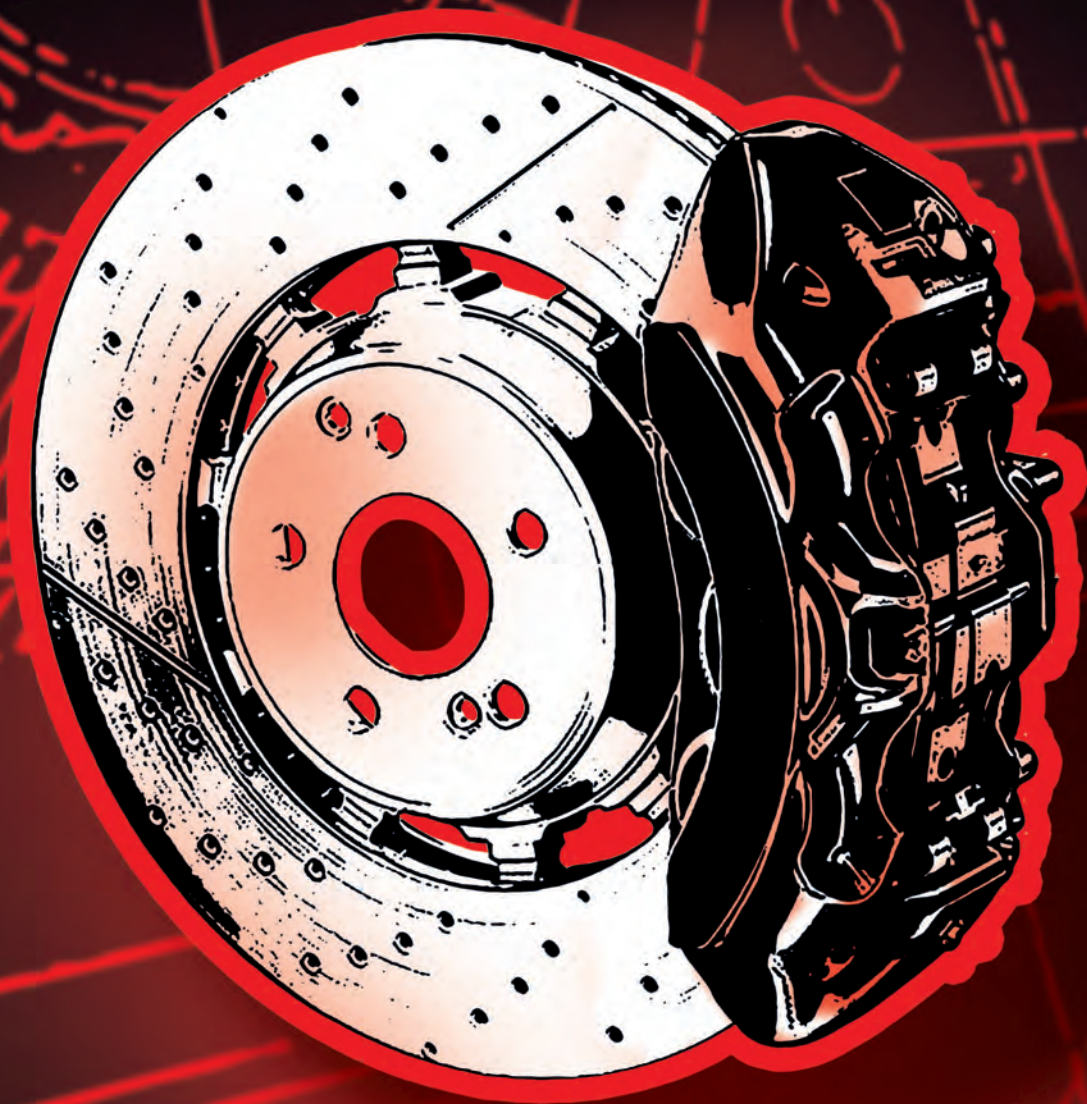


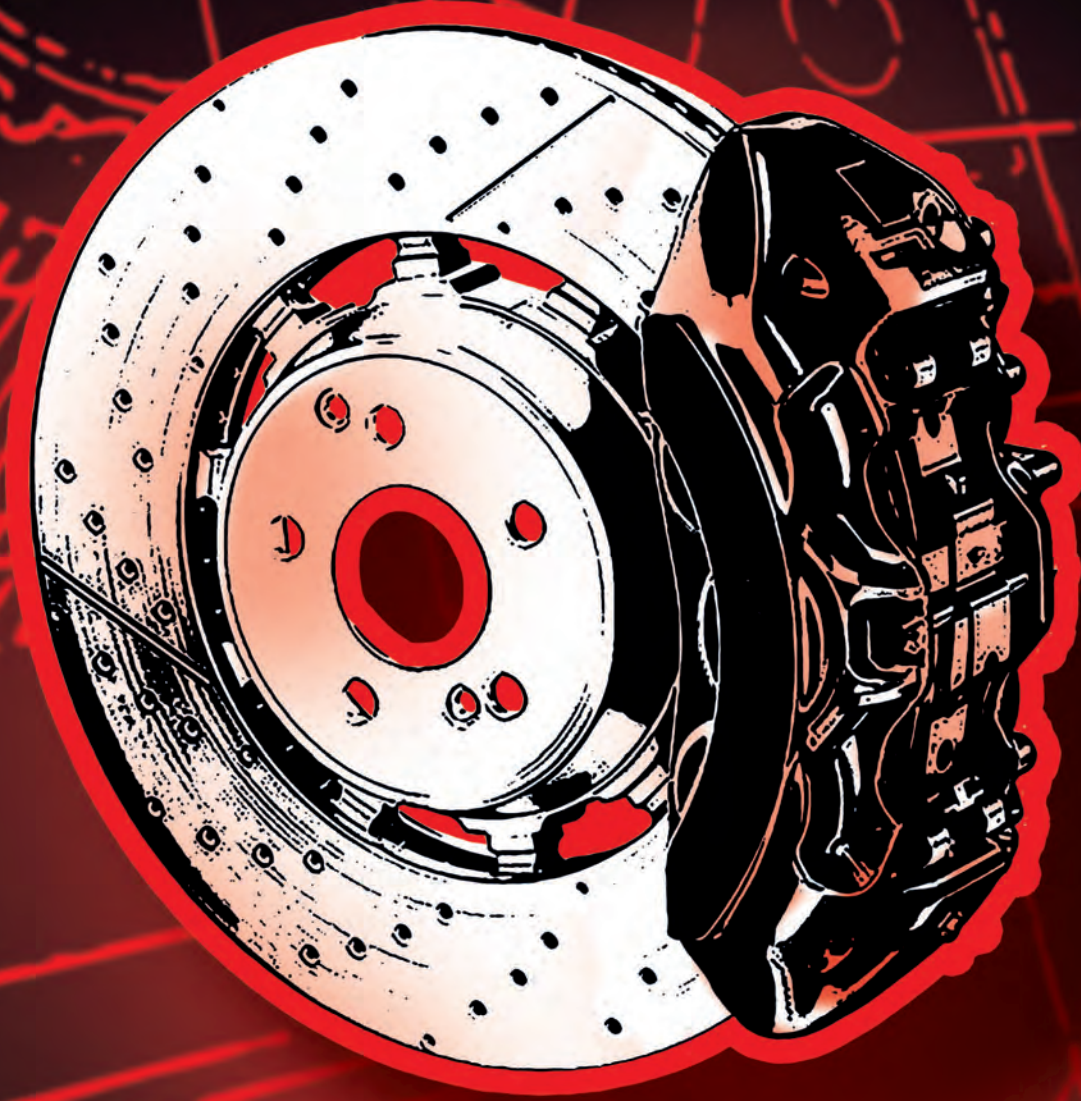
K15



KS TOOLS



BRAKE SERVICE



Innovation is
our mission!

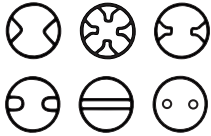


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BRAKE PISTON RESET TOOL

Universal brake piston resetting dice

- Universal usage: suitable for almost all common vehicles
- Ideally suited to pulling back the brake piston on the braking system with hand brake securer
- Internal square drive to DIN 3120/ISO 1174
- Special steel



3/8"

	Length mm	Width mm	Height mm	
150.2222	95.0	33.0	170.0	90



Brake piston resetting tool, small

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with two pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special steel



	Min span width mm	Max span width mm	Height mm	Length mm	
150.2056	13.0	70.0	125.0	260.0	875

Brake piston resetting tool, large

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with four pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special steel



	Min span width mm	Max span width mm	Height mm	Length mm	
150.2057	13.0	70.0	115.0	260.0	1.70

Brake piston re-setter gun

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output with one-hand operation
- Rotatable 360°
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers with a single piston and fixed callipers with two pistons
- High stability and closing tightness thanks to the hardened plates and guide bolts
- High precision guarantees an easy and durable use
- Special steel



	Min span width mm	Max span width mm	Height mm	Length mm	
150.2193	27.0	75.0	220.0	260.0	1.35

Ratchet brake piston re-setter, reversible

- Universal usage: suitable for almost all common vehicle types without integrated hand brake securing device
- Ideally suited to damage-free resetting of the brake disc piston
- Lower force output due to spindle operation with reversible ratchet mechanism
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Ideally suited to floating callipers and fixed callipers: adjustable to brake calliper shape and number of pistons
- High stability and closing tightness thanks to the hardened plates
- High precision guarantees an easy and durable use
- With PVC dipped handle
- Special steel



	Length mm	Operation range mm	
150.2194	280.0	40.0 - 68.0	830

Left-turning spindle for brake piston adapter

- With left handed thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal pin adapter
- Without retaining plates
- Special steel



	L mm	
150.2036	155.0	360

Right-turning spindle for brake piston adapter

- With right handed thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal pin adapter
- Without retaining plates
- Special steel



	L mm	
150.2001	155.0	360

2 in 1 right and left-turning spindle for brake piston adapter

- By reinserting with left or right thread
- Complementary for brake pistons, pressure and turning device adapters
- With universal square attachment
- With retaining plate
- Special steel



		Length mm	
150.1966	3 pcs	155.0	650

consists of:

150.1964	2 in 1 right and left-turning spindle with t-handle	410
150.2064	Counter plate #11, Ø 90 mm	91
150.2007	3/8" brake piston tool adapter with magnet	60

Universal brake piston re-setter tool set

- With individually adjustable 2-pin universal brake piston adapter
- Ideally suited to pulling pack (pulling or pushing) the brake piston on floating brake calliper systems with or without hand brake securing devices
- With 2-way spindle via reinserting with left and right thread
- Lower force output due to spindle operation
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Spindle with universal square attachment
- Includes universal pin adapter
- Insert made from high quality foam



150.1965	4 pcs Universal brake piston re-setter tool set	800

consists of:

150.1964	2 in 1 right and left-turning spindle with t-handle	410
150.2064	Counter plate #11, Ø 90 mm	91
150.2007	3/8" brake piston tool adapter with magnet	60
150.1967	Universal adapter, adjustable with 2 pins	100

Pneumatic spindle for brake piston adaptor

- Ideally suited to damage-free resetting of the brake piston
- Right and left-turning
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- With universal pin adapter with magnetic spindle adapter plate
- Optimal grip due to rubber coated control lever
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Aluminium housing
- Special steel spindle
- Includes 1/4" coupling connector



		L mm	3/8" Extension square adaptor	
150.2039		260.0	150.2041	2.85

Universal brake piston re-setter tool set with pneumatic spindle

- With individually adjustable 2-pin and 3-pin universal brake piston adapter
- Ideally suited to damage-free resetting of the brake piston
- Right and left-turning
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- With universal pin adapter with magnetic spindle adapter plate
- Optimal grip due to rubber coated control lever
- Allows for a central resetting of the brake piston without tilting
- No damage to sleeves, pistons of piston holes in the brake calliper
- Removes misuse of other tools
- Whilst carrying out maintenance work and when changing the brake pads it is necessary to push the brake pistons back into the brake calliper
- Aluminium housing
- Special steel spindle
- Includes 1/4" coupling connector



150.1925	3 pcs Universal brake piston re-setter tool set with pneumatic spindle	3.13

consists of:

150.2039	Pneumatic spindle for brake piston adapter, 260 mm	2850
150.1926	Universal 2-pin adapter	117
150.1927	Universal 3-pin adapter	161

Brake piston re-setter tool set

- Clockwise
- For the winding back of the brake piston
- Adaptor plates with nosings for borings in the brake piston
- Numerical adaptor plates enable good allocation
- Magnetic spindle drive plate
- Includes stepped adaptor plate for front axles
- Can be used on the front and rear making the work easy
- Fine sandblasted surface
- Special steel
- In durable plastic storage case

Application range:

- 0 - General Motors
- 2 - Citroen XM, Xantia, etc.
- 3 - Alfa Romeo, Audi, Austin, BMW, Ford, Honda, Jaguar
- 4 - Alfa Romeo 164 2.0, Ford, Mazda, Saab 9000, Subaru
- 5 - Adaptor with 3/8" square drive
- 6 - Nissan Primera, Volkswagen Golf IV
- 7 - Audi 80/90/100/V8, Ford Sierra ABS + Scorpio after 85, Honda Prelude, Nissan Silvia 1.8 Turbo, Rover
- 8 - General Motors
- 9 - General Motors
- G - Opel Astra
- Z - Renault
- M - Ford
- N - Saab Honda



150.2015	15 pcs Brake piston re-setter tool set	2.00

consists of:

