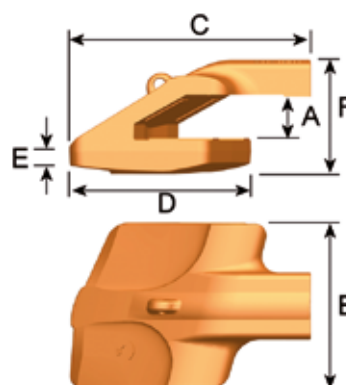
Lip Shroud 75 mm SPECIFICATIONS



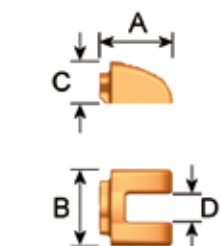
MSCL 



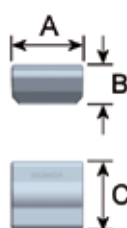
MSLL 



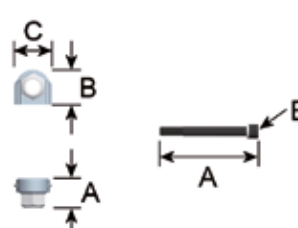
MSRL 



MSP 



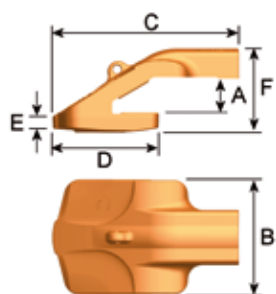
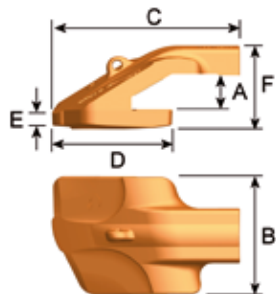
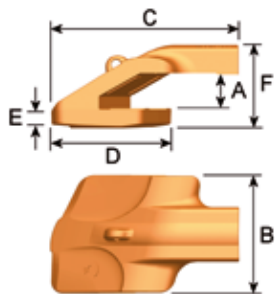
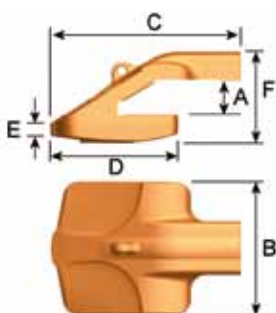
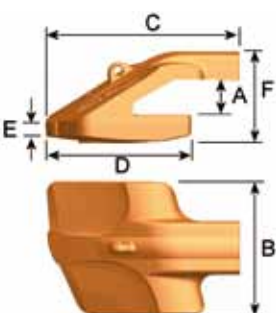
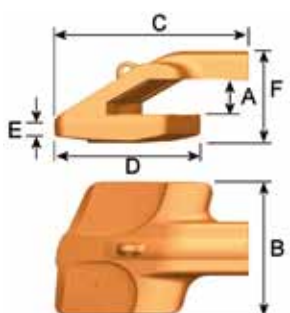
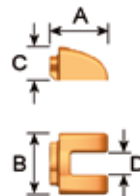
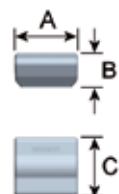
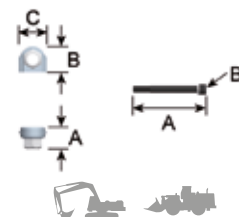
WSR 