150.2001	Clockwise spindle, 155mm	360
150.2002	Piston windback adaptor#0, Ø 63mm	105
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2, Ø 51mm	40
150.2005	Brake piston tool adaptor 3, Ø 54mm	45
150.2006	Brake piston tool adaptor 4, Ø 32mm	60
150.2007	Brake piston tool adaptor 5, Ø 35mm	60
150.2008	Brake piston tool adaptor 6, Ø 42mm	68
150.2009	Brake piston tool adaptor 7, Ø 42mm	84
150.2010	Piston windback adaptor#8, Ø 47mm	46
150.2011	Piston windback adaptor#9, Ø 54mm	46
150.2013	Brake piston adaptor tool G, Ø 30mm	84
150.2016	Brake piston adaptor tool M, Ø 32mm	60
150.2017	Piston windback adaptor#4, Ø 32mm	60
150.2012	Piston windback adaptor#Z, Ø 30mm	80

Brake piston re-setter tool set

- Clockwise and anticlockwise
- For the winding back of the brake piston
- Adaptor plates with nosings for borings in the brake piston
- Numerical adaptor plates enable good allocation
- Magnetic spindle drive plate
- Includes stepped adaptor plate for front axles
- Can be used on the front and rear making the work easy
- Fine sandblasted surface
- Special steel
- In durable plastic storage case

Application range:

- 0 - General Motors
- 2 - Citroën XM, Xantia, etc.
- 3 - Alfa Romeo, Audi, Austin, BMW, Ford, Honda, Jaguar, Mercedes Benz, Mitsubishi, Nissan, Rover, Toyota, Volkswagen
- 4 - Alfa Romeo 164 2.0, Ford, Mazda, Saab 9000, Subaru
- 5 - Adaptor with 3/8" square drive
- 6 - Nissan Primera, Volkswagen Golf IV
- 7 - Audi 80/90/100/V8, Ford Sierra ABS + Scorpio after 85, Honda Prelude, Nissan, Silvia 1.8 Turbo, Rover 8000, Saab 9000, Subaru L+Z, Volkswagen Golf + Passat
- 8 - General Motors
- 9 - General Motors
- G - Opel Astra
- Z - Renault
- M - Ford
- N - Saab Honda
- K - Citroën
- E - Nissan Maxima



kg			
150.2035	18 pcs	Brake piston re-setter tool set	2.10

consists of:

kg		
150.2001	Clockwise spindle, 155mm	360
150.2036	Anti-clockwise spindle, 155mm	360
150.2002	Piston windback adaptor #0, Ø 63mm	105
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2, Ø 51mm	40
150.2005	Brake piston tool adaptor 3, Ø 54mm	45
150.2006	Brake piston tool adaptor 4, Ø 32mm	60
150.2007	Brake piston tool adaptor 5, Ø 35mm	60
150.2008	Brake piston tool adaptor 6, Ø 42mm	68
150.2009	Brake piston tool adaptor 7, Ø 42mm	84
150.2010	Piston windback adaptor #8, Ø 47mm	46
150.2011	Piston windback adaptor #9, Ø 54mm	46
150.2019	Brake piston adaptor tool E	60
150.2013	Brake piston adaptor tool G, Ø 30mm	84
150.2018	Piston windback adaptor #K	60
150.2016	Brake piston adaptor tool M, Ø 32mm	60
150.2017	Piston windback adaptor #4, Ø 32mm	60
150.2012	Piston windback adaptor #Z, Ø 30mm	80

Brake piston re-setter tool set with pneumatic spindle

- Right and left-turning
- Ideally suited to damage-free resetting of the brake piston
- The turning direction is set by the user via the angle piece at the end of the spindle
- Automatic balancing of different thread slopes with the continuous spindle
- Comfortable and fast working through pneumatic spindle
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- With universal pin adapter with magnetic spindle adapter plate
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special steel
- In durable plastic storage case

Application range:

- 0 - General Motors
- 2 - Citroën XM, Xantia, among others.
- 3 - Alfa Romeo, Audi, Austin, BMW, Ford, Honda, Jaguar, Mercedes, Mitsubishi, Nissan, Rover, Toyota, Volkswagen
- 4 - Alfa Romeo 164 2.0, Ford, Mazda, Saab 9000, Subaru
- 5 - Adapter wit 3/8" internal square
- 6 - Nissan Primera, Volkswagen Golf IV
- 7 - Audi, Ford, Honda Prelude, Nissan Silvia 1.8 Turbo, Rover 8000, Saab 9000, Subaru L+Z, Volkswagen Golf + Passat
- 8 - General Motors
- 9 - General Motors
- G - Opel Astra
- Z - Renault
- M - Ford
- N - Saab Honda
- K - Citroën
- E - Nissan Maxima
- K1 - Citroën
- K2 - Citroën / Renault



kg			
150.2000	18 pcs	Brake piston re-setter tool set with pneumatic spindle	3.35

kg		
150.2039	Pneumatic brake piston windback tool	2850
150.2002	Piston windback adaptor #0, Ø 63mm	105
150.2004	Brake piston tool adaptor 2, Ø 51mm	40
150.2005	Brake piston tool adaptor 3, Ø 54mm	45
150.2006	Brake piston tool adaptor 4, Ø 32mm	60
150.2007	Brake piston tool adaptor 5, Ø 35mm	60
150.2008	Brake piston tool adaptor 6, Ø 42mm	68
150.2009	Brake piston tool adaptor 7, Ø 42mm	84
150.2010	Piston windback adaptor #8, Ø 47mm	46
150.2011	Piston windback adaptor #9, Ø 54mm	46
150.2012	Piston windback adaptor #Z, Ø 30mm	80
150.2013	Brake piston adaptor tool G, Ø 30mm	84
150.2016	Brake piston adaptor tool M, Ø 32mm	60
150.2017	Piston windback adaptor #4, Ø 32mm	60
150.2018	Piston windback adaptor #K	60
150.2019	Brake piston adaptor tool E	60
150.2037	Brake piston adaptor tool K1, Ø 54mm	60
150.2038	Brake piston adaptor tool K2, Ø 45mm	50

Brake piston re-setter tool set

- Right and left-turning
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Sandblasted surface
- Special steel
- In durable plastic storage case


Application range:

- 0 - General Motors
- 1 - Retaining plate closed angled
- 2 - Citroën XM, Xantia, among others.
- 3 - Alfa Romeo, Audi, Austin, BMW, Ford, Honda, Jaguar, Mercedes, Mitsubishi, Nissan, Rover, Toyota, Volkswagen
- 4 - Alfa Romeo 164 2.0, Ford, Mazda, Saab 9000, Subaru
- 5 - Adapter wit 3/4" internal square
- 6 - Nissan Primera, Volkswagen Golf IV
- 7 - Audi 80/90/100/V8, Ford Sierra ABS + Scorpio from 85, Honda Prelude, Nissan, Silvia 1.8 Turbo, Rover 8000, Saab 9000, Subaru L+Z, Volkswagen Golf + Passat
- G - Opel Astra
- 12 - Retaining plate open cornered
- M - Ford
- E - Nissan Maxima
- B - Ford USA; Lincoln Continental; Subaru
- K1 - Citroën
- K2 - Audi A8, S8 (from 99-)
- C - Nissan Primera; Opel Vectra (from 02-); Toyota Avensis
- D - Citroën BX (from 83), BX 16V (from 88-)
- F - Peugeot 206 (from 03)
- J - Alfa Romeo; Audi; Citroën; Fiat; Ford; Honda; Jaguar; Lancia; Nissan; Peugeot; Renault; Rover; Saab; Seat; Subaru; Volkswagen
- X - Alfa Romeo 164 2.0 Twin Spark, 2.0 Turbo, 3.0 V6; Audi 200; Ford Mondeo 2.0 Ghia; Lancia Thamaal
- P - Citroën C3
- Q - Alfa Romeo 164 2.0; Fiat Uno, Turbo ie-Barchetta; Ford Escort MK, Orion; Honda; Rover; Subaru
- 11 - Retaining plate open angled
- R - Ford Australia; Mazda 323 Gti, GTX, 929, RX7, 626 16V, 626 GT, 929 V6; Mitsubishi Galant GL Si; Toyota Celicia, Corolla GT, MR2
- S - Audi 100; BMW 740i (from 91); Lancia Delta 1.9TD; Proton 416; Renault Laguna, Safrane; Rover 623 Si; Volkswagen Golf Gti Mk, Passat VR6, Vento GT
- T - Rover 220 C Turbo (from 95)
- V - Rover 216 Gti 16V, 820 Si 2.0 (from 93), 825 SD 2.5 (from 93)
- A - Nissan Primera 2.0 Bluebird; Opel Astra C, Zafira; Toyota
- Z - BMW Mini



kg			
150.2030	30 pcs	Brake piston re-setter tool set	3.30

kg		
150.2001	Clockwise spindle, 155mm	360
150.2036	Anti-clockwise spindle, 155mm	360
150.2064	Counter plate 11, Ø 90mm	91
150.2014	Counter plate 12, Ø 80mm	110
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2, Ø 51mm	40
150.2005	Brake piston tool adaptor 3, Ø 54mm	45
150.2006	Brake piston tool adaptor 4, Ø 32mm	60
150.2007	Brake piston tool adaptor 5, Ø 35mm	60


		
150.2008	Brake piston tool adaptor 6, Ø 42mm	68
150.2009	Brake piston tool adaptor 7, Ø 42mm	84
150.2074	Brake piston adaptor tool A, Ø 42mm	80
150.2034	Brake piston adaptor tool B, Ø 38mm	70
150.2048	Brake piston adaptor tool C, Ø 38mm	40
150.2051	Brake piston adaptor tool D, Ø 52mm	200
150.2019	Brake piston adaptor tool E	60
150.2013	Brake piston adaptor tool G, Ø 30mm	84
150.2052	Brake piston adaptor tool F, Ø 35mm	90
150.2053	Brake piston adaptor tool J, Ø 42mm	80
150.2037	Brake piston adaptor tool K1, Ø 54mm	60
150.2038	Brake piston adaptor tool K2, Ø 45mm	50
150.2016	Brake piston adaptor tool M, Ø 32mm	60
150.2059	Brake piston adaptor tool P, Ø 52mm	70
150.2062	Brake piston adaptor tool Q, Ø 30mm	40
150.2069	Brake piston adaptor tool R, Ø 35mm	50
150.2071	Brake piston adaptor tool S, Ø 40mm	50
150.2072	Brake piston adaptor tool T, Ø 25mm	60
150.2073	Brake piston adaptor tool V, Ø 40mm	90
150.2054	Piston windback adaptor#X, Ø 30mm	50
150.2099	Brake piston adaptor tool Z, Ø 28mm	40

Brake piston re-setter tool set

- Right and left-turning
- Ideally suited to pulling back the brake piston
- Adapter plates with carriers for borings in the brake piston
- Numerical adapter plates enable good allocation
- Magnetic spindle attachment plate
- Includes adapter attachment for 3/8" ratchet
- Includes stepped adapter plate for front axles
- Priority usage on disk braking rear axles
- Suitable for Bendix, Girling and Smart braking systems
- With 3 interchangeable retaining plates, 2 of which are open, for use with very worn brake pads or tight spaces; with the plates it is possible to construct together in the brake calliper
- Sandblasted surface
- Special steel
- In durable plastic storage case

Application range:

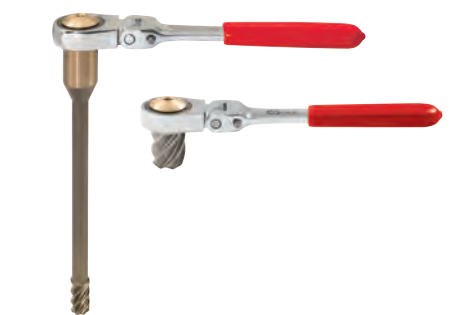
- 0 - General Motors
- 1 - Retaining plate closed angled
- 2 - Citroën XM, Xantia, among others.
- 3 - Alfa Romeo, Audi, Austin, BMW, Ford, Honda, Jaguar, Mercedes, Mitsubishi, Nissan, Rover, Toyota, Volkswagen
- 4 - Alfa Romeo 164 2.0, Ford, Mazda, Saab 9000, Subaru
- 5 - Adapter wit 3/4" internal square
- 6 - Nissan Primera, Volkswagen Golf IV
- 7 - Audi 80/90/100/V8, Ford Sierra ABS + Scorpio from 85, Honda Prelude, Nissan, Silvia 1.8 Turbo, Rover 8000, Saab 9000, Subaru L+Z, Volkswagen Golf + Passat
- 8 - General Motors
- 9 - General Motors
- 11 - Retaining plate open angled
- 12 - Retaining plate open cornered
- A - Nissan Primera 2.0 Bluebird; Opel Astra C, Zafira; Toyota
- B - Ford USA; Lincoln Continental; Subaru
- C - Nissan Primera; Opel Vectra (from 02-); Toyota Avensis
- D - Citroën BX (from 83), BX 16V (from 88-)
- E - Nissan Maxima
- F - Peugeot 206 (from 03)
- G - Opel Astra
- J - Alfa Romeo; Audi; Citroën; Fiat; Ford; Honda; Jaguar; Lancia; Nissan; Peugeot; Renault; Rover; Saab; Seat; Subaru; Volkswagen
- K - Citroën C5
- K1 - Citroën C5
- K2 - Audi A8, S8 (from 99-)
- M - Nissan Primera (from 03-)
- N - Alfa Romeo 164 2.0 Twin Spark; Audi 200, Ford Mondeo; Lancia Themaalte; Volkswagen Golf GTI (from 83-87), Scirocco 16V (from 84)
- P - Citroën C3
- Q - Alfa Romeo 164 2.0; Fiat Uno, Turbo ie-Barchetta; Ford Escort MK, Orion; Honda; Rover; Subaru
- R - Ford Australia; Mazda 323 Gti, GTX, 929, RX7, 626 16V, 626 GT, 929 V6; Mitsubishi Galant GL Si; Toyota Celicia, Corolla GT, MR2
- S - Audi 100; BMW 740i (from 91); Lancia Delta 1.9TD; Proton 416; Renault Laguna, Safrane; Rover 623 Si; Volkswagen Golf Gti Mk, Passat VR6, Vento GT
- T - Rover 220 C Turbo (from 95)
- V - Rover 216 Gti 16V, 820 Si 2.0 (from 93), 825 SD 2.5 (from 93)
- IV - Iveco
- Z - BMW Mini


		
150.2007	Brake piston tool adaptor 5, Ø 35mm	60
150.2008	Brake piston tool adaptor 6, Ø 42mm	68
150.2009	Brake piston tool adaptor 7, Ø 42mm	84
150.1971	Brake piston adaptor tool 8	62
150.1972	Brake piston adaptor tool 9	81
150.2074	Brake piston adaptor tool A, Ø 42mm	80
150.2034	Brake piston adaptor tool B, Ø 38mm	70
150.2048	Brake piston adaptor tool C, Ø 38mm	40
150.2051	Brake piston adaptor tool D, Ø 52mm	200
150.2019	Brake piston adaptor tool E	60
150.2052	Brake piston adaptor tool F, Ø 35mm	90
150.2013	Brake piston adaptor tool G, Ø 30mm	84
150.1978	Brake piston tool adapter #H6	145
150.9494	Hexagon socket angled screwdriver 7,0 mm	100
150.2053	Brake piston adaptor tool J, Ø 42mm	80
150.1975	Brake piston adaptor tool K	82
150.2037	Brake piston adaptor tool K1, Ø 54mm	60
150.2038	Brake piston adaptor tool K2, Ø 45mm	50
150.2016	Brake piston adaptor tool M, Ø 32mm	60
150.1976	Brake piston adaptor tool N	30
150.2059	Brake piston adaptor tool P, Ø 52mm	70
150.1988	Brake piston tool adapter #P3.0	70
150.1989	Brake piston tool adapter #P5.5	68
150.2062	Brake piston adaptor tool Q, Ø 30mm	40
150.2069	Brake piston adaptor tool R, Ø 35mm	50
150.2071	Brake piston adaptor tool S, Ø 40mm	50
150.2072	Brake piston adaptor tool T, Ø 25mm	60
150.2073	Brake piston adaptor tool V, Ø 40mm	90
150.2099	Brake piston adaptor tool Z, Ø 28mm	40
150.2042	Brake piston adaptor tool f.IVECO	50
150.1993	Thread oil from kit 150.1970	105

BRAKE SENSOR CLEANING TOOL


Reamer for ABS sensor with bendable ratchet


- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrossions, etc.
- No damage to the new sensor due to improper insertion or pressing in, etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With integrated, bendable, finely toothed special wrench turning to the right is only possible
- Special steel



	Ø mm	Height mm	Length mm	
150.1981	10,0	100,0	150,0	218
150.1985	15,0	23,0	150,0	180
150.1986	18,0	23,0	150,0	190
150.1987	18,0	34,0	150,0	205



		
150.1970	41 pcs Brake piston re-setter tool set	5.10

		
150.2001	Clockwise spindle, 155mm	360
150.2036	Anti-clockwise spindle, 155mm	360
150.2064	Counter plate 11, Ø 90mm	91
150.2014	Counter plate 12, Ø 80mm	110
150.1974	Brake piston adaptor tool 0-disc	65
150.1973	Brake piston adaptor tool 0	114
150.2003	Brake piston adaptor tool 1	180
150.2004	Brake piston tool adaptor 2, Ø 51mm	40
150.2005	Brake piston tool adaptor 3, Ø 54mm	45
150.2006	Brake piston tool adaptor 4, Ø 32mm	60

Reamer set for ABS sensor with bendable ratchet

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrossions, etc.
- No damage to the new sensor due to improper insertion or pressing in, etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With integrated, bendable, finely toothed special wrench turning to the right is only possible
- Special steel



				g
150.1980	2 pcs	Reamer set for ABS sensor with bendable ratchet	415	

				g
150.1981	Reaming ratchet, 10mm		218	
150.1984	Special drill with roll-pin, 8mm, L=180mm		64	

ABS sensor reamer set

- Suitable for cleaning all guide holes of the ABS sensor in the wheel bearing casing from rust, dirt and corrossions, etc.
- No damage to the new sensor due to improper insertion or pressing in, etc.
- Ensures exact measurement values due to clean and correct positioning of the new sensor
- With the integrated, bendable, fine-toothed special ratchet with quick change function only turning to the right is possible
- Included special borer M10 x 133 mm for boring out corroded and therefore securely fitting sensors
- With various reamers
- Special steel
- In durable plastic storage case



				g
150.2480	7 pcs	ABS sensor reamer set	1.51	

Suitable for		Ø mm	Length mm	g
150.2481	VW Golf V, Polo 9N, Lupo, Passat, T5, Škoda Fabia, Seat Ibiza, Opel Insignia	10	29.2	84
150.2482	BMW E38, E39, E52, E60, E61, E63, E64, E65, E66, E67, E70, E71	14	32.0	27
150.2483	Mercedes A class, Mazda, Ford, Daewoo	15	23.0	22
150.2484	Audi, VW, BMW E36 + E46, Seat, Škoda	18	23.0	33
150.2485	Audi, VW, Seat, Škoda, NFZ	18	34.0	54
150.2486	Borer for boring ABS sensors	10	133.0	50
150.2487	1/4" special joint reamer	-	120.0	142

BRAKE CALLIPER TOOL

Internal square angled pin wrench for brake callipers

- Ideal for the assembly and disassembly of brake callipers
- Universally suited to many vehicle types
- Long design
- Phosphate
- Special steel
- With ribbed aluminium handle



	mm	L1 mm	L2 mm	g
150.1978	6,0	117,0	226,0	145
150.1979	7,0	117,0	226,0	155

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square in accordance with DIN 3120 / ISO 1174
- Short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Renault Laguna rear axle



	mm	D mm	L mm	T mm	g
911.3926	7,0	29,0	38,0	11,0	40

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square in accordance with DIN 3120 / ISO 1174
- Extra slim design
- Short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: for releasing and tightening the hard-to-reach brake calliper screws on Mercedes with SBC braking systems, e.g. E class, SL, CLS etc. when changing the brake pads

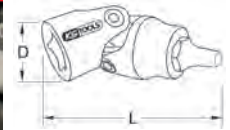


	mm	D mm	L mm	T mm	g
911.3928	7,0	20,0	43,0	13,0	40

Bit socket with joint for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square to DIN 3120/ISO 1174 with ball reception
- Screwed joints
- For manual operation
- Matt finish
- Chrome vanadium

Application range: BMW 3 series, BMW 5 series, BMW 8 series, Opel

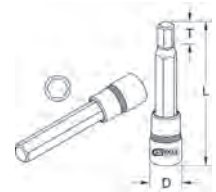


	mm	D mm	L mm	g
911.3904	7,0	19,0	61,0	37

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Extra-long execution
- Ideal for the assembly and disassembly of brake callipers
- In accordance with DIN 7422
- Internal square drive to DIN 3120/ISO 1174 with ball reception
- With press fitted nickel-plated insert bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Volkswagen, Audi, etc.

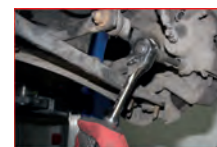


	mm	D mm	L mm	T mm	g
911.5327	7,0	22,0	170,0	10,0	140

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square in accordance with DIN 3120 / ISO 1174
- Short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Mercedes ML (W166)

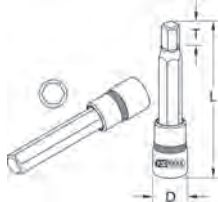


	mm	D mm	L mm	T mm	g
911.3927	11,0	26,0	60,0	17,0	90

Bit socket for internal hexagon screws on the brake calliper

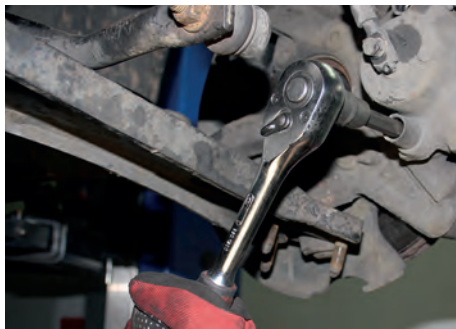
- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- In accordance with DIN 7422
- Internal square drive to DIN 3120/ISO 1174 with ball reception
- Long design
- With press fitted nickel-plated insert bit
- For manual operation
- Matt finish
- Chrome vanadium

Application range: Audi, BMW, Peugeot, Seat, Ford, Renault, Mercedes, Volkswagen, Volvo, etc.



1/2"

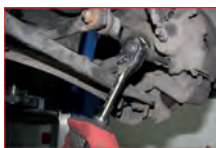
	mm	D mm	L mm	T mm	g
911.1326	6,0	22,0	110,0	72,0	120
911.1327	7,0	22,0	110,0	72,0	120
911.1328	8,0	22,0	110,0	72,0	120
911.1329	9,0	22,0	110,0	72,0	120



Bit socket for TX screws on the brake calliper

- TX
- Ideal for the assembly and disassembly of brake callipers
- Internal square in accordance with DIN 3120 / ISO 1174
- Extra slim design
- Short design
- For manual operation
- Matt finish
- Chrome vanadium

Application range: for releasing and tightening the hard-to-reach brake calliper screws on Mercedes with SBC braking systems, e.g. E class, SL, CLS etc. when changing the brake pads



3/8"

	D mm	L mm	T mm	g	
911.3929	T40	20,0	43,0	13,0	40

Bit socket set for internal hexagon screws on the brake calliper with bendable ratchet

- Ideally suited to the assembly and disassembly of guide bolts in narrow spaces around the brake calliper
- Ideally suited to the guide bolts on fixed callipers
- Universal usage with all common sizes
- Allows for safe and comfortable working
- Chrome vanadium



	g	
918.3500	5 pcs Bit socket set for internal hexagon screws on the brake calliper with bendable ratchet	250

consists of:

		g
918.3501	Internal square socket wrench insert, 6 mm	25
918.3502	Internal square socket wrench insert, 7 mm	29
918.3503	Internal square socket wrench insert, 8 mm	33
918.3504	Internal square socket wrench insert, 9 mm	35
918.3507	Joint reset ratchet, 13.0 mm	81

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120/ISO 1174
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Mercedes W204 (C class)



3/8"

	mm	D mm	L mm	T mm	g
150.2227	7	20,0	25,0	6,0	30

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120/ISO 1174
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Audi TT (>2007), Audi A4 (>2001), Audi A6(>2005), Audi A8



3/8"

	mm	D mm	L mm	T mm	g
150.2228	8	20,0	25,0	6,0	30

Bit socket for internal hexagon screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120/ISO 1174
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Mercedes W164 (M class), Mercedes W251 (R class), BMW, Volkswagen T5



3/8"

	mm	D mm	L mm	T mm	g
150.2229	9	20,0	25,0	6,0	30

Bit socket set for internal square screws on the brake calliper

- Hexagon socket
- Ideal for the assembly and disassembly of brake callipers
- Internal square drive to DIN 3120/ISO 1174
- Short design
- For manual operation
- Phosphate
- Chrome vanadium



3/8"

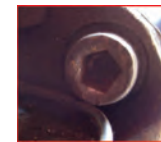
		g
150.2225	3 pcs Bit socket set for internal square screws on the brake calliper	90

	mm	Substitutable for	g
150.2227	7	Mercedes W204 (C class)	30
150.2228	8	Audi TT (>2007), Audi A4 (>2001), Audi A6(>2005), Audi A8	30
150.2229	9	Mercedes W164 (M class), W251 (R class), BMW, VW T5	30

Bit socket for pentagon screws on the brake calliper

- Internal pentagon
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120/ISO 1174 with ball reception
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Citroën, Peugeot, Renault, etc.



1/2"

	Profile	mm	L mm	g
150.2153		10	56,0	90

Socket for pentagon screws on brake calliper

- 5-point
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120/ISO 1174 with ball reception
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Citroën, Peugeot, Renault, etc.



1/2"

	Profile	mm	L mm	g
150.2154		14	40.0	70
150.2155		19	40.0	120

Brake calliper special socket set

- Internal pentagon
- 5-point
- Ideally suited to the disassembly of brake callipers
- Internal square to DIN 3120/ISO 1174 with ball reception
- Short design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Citroën, Peugeot, Renault, etc.