SL, Washer, Bolt 

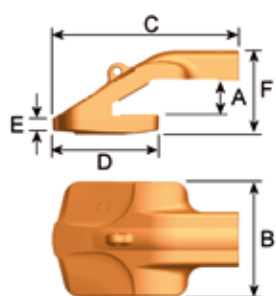
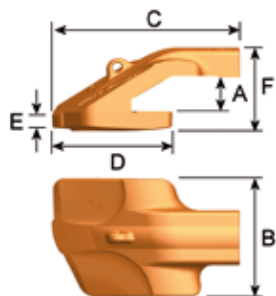
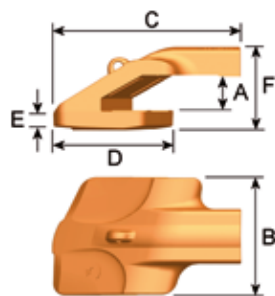
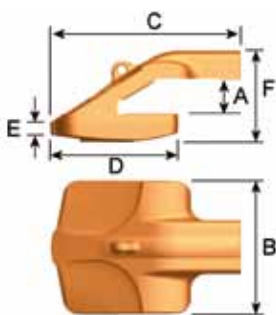
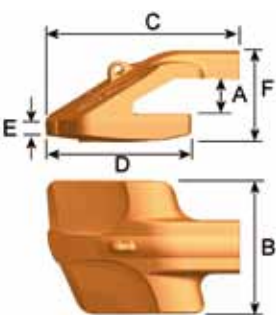
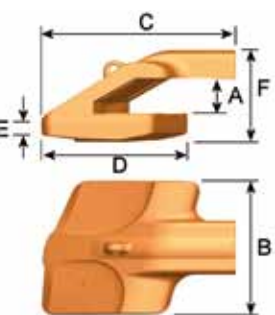
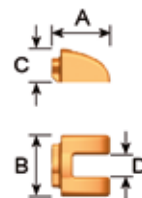
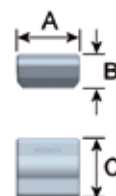
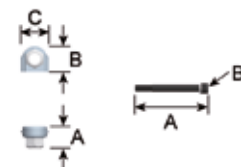
Type	Part. no		Angle °	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm
MSCL	800401		0°	121,2	77	370	527	354	34	238
MSLL	800402		15°	121,2	77	370	532	354	34	238
MSRL	800403		15°	121,2	77	370	532	354	34	238
MSP	700424			6,5	140	148	54	54		
WSR	700413			3,3	110	60	105			
SL	700303			0,4	51	60	68			
Washer	700330									
Bolt	700350			1,3						

Lip Shroud 90 mm SPECIFICATIONS


MSCE 

MSLE 

MSRE 

MSCL 

MSLL 

MSRL 

MSP  

WSR  

SL, Washer, Bolt

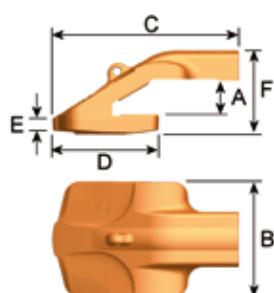
Type	Part. no		Angle °	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm
MSCE	700404		0°	80.0	93	320	506	288	32	228
MSLE	700405		15°	80.0	93	320	511	288	32	228
MSRE	700406		15°	80.0	93	320	511	288	32	228
MSCE	700434		0°	72.0	93	274	506	288	32	228
MSCL	800404		0°	118.5	93	370	527	354	34	253
MSLL	800405		15°	118.5	93	370	532	354	34	253
MSRL	800406		15°	118.5	93	370	532	354	34	253
MSP	700424			6.5	140	148	82	54		
WSR	700413			3.3	110	60	105			
SL	700303			0.4	51	60	68			
Washer	700330									
Bolt	700350			1.3	260					

Lip Shroud 100 mm SPECIFICATIONS

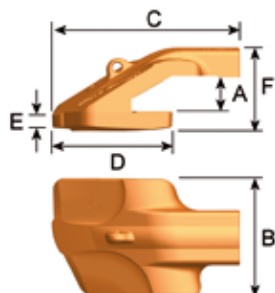

MSCE

MSLE

MSRE

MSCL

MSLL

MSRL

MSP

VWSR

SL, Washer, Bolt

Type	Part. no		Angle °	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm
MSCE	700407		0°	110	103	350	565	323	36	256
MSLE	700408		15°	110	103	350	571	323	36	256
MSRE	700409		15°	110	103	350	571	323	36	256
MSCE	700437		0°	94.5	103	290	565	323	36	256
MSCL	800407		0°	169	103	420	596	402	38	283
MSLL	800408		15°	169	103	420	604	402	38	283
MSRL	800409		15°	169	103	420	604	402	38	283
MSP	700425			9.2	158	166	92	60		
VWSR	700414			4.8	124	67	120			
SL	700304			0.4	56	66	72			
Washer	700331									
Bolt	700351			1.8	290					