1/2"

			g
150.2140	3 pcs	Brake calliper special socket set	365

		g
150.2153	1/2" brake calliper bit socket internal pentagon, 10 mm	90
150.2154	1/2" brake calliper socket, pentagon, 14 mm	70
150.2155	1/2" brake calliper socket, pentagon, 19 mm	120

Socket for pentagon screws on brake callipers

- 5-point
- Ideally suited to the assembly and disassembly on brake callipers or pistons
- For the installation and removal of the guide pins, if it is rusty
- Internal square drive to DIN 3120/ISO 1174
- Long and thin design
- For manual operation
- Phosphate
- Chrome vanadium

Application range: Smart Fortwo (lower brake calliper securing screws on the front axle)/Opel Astra G, Opel Zafira (brake calliper system on rear axle)



1/2"

	mm	D mm	L mm	T mm	g
515.1101	14	24.0	70.0	10.0	70

Socket for TX screws on the brake disc

- TX
- Ideally suited to the assembly and disassembly of brake disks
- Internal square drive to DIN 3121/ISO 1174
- Long design
- For manual operation
- Phosphate
- Chrome molybdenum

Application range: Ford, GM



3/8"

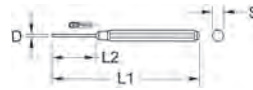
		D mm	L mm	g
515.1581	T40	22.0	52.0	130
515.1582	T45	22.0	52.0	130
515.1583	T50	22.0	52.0	130



COTTER PIN DRIVES

Pin punch

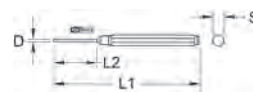
- 8 point
- Quenched and tempered
- Chrome plated and mirror polished
- Highly polished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	g
156.0111	2.0	115.0	30.0	8.0	40
156.0112	3.0	125.0	40.0	8.0	40
156.0113	4.0	150.0	50.0	9.5	60
156.0114	5.0	165.0	50.0	9.5	70
156.0115	6.0	180.0	55.0	12.7	140
156.0116	8.0	180.0	55.0	12.7	150

Pin punch, extra long

- 8 point
- Quenched and tempered
- chrome plated and mirror polished
- Highly polished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	g
156.0121	3.0	200.0	80.0	9.5	70
156.0122	4.0	200.0	85.0	9.5	70
156.0123	5.0	200.0	90.0	9.5	80
156.0124	6.0	200.0	93.0	9.5	80
156.0125	8.0	200.0	93.0	12.7	150
156.0126	10.0	200.0	93.0	12.7	170

Pin punch set

- Quenched and tempered
- Chrome plated and mirror polished
- Highly polished
- Chrome vanadium
- In plastic support bracket



			g
156.0150	6 pcs	115x2 - 125x3 - 150x4 - 165x5 - 180x6 - 180x8 mm	520

Pin punch set

- 8 point
- Quenched and tempered
- Chrome plated and mirror polished
- Highly polished
- Chrome vanadium
- In metal stand with the possibility of wall hanging



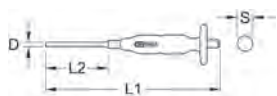
		g	
156.0180	17 pcs	Pin punch set	1.00

consists of:

		g
156.0111	Punch, octagonal, mirror polished, Ø 2mm	40
156.0112	Punch, octagonal, mirror polished, Ø 3mm	40
156.0113	Punch, octagonal, mirror polished, Ø 4mm	60
156.0114	Punch, octagonal, mirror polished, Ø 5mm	70
156.0115	Punch, octagonal, mirror polished, Ø 6mm	140
156.0116	Punch, octagonal, mirror polished, Ø 8mm	150
156.0121	Punch, extra long, octagonal, mirror polished, Ø 3mm	70
156.0122	Punch, extra long, octagonal, mirror polished, Ø 4mm	70
156.0123	Punch, extra long, octagonal, mirror polished, Ø 5mm	80
156.0124	Punch, extra long, octagonal, mirror polished, Ø 6mm	80
156.0125	Punch, extra long, octagonal, mirror polished, Ø 8mm	150
156.0126	Punch, extra long, octagonal, mirror polished, Ø 10mm	170
156.0130	Punch, mirror polished, Ø 2mm	60
156.0131	Punch, mirror polished, Ø 3mm	60
156.0132	Punch, mirror polished, Ø 4mm	60
156.0133	Punch, mirror polished, Ø 5mm	60
156.0134	Punch, mirror polished, Ø 6mm	60

Pin punch, cylindrical shaft

- Quenched and tempered
- Tip can be resharpened
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	🔧
156.0231	3.0	150.0	50.0	8.0	52
156.0232	4.0	180.0	61.0	10.0	93
156.0233	5.0	200.0	61.0	10.0	109
156.0234	6.0	210.0	71.0	12.0	160
156.0235	8.0	220.0	85.0	12.0	172

Punch set, cylindrical shaft

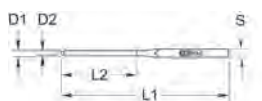
- Quenched and tempered
- Tip can be resharpened
- Highly polished
- Chrome molybdenum



	🔧
156.0230	5 pcs 3 - 4 - 5 - 6 - 8 mm 715

Brake pad cotter pin drive with guide tip

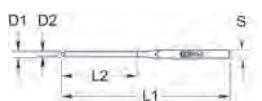
- 8-point
- Extra-long execution
- Quenched and tempered
- With guide pin for locking pins
- Suitable for locking pins on vehicles with disk brakes
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D1 mm	D2 mm	L1 mm	L2 mm	S mm	🔧	🔩
162.0411	4.0	2.7	175.0	85.0	10.0	-	60
162.0412	6.0	3.8	175.0	85.0	10.0	-	70

Brake pad cotter pin drive with guide tip

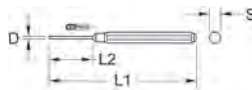
- 6-point
- Extra-long execution
- Quenched and tempered
- 150.2151 with guide pin for locking pins
- Suitable for locking pins on vehicles with disk brakes
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D1 mm	D2 mm	L1 mm	L2 mm	S mm	🔧	🔩
150.2150	4.0	0.0	180.0	80.0	10.0	-	70
150.2151	5.8	3.1	175.0	80.0	10.0	-	70

Pin punch

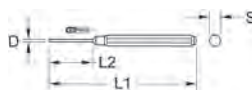
- DIN 6450 form C
- 8 point
- Tip can be resharpened
- Quenched and tempered
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	🔧	🔩
162.0371	2.0	150.0	35.0	10.0	-	60
162.0372	2.5	150.0	40.0	10.0	-	60
162.0373	3.0	150.0	40.0	10.0	-	60
162.0374	3.5	150.0	40.0	10.0	-	65
162.0375	4.0	150.0	50.0	10.0	-	65
162.0376	4.5	150.0	50.0	10.0	-	65
162.0377	5.0	150.0	50.0	10.0	-	65
162.0378	6.0	150.0	50.0	10.0	-	70
162.0379	7.0	150.0	55.0	10.0	-	95
162.0380	8.0	150.0	55.0	12.0	-	100
162.0381	9.0	150.0	55.0	12.0	-	110
162.0382	10.0	150.0	55.0	12.0	-	115
162.0383	12.0	150.0	55.0	16.0	-	170

Cotter pin drive, long

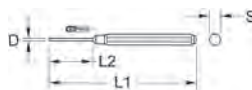
- 8 point
- Quenched and tempered
- Tip can be resharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	🔧	🔩
162.0391	3.0	175.0	80.0	10.0	-	60
162.0392	4.0	175.0	80.0	10.0	-	70
162.0393	5.0	175.0	80.0	10.0	-	80
162.0394	6.0	175.0	80.0	10.0	-	90
162.0395	8.0	175.0	80.0	12.0	-	140
162.0396	10.0	175.0	80.0	12.0	-	150

Pin punch, extra long

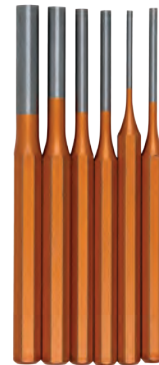
- 8 point
- Quenched and tempered
- Tip can be resharpened
- Shaft with gold coated lacquer
- Chrome molybdenum



	D mm	L1 mm	L2 mm	S mm	🔧	🔩
162.0401	2.0	200.0	40.0	10.0	-	82
162.0402	3.0	200.0	50.0	10.0	-	90
162.0403	4.0	200.0	55.0	10.0	-	92
162.0404	5.0	200.0	55.0	10.0	-	96
162.0405	6.0	200.0	55.0	12.0	-	100
162.0406	8.0	200.0	55.0	12.0	-	150
162.0407	10.0	200.0	55.0	12.0	-	165

Pin punch set

- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum
- In a plastic bag



	🔧
162.2122	6 pcs 150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10 mm 470

Pin punch set

- Quenched and tempered
- Tip can be re-sharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome vanadium
- In a plastic holder



	🔧
162.2123	6 pcs 150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10 mm 470

Pin punch set

- Quenched and tempered
- Tip can be resharpened
- Shaft with gold coated lacquer
- Highly polished
- Chrome molybdenum
- In metal storage box



	🔧
162.0370	6 pcs 150x10x3 - 150x10x4 - 150x10x5 - 150x10x6 - 150x12x8 - 150x12x10mm 750

Cotter pin drive with guide sleeve

- Guide sleeve, coded
- Ø 0.9 to 4.9 mm with loose guide sleeve
- Ø 5.9 mm with fixed sleeve
- Highly polished
- Chrome vanadium



	D mm	L mm	S mm	g
162.2249	0.9	70.0	5.0	15
162.2250	1.4	80.0	6.0	21
162.2251	1.8	83.0	6.0	21
162.2252	2.4	92.0	7.0	30
162.2253	2.8	94.0	7.0	30
162.2254	3.4	100.0	8.0	35
162.2255	3.9	100.0	8.0	35
162.2256	4.9	110.0	10.0	45
162.2257	5.9	115.0	12.0	68

Cotter pin drive set with guide sleeve

- Guide sleeve, coded
- Ø 0.9 to 4.9 mm with loose guide sleeve
- Ø 5.9 mm with fixed sleeve
- Highly polished
- Chrome vanadium
- In a plastic bag



	D pcs	g
162.2310	8 pcs	240

70x0,9 - 80x1,4 - 83x1,8 - 92x2,4 - 94x2,8 - 100x3,4 - 100x3,9 - 115x5,9 mm

Pin punches with hand grip

- Round
- Quenched and tempered
- With two component handle
- Tip can be re-sharpened
- Tip polished, shaft burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	g
156.0211	2.0	150.0	30.0	10.0	100
156.0212	3.0	150.0	40.0	10.0	100
156.0213	4.0	150.0	55.0	10.0	100
156.0214	5.0	150.0	60.0	10.0	100
156.0215	6.0	150.0	60.0	10.0	100
156.0216	7.0	150.0	60.0	12.0	110
156.0217	8.0	150.0	60.0	12.0	110
156.0218	9.0	150.0	60.0	12.0	110
156.0219	10.0	150.0	60.0	12.0	130

Pin punch set with hand protection grip

- Round
- Quenched and tempered
- With two component handle
- Tip can be re-sharpened
- Tip polished, shaft burnished
- Chrome vanadium



	D pcs	g
156.0220	5 pcs	800

3 - 4 - 5 - 6 - 8 mm

Pin punch with hand protection grip

- Round
- Quenched and tempered
- Tip can be resharpended
- Burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	g
156.0002	3.0	130.0	30.0	8.0	50
156.0003	3.0	145.0	40.0	8.0	60
156.0004	4.0	180.0	50.0	8.0	100
156.0005	5.0	180.0	60.0	10.0	100
156.0006	6.0	205.0	80.0	10.0	130
156.0008	8.0	225.0	85.0	12.0	150
156.0010	10.0	225.0	90.0	12.0	200

Pin punches with hand grip

- Round
- Quenched and tempered
- Tip can be resharpended
- Burnished
- Chrome vanadium



	D mm	L1 mm	L2 mm	S mm	g
156.0026	6.0	270.0	110.0	10.0	130
156.0028	8.0	300.0	130.0	12.0	220
156.0030	10.0	300.0	140.0	12.0	250
156.0032	12.0	300.0	140.0	14.0	340
156.0034	14.0	300.0	140.0	16.0	450

Pin punch set with hand protection grip

- With wall mounting possibility
- Tip can be resharpended
- Quenched and tempered
- Burnished
- Chrome vanadium
- In metal stand



	D pcs	g
156.0000	5 pcs	650

145x3 - 180x4 - 180x5 - 205x6 - 225x8 mm

Pin punch set with hand protection grip

- Quenched and tempered
- Tip can be resharpended
- Burnished
- Chrome vanadium
- In metal stand with the possibility of wall hanging



	D pcs	g
156.0020	5 pcs	2.70

270x6 - 300x8 - 300x10 - 300x12 - 300x14 mm

BRAKE SPRING TOOL

Brake spring clip tool

- Ideally suited to the assembly and disassembly of brake springs on drum brakes
- With secure clamping screw
- The return spring in placed into the hook head and tightened by turning the handle
- It is hung by turning the spring into the correct position
- With two component handle

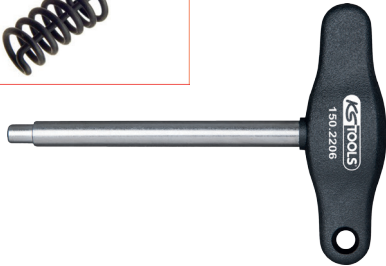
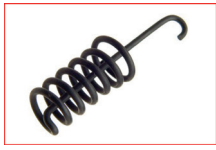



	Length mm	g
150.2218	220.0	70

Hand brake retention clip tool

- Ideal for the assembly and disassembly of the retaining clip on the hand brake jaws of the disk brake
- Guide slots in the function area
- Used for cylindrical and conical retaining clips
- With suspension hole
- 1 piece handle

Application range: Mercedes parking brakes




	Length mm	
150.2206	145.0	115

Brake spring clip tool

- Ideal for disassembling the retaining clamp
- Press guide slots into the provided notch
- Then turn the handle by 90° in order to release the clamp from the nail
- With two component handle

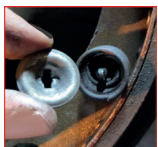
Application range: European vehicles with brake jaw retaining clamps



	Length mm	
150.2207	190.0	133

Brake spring clip tool

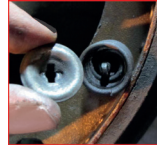
- Ideal for the assembly and disassembly of brake jaw retaining clips on drum brakes
- Quick, easy and correct assembly and disassembly of the spring clip
- With suspension hole
- With two component handle




	Ø mm	Length mm	
150.2212	13,0 - 22,0	175.0	130

Brake spring clip tool

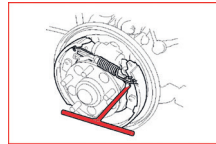
- Ideal for the assembly and disassembly of brake jaw retaining clips on drum brakes
- Quick, easy and correct assembly and disassembly of the spring clip
- With suspension hole
- With two component handle



	Ø mm	Length mm	
150.2213	12,0 - 16,0	160.0	130

Brake clip tool

- Ideal for the assembly and disassembly of brake jaw retaining springs on drum brakes
- Quick, easy and correct assembly and disassembly of the retaining spring
- Angled
- Special steel
- with T-handle




	Height mm	Length mm	
150.2208	80.0	155.0	50

BRAKE PIPE TESTER

Brake pipe cleaning tool

- Quick and easy to check brake pipes
- With two scraper surfaces for the removal of dirt and corrosion
- Easy manual operation when testing the brake pipes without risk of damage
- A level and angled edge allow it to reach all installation points
- The shaped point allow it to remove crusted dirt quickly and to clean the surfaces of the pipes
- Also suitable for detecting hidden corrosion in the brake pipes
- Special plastic

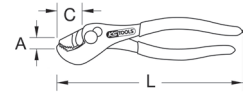



	Length mm	
150.2209	165.0	12

BRAKE SPRING PLIERS

Special pipe wrench

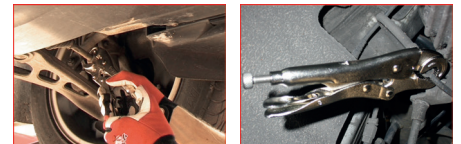
- 2-stage adjustment
- PVC dipped handle
- Ideal for round turned pipe fittings
- Polished surface
- Chrome vanadium





	A mm	L mm	C mm	
115.1361	0-16	178.0	23.0	180

Round jaw locking pliers with wire cutter

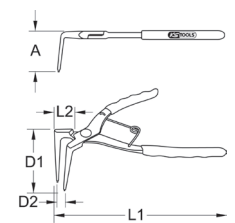
- For safe gripping of nuts and screw heads
- 3 level points prevents slipping and rounding
- With loosening lever
- With easy locking action
- Size adjustment using the adjustment wheel
- Good adaptation to existing surfaces
- With wire cutting function
- No flaring under the strongest loads
- Loosening under continuous pressure of a spring
- Nickel plated
- Chrome molybdenum




		L mm	
115.1175	11-19	175.0	370
115.1176	16-27	220.0	700

Long arm circlip pliers for external circlips, angled

- Durable, extra long precision points
- 90° angled tips
- Self opening
- PVC dipped handle
- Ideal for brake calliper and transmission work
- Chrome vanadium

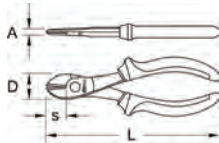


	A mm	D1 mm	D2 mm	L1 mm	L2 mm	
500.1037	63.0	18.0	4.0	185.0	18.0	190

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ERGOTORQUE® High leverage side cutter

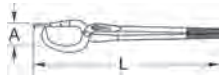
- In accordance to DIN ISO 5749
- Long cutting edge
- Suitable for various types of wire
- Induction hardened precision cutting
- Extremely robust execution
- Dual component handle
- Matt chrome
- Special tool steel



	A mm	D mm	L mm	S mm	g
115.1025	13.0	32.0	260.0	31.0	390

Car brake spring pliers

- For attaching and dismantling the brake shoes retaining spring
- For glued and riveted brake shoes
- Special surround
- Chrome vanadium



	A mm	L mm	g
150.2211	130.0	325.0	335

Car brake spring pliers

- For attaching and dismantling the brake blocks retaining spring
- For glued and riveted brake shoes
- With special surround
- With moveable wheel clamp
- Chrome vanadium



	A mm	L mm	g
150.2116	130	220.0	340

Brake block retaining clip pliers

- Ideally suited to the assembly of spring clamps on drum brakes
- For both brake block retaining spring designs
- Special steel
- Aluminium handle
- Special jaws for pre-tensioning the brake block retaining clip

Application range: Mercedes A class(A140), Citroën, Renault, Peugeot with Lucas drum brakes



	Length mm	g
150.2214	220.0	220

Brake spring pliers

- Ideally suited to the assembly and disassembly of hand brake cables on drum brakes
- With holding lever for safe working
- With PVC dipped handle
- Chrome vanadium

Application range: Volkswagen, Audi, BMW, Citroën, Nissan, Peugeot, Renault, Rover, Seat, etc.

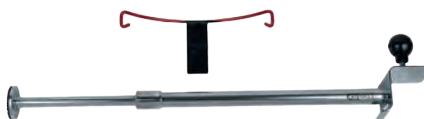


	L mm	g
150.2118	225.0	175

BRAKE PEDAL LOCKING DEVICE

Brake pedal locking device

- Ideally suited to setting the brake pedal in the desired position
- For obstructing the seat or the steering wheel
- Allows for a constant brake pressure over a long time thanks to internal springs
- Ideally used when testing the tightness on hydraulic braking systems, testing and adjusting brake force regulators or brake force limiters
- Easy and correct use
- Robust design

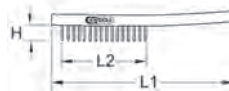


	Length mm	g
150.2216	460-660	1.80

BRAKE CALLIPER CLEANING

Steel hand wire brush 3 rowed

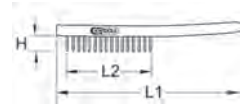
- 3 rowed
- Universal use
- Handle made out of wood
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g
201.2305	32.0	290.0	138.0	120

Steel hand wire brush 4 rowed

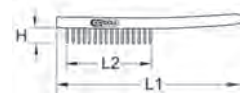
- 4 rowed
- Universal use
- Handle made out of wood
- For surface preparation
- With steel bristles



	H mm	L1 mm	L2 mm	g
201.2311	32.0	290.0	138.0	120

Stainless steel hand wire hand brush 3 rowed

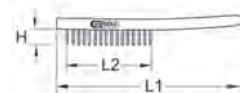
- 3 rowed
- Universal use
- Handle made out of wood
- For surface preparation
- With stainless steel bristles



	H mm	L1 mm	L2 mm	g
201.2310	32.0	290.0	138.0	120

Stainless steel hand wire hand brush 4 rowed

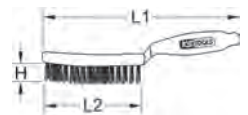
- 4 rowed
- Universal use
- Handle made out of wood
- For surface preparation
- With stainless steel bristles



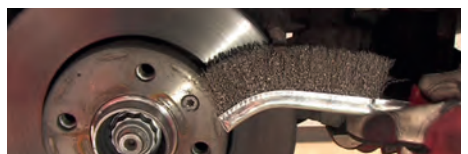
	H mm	L1 mm	L2 mm	g
201.2306	32.0	290.0	138.0	100

Steel wire hand brush 4 rowed

- 4 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight steel wire

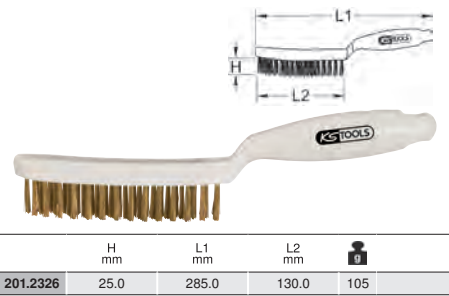


	H mm	L1 mm	L2 mm	g
201.2325	25.0	285.0	130.0	120



Brass wire hand brush 3 rowed

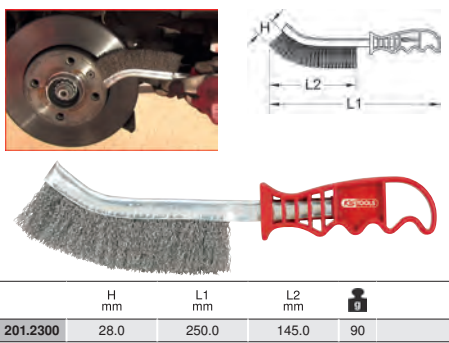
- 3 rowed
- Universal usage
- Plastic hand grip casing
- For surface preparation
- Straight brass wire



	H mm	L1 mm	L2 mm	g
201.2326	25.0	285.0	130.0	105

Steel wire all purpose wire brush

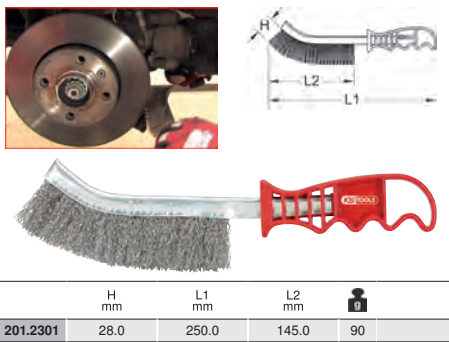
- With plastic handle
- For surface preparation
- Crimped steel wire



	H mm	L1 mm	L2 mm	g
201.2300	28.0	250.0	145.0	90

Stainless steel wire all purpose wire brush

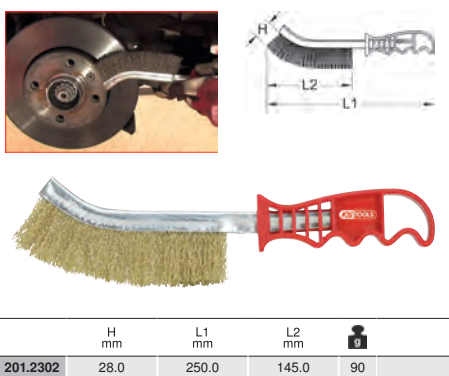
- With plastic handle
- For surface preparation
- Curled and rust free steel wire



	H mm	L1 mm	L2 mm	g
201.2301	28.0	250.0	145.0	90

Brass steel all purpose wire brush

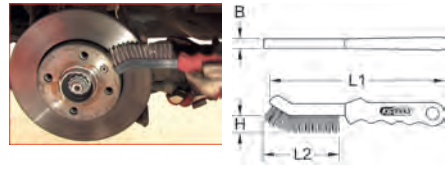
- With plastic handle
- For surface preparation
- Curved brass wire



	H mm	L1 mm	L2 mm	g
201.2302	28.0	250.0	145.0	90

Steel wire brake saddle wire brush 2 rowed, straight

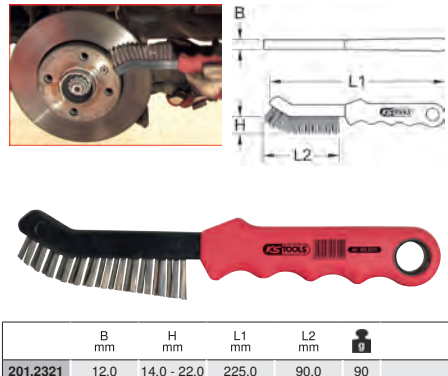
- 2 rowed
- Hanging hole
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Dual component handle
- For removing of stubborn brake dust
- For surface preparation
- Smooth steel wire



	B mm	H mm	L1 mm	L2 mm	g
201.2320	12.0	22.0	225.0	90.0	90

Steel wire brake saddle wire brush 2 rowed, straight and tapered point

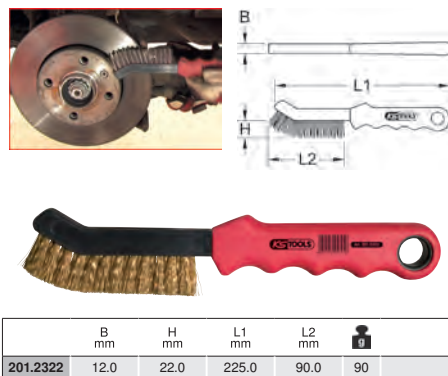
- 2 rowed
- Hanging hole
- Tapered point
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Dual component handle
- For removing of stubborn brake dust
- For surface preparation
- Smooth steel wire



	B mm	H mm	L1 mm	L2 mm	g
201.2321	12.0	14.0 - 22.0	225.0	90.0	90

Brass wire brake saddle wire brush 2 rowed, straight

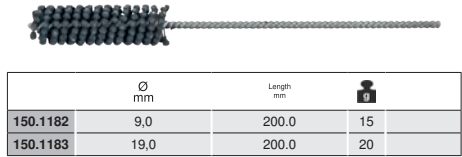
- 2 rowed
- Very narrow execution
- For narrow brake saddle shafts
- Robust stock
- Hanging hole
- Dual component handle
- For removing of stubborn brake dust
- For surface preparation
- Curved brass wire



	B mm	H mm	L1 mm	L2 mm	g
201.2322	12.0	22.0	225.0	90.0	90

Hone brush for brake calliper casing

- For corroded attachment bore holes in the brake calliper casing
- For easy assembly of the new guide sleeves
- Universal usage
- Usable with hand-operated bore machine
- Only to be used clockwise and with a maximum turning speed on 500 rpm
- Special steel

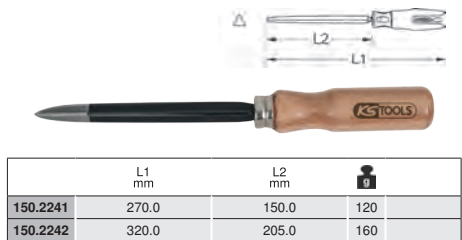


	Ø mm	Length mm	g
150.1182	9,0	200,0	15
150.1183	19,0	200,0	20

WHEEL HUB CLEANING

Triangular hollow scraper

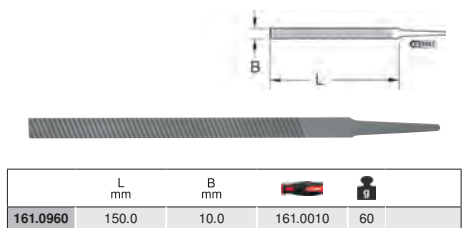
- Ideally suited to treating surfaces
- 3 cutting edges for clean deburring
- Polished working surfaces
- In accordance with DIN 8350 Shape C
- Wooden handle
- Special steel



	L1 mm	L2 mm	g
150.2241	270.0	150.0	120
150.2242	320.0	205.0	160

Brake saddle file inset extra narrow without handle

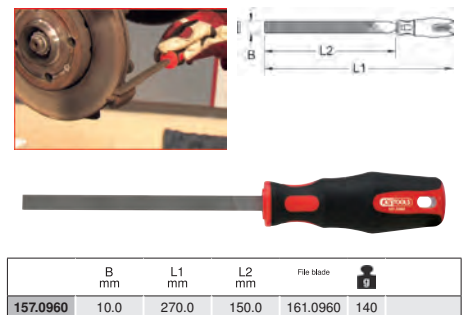
- Especially suited for Japanese vehicles
- For vehicles with disk brakes
- Beveled edges
- Extra narrow execution
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special steel