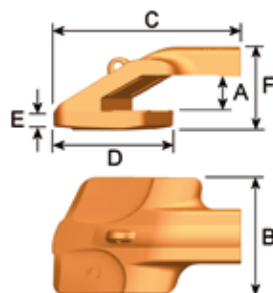
Lip Shroud 120 mm SPECIFICATIONS



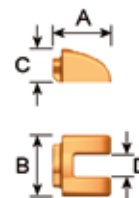
MSCE 



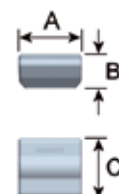
MSLE 



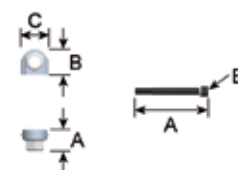
MSRE 



MSP 



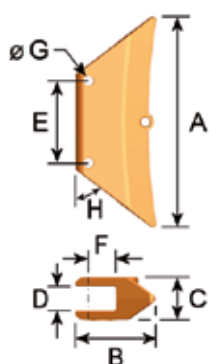
WSR 



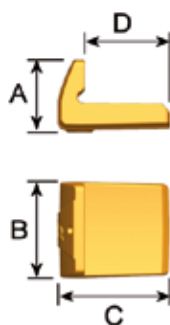
SL, Washer, Bolt 

Type	Part. no		Angle °	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm
MSCE	700410		0°	153	123	395	645	355	39	292
MSLE	700411		15°	153	123	395	651	355	39	292
MSRE	700412		15°	153	123	395	651	355	39	292
MSCE	700440		0°	130	123	335	645	355	39	292
MSP	700426			13.4	174	183	102	66		
WSR	700415			7.0	146	74	133			
SL	700304			0.4	56	66	72			
Washer	700332									
Bolt	700352			2.0	320					

Shroud SPECIFICATIONS



Side shroud
SSM



Heel shroud
WHS



Pin and ring



Type	Part. no	 	Plate thickness mm	Weight kg	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H °
SSM *1	700602	 	50.0	28.0	500	189	98	52	190	64	23	53
SSM *2	700601	 	63.5	41.0	564	215	115	65	220	75	27	53
SSM *2	700603	 	60.0	41.0	564	215	115	63	220	75	27	53
Pin	700321	 	50.0									
Pin	700320	 	60.0/63.5									
Ring	700360	 	50									
Ring	700361	 	60.0/63.5									
WHS	700651	 		15.0	130	180	210	160				
WHS	700652	 		20.0	150	180	240	180				
WHS	700653	 		37.0	199	250	300	236				

*1 used together with 700321 and 700360.

*2 used together with 700320 and 700361.

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combi wear parts
move the earth

EXCAVATOR TEETH AND ADAPTERS

ADAPTER

BE

Standard bottom leg adapter. Low profile design, improved flow of material in and out of bucket.

BME

Bottom leg adapter with a mechanical wear cap. The top of the adapter is well protected against excess wear.

WEAR CAP

CM

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

LOCK

SL

Standard lock provides easy and secure tooth replacement. The vulcanized rubber core provides a strong and tight fit.

ML

Mechanical lock for safer mounting and dismounting procedure

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.

PE

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

GPE

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

WE

Penetration tooth for hard surface layers and compact terrain.

TOOL

T

Tool for mounting and dismounting the locking device. Simplifies the change of teeth and is recommended for safety reasons.