	L mm	B mm	g
161.0960	150.0	10.0	161.0010 60

Brake saddle file extra narrow

- Especially suited for Japanese vehicles
- For vehicles with disk brakes
- With two component handle
- With hanging hole
- Extra narrow execution
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special steel



	B mm	L1 mm	L2 mm	File blade	g
157.0960	10.0	270.0	150.0	161.0960	140

Brake saddle file without handle

- For vehicles with disk brakes
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special steel



	B mm	L mm		
161.0950	12.0	150.0	161.0010	90

Brake saddle file

- With vehicles with disk brakes
- With two component handle
- With hanging hole
- Bevelled edges
- Insert unilaterally coarsely diagonally milled
- With blunt scraper on the forehead side
- For cleaning the brake saddle
- For removing of coarse residues
- Special steel



	B mm	L1 mm	L2 mm	File blade	
157.0950	12.0	270.0	150.0	161.0950	170

Wheel hub bolt grinder set, Ø 40 / 50 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 or Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,500 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc



100.4080	14 pcs	Wheel hub bolt grinder set, Ø 40 / 50 mm	470

consists of:

100.4081	Wheel hub grinder without cleaning discs	50	
100.4085	Replacement disc set for hub bolt wheel grinder, 5 pcs.	230	
100.4088	Replacement disc set large for hub bolt wheel grinder, 5 pcs.	200	

Wheel hub bolt grinding discs Ø 40 mm

- 5 replacement discs Ø 40 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 40 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,500 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- Delivery takes place without grinding disc



		Ø mm	
100.4085	5 pcs	40	230

Wheel hub bolt grinding discs Ø 50 mm

- 5 replacement discs Ø 50 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs with stud bolts up to Ø 50 mm in diameter
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,500 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- Delivery takes place without grinding disc



		Ø mm	
100.4088	5 pcs	50	200



Wheel hub grinding disc set Ø 65 / 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium



100.4035	2 pcs	Wheel hub grinding disc set Ø 65 / 105 mm	300

consists of:

100.4038	Wheel hub grinder Ø 65 mm	100	
100.4039	Wheel hub grinder Ø 105 mm	200	



Wheel hub grinding disc set Ø 65 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium



		Ø mm	
100.4036	5 pcs	65	575

consists of:

	X		
100.4038	5	Wheel hub grinder Ø 65 mm	100

Wheel hub grinding disc set Ø 105 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideal for use with passenger cars, vans and saloon car wheel hubs
- Grinding disc with 1/2" receptacle
- For use with impact wrenches or cordless impact wrenches (max. speed 7,000 rpm)
- No flying sparks
- Low wear - maximum service life (about 50 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium



		Ø mm	g
100.4037	5 pcs	105	625

consists of:

	X	g
100.4039	5 Wheel hub grinder Ø 105 mm	200



Wheel hub grinder set, Ø 160 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,500 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 100 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc



		g
100.4070	4 pcs Wheel hub grinder set, Ø 160 mm	800

consists of:

		g
100.4071	Wheel hub grinder without cleaning discs	270
100.4075	Replacement discs-set for wheel hub grinder 100.4070, 3pcs.	530

Replacement discs set for wheel hub grinder

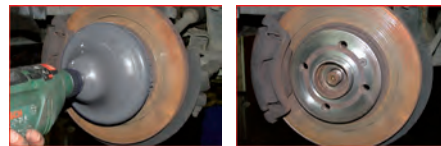
- 3 replacement discs Ø 160 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 160 mm
- Optimised for the latest wheel hubs with larger inner diameter (Ø 75 mm)
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 100 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- Delivery takes place without grinding disc



		Ø mm	g
100.4075	3 pcs	160	530

Wheel hub grinder set, Ø 200 mm

- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- Grinding disc with 10 mm pin receptacle with 3 contact surfaces
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 100 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimum dust development due to open-pore grinding medium and cup-shaped grinding disc



		g
100.4090	3 pcs Wheel hub grinder set, Ø 200 mm	1.01

consists of:

		g
100.4091	Wheel hub grinder without cleaning discs	470
100.4095	Replacement discs set for wheel hub grinder 100.4090, 2pcs.	530



Wheel hub grinding discs, Ø 200 mm

- 2 replacement discs Ø 200 mm
- For the optimal cleaning of wheel hubs and brake discs
- Ideally used for passenger cars, vans and saloon car wheel hubs up to Ø 200 mm
- For use with boring machines and cordless spanners (max. speed 1,000 rpm)
- Velcro closure for the quick replacement of the cleaning disc
- No flying sparks
- Low wear - maximum service life (about 100 vehicles per disc)
- Clean contact surfaces prevent falsification of the wheel tightening torques
- Minimal dust development due to open-pore grinding medium
- Delivery takes place without grinding disc



		Ø mm	g
100.4095	2 pcs	200	530

BRAKE DISC SCRAPER

Brake disk scraper

- Ideally suited to removing rust on the external sides of the brake disk
- As well as the coating of the brake calliper
- Recommendation: Use crank 440.0335 to turn the brake disk
- Use for cleaning
- With two component handle
- With suspension hole



	Length mm	g
440.0330	215.0	200

Crank for brake disc

- For turning the brake disc when using the scraper 440.0330
- For removing rust from the outer edges
- Angled handle
- Special steel



	L1 mm	L2 mm	g
440.0335	165.0	125.0	240

ASSEMBLY SLEEVES

Brake assembly sleeve set

- For brake discs of brake drums integrated in the wheel bearing
- No tilting during assembly and disassembly
- Quick and safe working without irreparable damage
- Universal usage
- Chrome plated and mirror polished
- Chrome vanadium

Application range: universal, but particularly for PSA



				g
700.2320	8 pcs	Brake assembly sleeve set		885

consists of:

				g
700.2321	Assembly sleeve #1, 24/35 x 50 mm			193
700.2322	Assembly sleeve #2, 24/30 x 50 mm			30
700.2323	Assembly sleeve #3, 20/25 x 50 mm			93
700.2324	Assembly sleeve #4, 22/25 x 50 mm			122
700.2325	Assembly sleeve #5, 28/30 x 50 mm			148
700.2326	Assembly sleeve #6, 22/30 x 50 mm			130
700.2327	Assembly sleeve #7, 20/30 x 50 mm			38
700.2328	Assembly sleeve #8, 24/25 x 50 mm			64

PIPE STOPPER

ALLinONE Hose clamp pliers set

- Simple sealing of pipe lines, 4.75 mm (3/16") to 14.0 mm (9/16")
- Rotary magazine with 4 slots for the corresponding pipe size
- Ideal for maintenance work with gasoline, oil, water and antifreeze
- Protects against ingress of moisture and dirt
- Ideal for use in passenger cars, vans and large vans, commercial vehicles, tractors, agricultural machinery, construction machinery and industrial applications
- Special plastic



					g
Ø mm	A mm	L mm			
122.1295	2 pcs	4,75-14	38,0	120,0	149

consists of:

				X	g
122.1296	2	ALLinONE Fluidstopper Ø 4,75 - 14 mm		60	
122.1297	1	Replaceable plastic plugs for 122.1296 pipe stopper pliers		50	

BRAKE PIPE CUTTER

Mini pipe cutter

- For copper, brass and thin walled steel tubes
- With 2 support rollers
- V²A cutter can be retrofitted
- With hard chrome plated knurled knob
- Metal housing
- Special steel



	D mm	H mm	Metal	V ² A	Plastic	g
101.1000	3,0 - 16,0	35,0	101.1001	101.1002	-	100
101.2000	3,0 - 22,0	40,0	101.1001	101.1002	-	120

Mini pipe cutter

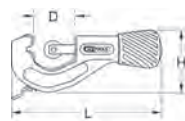
- Ergonomically designed
- For copper, brass and thin walled steel tubes
- With 2 support rollers
- With large impact head
- V²A cutter can be retrofitted
- Metal housing
- Special steel



	D mm	H mm	Metal	V ² A	Plastic	g
101.5000	3,0 - 28,0	55,0	101.1001	101.1002	-	260
101.5016	3,0 - 16,0	41,0	101.1001	101.1002	-	120
101.5022	3,0 - 22,0	50,0	101.1001	101.1002	-	120

Telescopic pipe cutter

- With removeable internal deburrer
- Includes spare wheel under the cover cap on the rotary handle
- With 2 support rollers
- With large knurled knob
- Metal housing
- Special steel



	D mm	H mm	L mm	Metal	V ² A	Plastic	g
103.5000	6,0 - 38,0	60,0	156,0	103.5001	-	-	500

BRAKE PIPE DEBURRER

Internal deburrer

- 3 cutting edges for clean deburring
- Cutting jaws from HSS steel
- Ensures chatter-free working
- For copper, aluminium and soft steel piping
- 2 piece handle



	Material	Ø mm	L mm	g
105.3010	HSS	3,0 - 40,0	105,0	40

Internal and external deburrer

- 3 cutting edges for clean deburring
- Insertable blades made from allow HSS steel
- Ensures chatter-free working
- For copper, aluminium and soft steel piping
- Plastic housing



	Material	Ø mm	Ø mm	L mm	g
105.2000	HSS	3,0 - 42,0	6,0 - 42,0	50,0	240

Internal and external deburrer

- 3 cutting edges for clean deburring
- Cutting jaws from alloy HSS steel
- Insertable blades made from allow HSS steel
- Retractable point for internal burring (protects from injury)
- Ensures chatter-free working
- For copper, aluminium and soft steel piping
- Aluminium housing

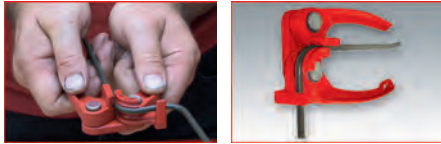


	Material	Ø mm	Ø mm	L mm	g
105.3015	HSS	3,0 - 12,0	4,0 - 14,0	125,0	175

BRAKE PIPE BENDING TOOL

Mini brake pipe bend tool

- Easy and handy to use
- For 3.00 + 4.75 + 6.00 mm brake pipes
- Bending doesn't change the diameter of the pipe
- For exact two handed bending up to 90°
- For copper, aluminium, brass and soft steel piping
- For 3 dimensions without exchange of bending segments
- Can be used directly on the vehicle
- Undersize and bend radius on the bending form
- Special steel



	∅ mm	∅ mm	L mm	g
120.1050	3,0 + 4,75 + 6,0	1/8" + 3/16" + 1/4"	140,0	150

Brake pipe bending pliers, 2 in 1

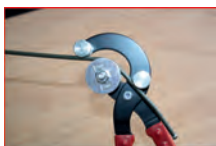
- For 4,75 and 6,00 mm brake pipes
- With plastic handle
- Ideally suitable for bending pipes directly
- For copper, aluminum, brass, mild steel and plastic coated brake pipes
- Burnished
- Special tool steel



	A mm	L mm	C mm	g
120.2000	0-27,5	240,0	37,0	400

Brake pipe flaring pliers

- For 4.75 + 6.00 = 8.00 + 10.00 mm brake pipes
- Bending doesn't change the diameter of the pipe
- For exact two handed bending up to 90°
- For copper, aluminium, brass and soft steel piping
- Undersize and bend radius on the bending form
- With two pivoted flaring segments
- With plastic handle
- Special steel



	∅ mm	Length mm	g
120.1003	4,75 + 6,0 + 8,0 + 10,0	260,0	530

BRAKE PIPE FLARING TOOL

Universal brake flaring tool set

- Metric sizes
- Easy and handy to use
- Prevents damages of the coated surfaces
- For the manufacture of convex and double flared joints
- For the universal use in vehicle workshops
- Ideally suited for brakes and hydraulic connections
- For thin walled steel, aluminium and copper conductions
- Automatic mandral return
- Fast and precise practical working
- Straight flaring
- No rotating prevents the pipe from splitting
- In durable plastic storage case



		g
122.1250	14 pcs Universal brake flaring tool set	4.27

consists of:

		g
122.1244	Flaring tool rotating head	3270
122.1231	Flaring tool die, 3/16"+4,75mm	50
122.1251	Flaring tool die set, 5mm	50
122.1252	Flaring tool die set, 6mm	50
122.1236	Flaring tool punch, OP0	50
122.1237	Flaring tool punch, OP1 4.75mm	50
122.1254	Flaring tool punch, OP1 4.75/5mm	50
122.1255	Flaring tool punch, OP1 4.75	50
122.1256	Flaring tool punch, OP1 5mm	50
122.1257	Flaring tool punch, OP1 6mm	50
122.1258	Flaring tool punch, OP2 4.75/5/6mm	50
122.1259	Flaring tool punch, OP1 6mm	50

Universal brake flaring tool set

- Imperial sizes
- Easy and handy to use
- Prevents damages of the coated surfaces
- For the manufacture of convex and double flared joints
- For the universal use in vehicle workshops
- Ideally suited for brakes and hydraulic connections
- For thin walled steel, aluminium and copper conductions
- Automatic mandral return
- Fast and precise practical working
- Straight flaring
- No rotating prevents the pipe from splitting
- In durable plastic storage case



		g
122.1230	14 pcs Universal brake flaring tool set	4.27

consists of:

		g
122.1244	Flaring tool rotating head	3270
122.1231	Flaring tool die, 3/16"+4,75mm	50
122.1232	Flaring tool die, 1/4"	50
122.1233	Flaring tool die, 5/16"	50
122.1234	Flaring tool die, 3/8"	50
122.1236	Flaring tool punch, OP0	50
122.1237	Flaring tool punch, OP1 4.75mm	50
122.1238	Flaring tool punch, OP1 3/16"	50
122.1239	Flaring tool punch, OP1 1/4"	50
122.1240	Flaring tool punch, OP2 3/16"+1/4"	50
122.1241	Flaring tool punch, OP1 5/16"	50
122.1242	Flaring tool punch, OP1 3/8"	50
122.1243	Flaring tool punch, OP1 5/16"+3/8"	50

FLAREFIX 1 universal brake pipe flaring tool set with hydraulic spindle

- Easy and handy to use
- With hydraulic pressure spindle
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- Ideally suited to the use at brake connections and/or hydraulics connections
- For thin walled steel-, Aluminium and copper conductions
- For the manufacture of convex and double flared joints
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- Including cutter, bender and pipe deburring tool for professional flaring
- In durable plastic storage case



		g
122.1290	16 pcs FLAREFIX 1 universal brake pipe flaring tool set with hydraulic spindle	3.05

consists of:

		g
101.1000	Mini pipe cutter, 3-16mm	100
105.3010	REAMER FOR 122.1290	40
120.1050	3in1 mini bender, ∅ 3+4,75+6mm	150
122.1271	Locking screw, M12x1,25	50
122.1272	FLAREFIX base body	625
122.1273	Die set, 4,75mm, 3/16"	50
122.1274	Die set, 5mm	50
122.1275	Die set, 6mm	50
122.1276	FLAREFIX punch, 4,75+5mm	50
122.1277	FLAREFIX punch, 6mm	50
122.1278	FLAREFIX punch, 4,75+5mm	50
122.1279	FLAREFIX punch, 4,75+5mm	50
122.1280	FLAREFIX punch, 6mm	20
122.1281	FLAREFIX hydraulic ram	500
122.1282	FLAREFIX hand grip with screw	150
122.1283	FLAREFIX Locking bolt for hydraulic spindle	82

FLAREFIX 2 universal brake pipe flaring tool set with hydraulic spindle

- Easy and handy to use
- With hydraulic pressure spindle
- Enables use directly on the vehicle
- Prevents damages of the coated surfaces
- For the universal use in vehicle workshops
- Ideally suited to the use at brake connections and/or hydraulics connections
- For thin walled steel-, Aluminium and copper conductions
- For the manufacture of convex and double flared joints
- Fast and precise work results through straight flaring tool action
- No rotating prevents the pipe from splitting
- In durable plastic storage case



K			
122.1260	11 pcs	FLAREFIX 2 universal brake pipe flaring tool set with hydraulic spindle	3.19

consists of:

K			
122.1264	Flared arbor, 4,75 - 5,0mm SAE	50	
122.1265	Flared arbor, 6,0mm SAE	50	
122.1266	Flared arbor, 4,75, 5,0 und 6,0mm, 90° SAE	50	
122.1267	Flared arbor, 4,75, 5,0 mm DIN	50	
122.1268	Flared arbor, 6,0 mm DIN	50	
122.1269	Locking screw, M12x1,25	50	
122.1273	Die set, 4,75mm, 3/16"	50	
122.1274	Die set, 5mm	50	
122.1275	Die set, 6mm	50	
122.1285	Hydraulic spindle 122.1260	790	
122.1286	Basic unit 122.1260	720	

BRAKE CALLIPER REPAIR TOOL

Thread repair set M9 x 1,25 for brake calliper guide bolts

- For the professional restoration
- Ideal for defective interior threads for brakes guide bolts in wheel hub housings to repair
- The interior thread in the wheel hub housing M9 x 1.25 serves to the reinforcement of the Brake guide bolts
- Due to the Special drill and the drilling template the defective thread is cleared
- In the second section a highly resilient, corrosion-resistant stainless steel threaded sleeve can then be inserted
- In durable plastic storage case

Application range: Golf 4, Golf Variant, Beetle, Audi A3 as well as structurally identical vehicles of that group VAG e.g. Audi, Skoda, Seat, Opel Astra G and Ford Focus



K			
122.1300	16 pcs	Thread repair set M9 x 1,25 for brake calliper guide bolts	1.03

consists of:

K			
122.1301	Special spiral reamer	55	
122.1302	Thread drill, M9x1.25	15	
122.1303	Replacement brush, 10pcs, M9x1.25	50	
122.1304	Drilling template, VAG	190	
122.1305	Drilling template, Opel Astra	190	
122.1306	Drilling template, Ford Focus	215	

BRAKE FLUID TESTER

Brake fluid tester

- For checking the H₂O content in the brake fluid
- With automatic switching off after 12 minutes
- Handy pin form with clip for the breast pocket
- With safety cover
- Plastic housing



Technical data:

Readout:	optical/5LED
Battery type:	1xAAA
Compatible for brake fluid:	DOT4
Standard:	IEC/EN 61010-1
Protection class:	IP 44

	D mm	L mm	K
150.2199	20.0	150.0	70

Digital brake fluid tester

- For fast and accurate alignment of the steering wheel during the wheel alignment
- Exact measurement of the boiling point possible
- For measuring all brake fluids on glycol content (DOT3, DOT4, DOT 5.1)
- Portable can be used anywhere just connect to a 12 V vehicle battery
- Measurement possible through a sample goblet and dropper also means testing outside of the vehicle
- Enormous time savings through testing directly in the fluid container
- No loss of fluids
- Easy intelligible multilingual menu navigation
- Easy-to-read display
- Acknowledged by leading vehicle manufacturers
- Exceeds the requirements of the TÜV Austria
- Displays and eventual change of the brake fluid
- Plastic housing



Technical data:

Readout:	LCD display
Compatible for brake fluid:	DOT3, DOT4, DOT4 Plus, DOT4 Pro, DOT4 HP, DOT5.1
Maximum Testing temperature:	320 °C (608 °F)
Output-version:	°C / °F
Operational voltage:	12 V
Dropper with test container	150.2195-1

	D mm	L mm	K
150.2195			1.25

Digital brake fluid tester set with printer

- Includes printer with integrated software
- For fast and accurate alignment of the steering wheel during the wheel alignment
- Exact measurement of the boiling point possible
- For measuring all brake fluids on glycol content (DOT3, DOT4, DOT 5.1)
- Portable can be used anywhere just connect to a 12 V vehicle battery
- Measurement possible through a sample goblet and dropper also means testing outside of the vehicle
- Enormous time savings through testing directly in the fluid container
- No loss of fluids
- Easy intelligible multilingual menu navigation
- Easy-to-read display
- Acknowledged by leading vehicle manufacturers
- Exceeds the requirements of the TÜV Austria
- Displays and eventual change of the brake fluid
- Plastic housing



Technical data:

Readout:	LCD display
Compatible for brake fluid:	DOT3, DOT4, DOT4 Plus, DOT4 Pro, DOT4 HP, DOT5.1
Maximum Testing temperature:	320 °C (608 °F)
Output-version:	°C / °F
Operational voltage:	12 V

K			
150.2198	Digital brake fluid tester set with printer	1.55	

consists of:

K			
150.2196	Digital brake fluid tester	1255	
150.2197	Printer for brake fluid tester	187	

BRAKE BLEED WRENCHES

One handed multi function spanner

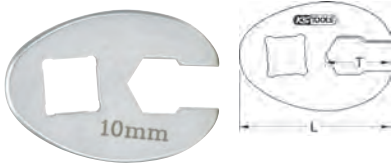
- Multi-function wrench with ratchet function
- For all screw work
- Adapts itself automatically to the screw size
- Self-clamping on flat pipes, bolts, shafts, and unscrewed bodies of hexagonal screws
- No slips thanks to the coarse teeth
- Chrome vanadium



	D mm	L mm	K
114.0050	8-19	190.0	165
114.0051	14-32	300.0	515

Crawfoot wrench, hexagonal

- 6 point
- With internal square drive
- For manual operation
- Matt finish
- Chrome vanadium



	mm	L mm	T mm	g
913.3810	10,0	40,0	16,0	40
913.3811	11,0	37,0	13,0	40
913.3812	12,0	37,0	15,0	40
913.3813	13,0	36,0	14,0	40
913.3814	14,0	43,0	18,0	60
913.3815	15,0	42,0	20,0	60
913.3816	16,0	43,0	22,0	60

Joint ring wrench socket

- Hexagon (open)
- Special construction allows for the removal and tightening of hard-to-reach screws
- Universal usage
- Internal square drive to DIN 3120/ISO 1174 with ball reception
- For manual operation
- Chrome plated and mirror polished
- Chrome vanadium
- In durable plastic storage case

Application range: universally suited to all pipe screws on injection systems, brake systems, etc.



	mm	g
911.1711	11,0	60
911.1712	12,0	70
911.1713	14,0	80
911.1714	16,0	140
911.1715	17,0	150
911.1716	18,0	160
911.1717	19,0	170

Joint ring wrench socket set (open)

- Hexagon (open)
- Special construction allows for the removal and tightening of hard-to-reach screws
- Universal usage
- Internal square drive to DIN 3120/ISO 1174 with ball reception
- For manual operation
- Chrome plated and mirror polished
- Chrome vanadium
- In durable plastic storage case

Application range: universally suited to all pipe screws on injection systems, brake systems, etc.



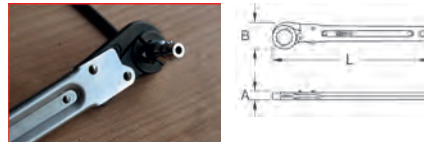
	g
911.1710 7 pcs Joint ring wrench socket set (open)	900

consists of:

		g
911.1711	Joint ring wrench socket, 11 mm	60
911.1712	Joint ring wrench socket, 12 mm	70
911.1713	Joint ring wrench socket, 14 mm	80
911.1714	Joint ring wrench socket, 16 mm	140
911.1715	Joint ring wrench socket, 17 mm	150
911.1716	Joint ring wrench socket, 18 mm	160
911.1717	Joint ring wrench socket, 19 mm	170

Ratchet ring spanner, clamp head

- 12 point
- Straight form
- Hanging hole
- From 27 mm with rubber handle
- Chrome plated handle
- Head phosphate finish
- Chrome vanadium



	mm	A mm	B mm	L mm	g
500.5007	7	7.0	21.0	137.0	81
500.5008	8	7.0	21.0	137.0	83
500.5009	9	7.0	22.0	137.0	83
500.5010	10	7.0	22.0	137.0	82
500.5011	11	7.0	24.0	139.0	200
500.5012	12	7.0	28.0	140.0	88
500.5013	13	7.0	28.0	140.0	200
500.5014	14	7.0	28.0	140.0	88
500.5016	16	9.5	30.0	187.0	145

Brake bleeding combination spanner

- For pipe screws and screws
- Ideally suited to brake pipe and brake bleed screws
- Special hexagon profile
- Combination wrench
- Matt finish
- Chrome vanadium



	mm	Length mm	g
518.0341	7,0	115,0	20
518.0342	8,0	125,0	26
518.0343	9,0	135,0	34
518.0344	11,0	155,0	44
518.0345	12,0	165,0	52
518.0346	14,0	185,0	78

Brake bleeding combination spanner set

- For pipe screws and screws
- Ideally suited to brake pipe and brake bleed screws
- Special hexagon profile
- Combination wrench
- Matt finish
- Chrome vanadium



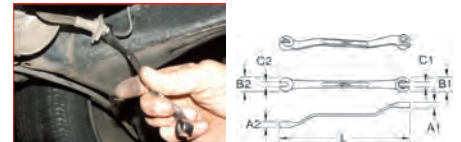
	g
518.0340 6 pcs Brake bleeding combination spanner set	300

consists of:

		g
518.0341	Bleed wrench 7.0 mm	20
518.0342	Bleed wrench 8.0 mm	26
518.0343	Bleed wrench 9.0 mm	34
518.0344	Bleed wrench 11.0 mm	44
518.0345	Bleed wrench 12.0 mm	52
518.0346	Bleed wrench 14.0 mm	78

CHROMEplus® Open double ring spanner set, offset

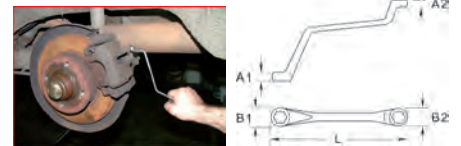
- 6 point
- Ring head 30° offset
- Spanner has double sized head
- Heavy duty head
- For brake pipe couplers
- No slippage
- Chrome plated and mirror polished
- Chrome vanadium



	mm	A1 mm	A2 mm	B1 mm	B2 mm	C1 mm	C2 mm	L mm	g
517.0270	10x11	10.5	11.2	17.8	20.0	6.0	6.1	175.0	80

Brake bleeding spanner

- 6-point
- Ideally suited to brake bleed screws
- Ring angled and offset
- For bleeding the brakes without disassembling the wheels
- Matt finish
- Chrome vanadium



	mm	A1 mm	A2 mm	B1 mm	B2 mm	L mm	g
518.0307	7	5.3	5.6	12.9	12.1	190.0	60
518.0308	8	7.5	7.0	16.0	15.8	211.0	130
518.0309	9	7.4	6.9	16.0	15.9	211.0	130
518.0310	10	7.3	7.1	17.5	16.9	236.0	135
518.0311	11	7.2	7.0	17.3	16.9	236.0	135

Brake bleeding spanner set

- 6-point
- Ideally suited to brake bleed screws
- Ring angled and offset
- For bleeding the brakes without disassembling the wheels
- Matt finish
- Chrome vanadium
- Supplied in a leather pouch



	g
518.0300 5 pcs Brake bleeding spanner set	1.20

consists of:

518.0307	Brake bleeding spanner, 7mm	60
518.0308	Brake bleeding spanner, 8mm	130
518.0309	Brake bleeding spanner, 9mm	130
518.0310	Brake bleeding spanner, 10mm	135
518.0311	Brake bleeding spanner, 11mm	135