LOADER TEETH AND ADAPTERS

ADAPTER		LOCK	
TL	SL	ML	
Standard top leg adapter. Low profile design, improved flow of material in and out of bucket.	Standard lock provides easy and secure tooth replacement. The vulcanized rubber core provides a strong and tight fit.	Mechanical lock for safer mounting and dismounting procedure	
TOOTH		TOOL	
AL	XAL	T	
Standard tooth which offers good penetration. Optimal in both general and highly abrasive environments.	Abrasion tooth for highly abrasive soils and rocks such as granite, basalt and sandstone. The design provides maximal wear material with maintained good penetration.	Tool for mounting and dismounting the locking device. Simplifies the change of teeth and is recommended for safety reasons.	

SHROUDS EXCAVATOR & LOADER

LIP SHROUD

MSC	MSL	MSR	MSP
Mechanical lip shroud Center For straight edges and for use in combination with MSL & MSR on spade nose buckets. Provides full lip protection between adapters in abrasive applications.	Mechanical lip shroud Left* 15° angle for delta and spade nose buckets. * Left from excavating direction.	Mechanical lip shroud Right* 15° angle for delta and spade nose buckets. * Right from excavating direction.	Mechanical shroud protector designed to protect the locking device and the backside of the shrouds.

RAIL	LOCKING PARTS	SIDE SHROUD	PIN AND RING
WSR Welded on shroud rail holds the lip shrouds in secure position.	Shroud Lock, Bolt and Washer Self tightening lock, bolt and washer for the mechanical shroud.	SSM Mechanical side shroud is used to protect the bucket side plates and fastened with pin and ring.	PIN AND RING Locking pin and ring for the side shroud.

HEEL SHROUD

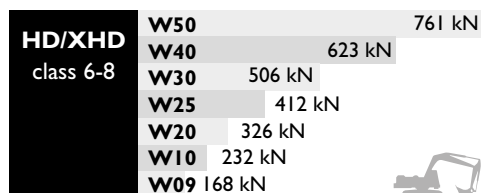
WHS
Welded on heel shroud provides excellent wear protection of the lower outside corner of all types of buckets.

APPLICATION TABLE

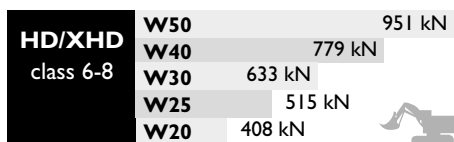
APPLICATION TABLE Based on DIN 18300 ground classification			
Ground classification	Description of ground conditions	Working conditions	Application
Class 1 Top soil without stones	Top layer of soil.	Very little wear. Very little penetration resistance. No impact resistance.	GP
Class 2 Wet ground	Sludge, 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. 60 mm	Moderate wear. Little penetration resistance. No impact resistance.	GP
Class 4 Moderately heavy ground	Very stony ground, gravel, stones. Stone size above 60 mm.	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. 200 mm.	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. 200 mm or bigger.	Usually considerable wear. Considerable penetration resistance. Considerable impact and break through resistance.	XHD
Class 8 Heavy rock	Blasted rock, size over 0,1 m 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.

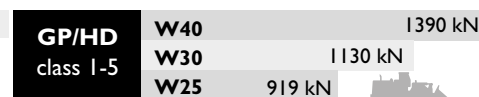
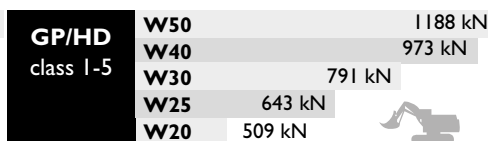
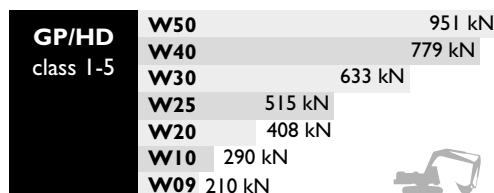
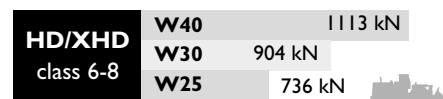
Breakout force diagram – Backhoe



Breakout force diagram – Face shovel



Breakout force diagram



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