Open double ring spanner, offset

- 6 point
- DIN 3118
- Jaw 15° offset
- Opening 15° cranked
- Chrome vanadium



		A1 mm	A2 mm	B1 mm	B2 mm	L mm	
517.0252	8x10	6.6	6.7	17.6	19.8	143.0	45
517.0253	9x11	7.6	7.4	21.3	22.9	152.0	50
517.0254	10x11	7.6	7.4	21.3	22.9	152.0	60
517.0255	10x12	7.6	7.4	21.3	22.9	152.0	80
517.0257	12x13	8.8	9.0	23.1	23.8	156.0	100
517.0258	12x14	10.0	9.9	25.3	27.6	178.0	110
517.0260	14x15	11.4	11.5	30.0	32.1	196.0	120
517.0261	14x17	11.4	11.5	30.0	32.1	196.0	140
517.0263	16x18	11.4	11.5	30.0	32.1	196.0	160

CHROMEplus® Open double ring spanner, offset

- 6 point
- DIN 3118
- Jaw 15° offset
- Opening 15° cranked
- Chrome plated and mirror polished
- Chrome vanadium

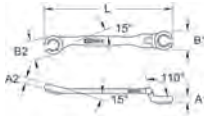


		A1 mm	A2 mm	B1 mm	B2 mm	L mm	
518.0511	6x8	6.6	6.7	17.6	19.8	143.0	50
518.0512	8x12	6.7	7.4	19.8	21.3	147.0	50
518.0513	9x11	7.6	7.4	21.3	22.9	152.0	60
518.0523	10x11	7.6	7.4	21.3	22.9	152.0	60
518.0514	10x12	7.6	7.4	21.3	22.9	152.0	60
518.0524	12x13	8.8	9.0	23.1	23.8	156.0	80
518.0515	13x14	10.0	9.9	25.3	25.3	178.0	120
518.0525	14x15	11.4	11.5	30.0	30.0	196.0	170
518.0526	14x17	11.4	11.5	30.0	30.0	196.0	170
518.0516	15x17	11.4	11.5	30.0	30.0	196.0	170
518.0517	16x18	11.4	11.5	30.0	30.0	196.0	170



CHROMEplus® open double ring spanner, with flexible joint

- 6 point
- Ring head 15° offset
- Opening 15° cranked
- With flexible head
- Chrome plated and mirror polished
- Chrome vanadium



		A1 mm	A2 mm	B1 mm	B2 mm	L mm	
518.0378	8	7.0	7.0	18.0	18.0	128.0	50
518.0379	9	7.0	7.0	18.0	18.0	128.0	50
518.0380	10	7.0	7.0	18.0	18.0	128.0	50
518.0381	11	9.0	9.0	22.0	22.0	148.0	120
518.0382	12	9.0	9.0	22.0	22.0	148.0	120
518.0383	13	11.0	11.0	26.0	26.0	175.0	140
518.0384	14	11.0	11.0	26.0	26.0	175.0	140
518.0387	17	13.0	13.0	32.0	32.0	190.0	200
518.0389	19	13.0	13.0	32.0	32.0	190.0	200

CHROMEplus® open double ring spanner set, with flexible joint

- 6 point
- Ring head 15° offset
- Opening 15° cranked
- With flexible head
- Chrome plated and mirror polished
- Chrome vanadium



518.0350	3 pcs 10 - 11 - 12 mm 240
518.0360	5 pcs 8 - 9 - 10 - 11 - 12 mm 420
518.0370	3 pcs 14 - 17 - 19 mm 620

CHROMEplus® ratchet spanner with revolving head

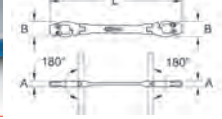
- 6 point
- Straight form
- 180° revolving head
- With ratchet function
- Suitable for force fit applications
- Chrome plated and mirror polished
- Chrome vanadium



		A mm	B mm	L mm	
518.0321	11	10.3	19.0	155.0	115

CHROMEplus® ratchet spanner with revolving head

- 6 point
- Straight form
- 180° revolving head
- Ratchet function
- Suitable for force fit applications
- Chrome plated and mirror polished
- Chrome vanadium



		A mm	B mm	L mm	
518.0332	8x9	8.5	14.8	123.0	56
518.0334	10x11	10.0	18.4	156.0	116
518.0336	12x13	11.2	21.1	179.0	170
518.0338	14x15	12.1	24.6	208.0	240

CHROMEplus® ratchet spanner set with revolving head

- 6 point
- Straight form
- 180° revolving head
- Ratchet function
- Suitable for force fit applications
- Chrome plated and mirror polished
- Chrome vanadium

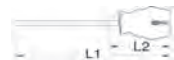


518.0330	4 pcs 8x9 - 10x11 - 12x13 - 14x15 mm 600

BRAKE BLEEDER

Suction and filling bottle

- Ideal aid for drip-free filling or removal of brake fluid
- Suitable for brake fluid
- Acid-resistant
- With rubber ball and rubber pipe
- Special plastic



		L1 mm	L2 mm	
160.0738	245.0	130.0	92	

Brake bleeding refill bottle

- Practical refill device
- While ventilation of the hydraulic brake system it is possible to refill brake fluid in reservoir
- Prevent the complete emptiness of the brake fluid reservoir and prevent the air gets into hydraulic brake system
- Universal clamping device for different reservoir openings
- Mount on the bottle on the brake fluid reservoir - open the valve - automatic level of control



150.2302	1	450
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One-man brake bleed adapter

- With return valve, which prevents used brake fluid from running back as well as air that has been pumped out
- Ideal for hard-to-reach places when bleeding the brakes
- Completely sealed connection of bleeding and filling devices
- For manual brake bleeds on hydraulic brake systems
- Especially suited for coupling systems
- Used fluids are led directly into the drip pan (optional) and stored environmentally
- One-man operation
- Short set-up time
- Simple operation
- Universal usage
- No need to adapt the balance container



150.2304	Length mm: 77.0	Width mm: 52.0	Weight kg: 60
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Brake bleeding spanner set

- Ideally suited to brake bleed screws
- For bleeding the brakes without disassembling the wheels
- Reversible ratchet wrench makes releasing and tightening easier
- Include fine-toothed and reversible ratchet with angled head
- Silicone bleed hose remains when releasing and tightening bleed valve
- Contains short and long hexagon through sockets
- Matt finish
- Chrome vanadium



518.0390	6 pcs	Brake bleeding spanner set	335
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consists of:

		L mm	Weight kg
518.0390-01	Silicone hose	1500.0	70
518.0390-02	9/16" ratchet for brake bleed	140.0	90
518.0390-03	Socket, short, 10 mm	29.0	30
518.0390-04	Socket, short, 11 mm	29.0	30
518.0390-05	Socket, long, 10 mm	75.0	75
518.0390-06	Socket, long, 11 mm	75.0	60

Brake bleeder with reception bottle

- With universal adapter
- Includes bendable silicone hose (400 mm)
- Ideal for containing the brake fluid when bleeding
- With robust hooks
- Special plastic



160.0735	1	272
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One-man brake bleeder with reception bottle

- With non-return valve, to avoid the backflow of old brake fluid or exhausted air
- Especially suited for clutch systems
- Old brake fluid is piped directly in the reception bottle and recycled
- One man operation
- Very short setup time - simple operation
- Universal usage
- No adaptors necessary
- Low priced in the acquirement



150.2305	1	1.18
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Automotive pressure and vacuum pump set

- For ventilating of smaller brake parts and for inspection of different areas including Low pressure and pressure functions
- Suitable for almost all current vehicles
- Robust metal execution
- Compact pistol form, one man operation
- Shock proof pressure and low pressure manometer with double scale
- Includes extensive adaptor assortment
- Readable in bar or psi
- In durable plastic storage case

Application range: Brake bleeding, test of the low pressure attitude the fuel pressure regulator, turbo charger valve, exhaust gas return valve and brake servos



Technical data:

Working range: vacuum up to -1 bar -30 Hg
pressure up to +1.5 bar 60 psi

150.1900	7 pcs	Automotive pressure and vacuum pump set	1.80
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consists of:

150.1901	Pressure and vacuum pump	730
150.1902	Drip measuring beaker, 120 ml	44
150.1903	Supply measuring beaker,	44
150.1904	Adapter set, 14 pcs	15
150.1905	Connection hose and sucker	23
150.1906	Connection point set, 4 pcs	9
150.1907	Connection hose set, 2 pcs	45



Pneumatic brake fluid bleeder set

- For the bleeding and filling of motor vehicle brake systems
- One-man operation
- Suitable for all current vehicles
- Vacuum production over pneumatic air through special "Venturi" -effect
- Bubble development is prevented efficiently
- Includes vacuum pistol and fill up container
- 1 lt fill up container 1 lt with automatic control mechanism
- The pneumatic operated pistol draws the old brake fluid through
- By means of fill up container this balances the new fluid container that becomes sucked through the Vacuum pistol system
- Includes 1/4" coupling connector



Technical data:

Operating pressure:	min. 5,0 - max. 12,0
Connection thread:	1/4"PT
Operating temperature:	-18°C up to max. 60°C
Exhaust tube length:	1 m
Collecting container volume:	2,0 l
Waste container volume:	1,0 l

150.2058	3 pcs Pneumatic brake fluid bleeder set	1.81

consists of:

150.2301	Brake bleeder unit	950
150.2302	Brake bleeder filling bottle, 1 litre	450
150.2303	Replacement tube f.brake bleeder	410

Vacuum fluid extractor suction pump 9.5 litre

- Ideal for quick, clean and simple suction, intake and emptying of fluids
- Suitable for engine oil, transmission oil, hydraulic oil, brake fluid, water, etc.
- For pneumatic use with a compressor or manual use with the integrated hand pump
- Select a suitable probe and suck easily using the vacuum principle
- Suction process automatically stopped when housing is full, preventing fluids from spilling over
- With integrated pressure relief valve for more safety
- With high-quality pump housing and strengthened pump head
- Includes 4 probes for different uses
- Ideally suited to hard-to-reach places thanks to the included, long suction hose
- The suction hose is resistant to petrol and oil
- Polyethylene

Application range: Passenger cars, transporters and MPVs, commercial vehicles, tractors, agricultural and construction machinery, industrial uses



Technical data:

Work pressure:	5-11,5 bar
Capacity:	9,5 l
Operating temperature:	+0°C to +55°C
Filling tube length:	1,5 m
Max. flow rate:	125 l/min

160.0790	5 pcs Vacuum fluid extractor suction pump 9.5 litre	5,00

consists of:

160.0791	Vacuum fluid extractor suction pump 9.5 litre	3708
160.0792	Adaptor and tube 4x8mm x1,5m	200
160.0793	Main probe 7.8 x 9.8 mm x 1 m	200
160.0794	Probe 5.3 x 6.7 mm x 1 m	200
160.0795	Probe 3.5 x 4.5 mm x 1 m	200



BRAKE MAINTENANCE TOOL

Brake maintenance device KS5

- Portable brake maintenance device
- Also suitable for ABS systems
- One-man operation
- Very good and user-friendly processing
- Mode of operation for use with original containers up to 5 litres
- Will not over-fill the amount of brake fluid required
- Pressure-free uncoupling on the vehicle
- Pulsing fluid flow ensures that even the smallest air pockets are removed from the brake system
- Fast, clean and environmentally friendly working
- Pressure regulator and analogous pressure notice shows on the device front
- Automatic end switching off in empty container
- No bleeding of the device when changing containers is necessary
- Manual on switch and empty switch
- Includes optimised suction hose with universal cone for original container and Euro adapter E20
- Steel housing

Application range Tyre fitting, petrol stations, motorcycle workshops, small motor vehicle workshops, etc.



Technical data:

Max Container size:	5 l
Work pressure:	0.5-3.5 bar
Operational voltage:	230 V
Filling tube length:	3.5 m
Dimensions:	400 x 200 x 300 mm

160.0700	Brake maintenance device KS5	7,00



Brake maintenance device KS20

- Portable brake maintenance device
- One-man operation
- Very good and user-friendly processing
- Integrated suction for extracting the old brake fluid
- Prevents damage to the ABS system
- Mode of operation for use with original containers up to 20 litres
- Will not over-fill the amount of brake fluid required
- Pressure-free uncoupling on the vehicle
- Pulsing fluid flow ensures that even the smallest air pockets are removed from the brake system
- Fast, clean and environmentally friendly working
- Pressure regulator and analogous pressure notice shows on the device front
- Automatic end switching off in empty container
- No bleeding of the device when changing containers is necessary
- Manual on switch and empty switch
- Includes optimised suction hose with universal cone for original container and Euro adapter E20
- Steel housing

Application range Tyre fitting, petrol stations, motorcycle workshops, small motor vehicle workshops, etc.



Technical data:

Max Container size:	20 l
Work pressure:	approx. 0.4-3.5 bar
Operational voltage:	230 V
Filling tube length:	3.5 m
Dimensions:	1000 x 400 x 400 mm

160.0705	Brake maintenance device KS20	20.00
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Bleed nozzle universal adapter U 90 with chain for brake bleeding

- Universal bottle adapter with securing chain
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- For reservoir Ø 20 mm to Ø 78 mm
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types, especially those not suited for the Euro adapter
- Made of aluminium

Application range: Japanese, Asian, American models, etc.



160.0708	Bleed nozzle universal adapter U 90 with chain for brake bleeding	270
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Bleed nozzle bayonet adapter B 35 for brake bleeding

- Bayonet connection
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- For reservoirs with internal Ø 34 mm and second seal for internal Ø 35 mm
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types with bayonet connection
- Made of aluminium

Application range: Japanese and European models, e.g. Subaru, Renault, Nissan, Suzuki, Hyundai, Kia etc.



160.0709	Bleed nozzle bayonet adapter B 35 for brake bleeding	175
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Bleed nozzle Euro adapter E 20 with swivel angle connector for brake bleeding

- Standard adapter
- Also for hard-to-reach reservoirs
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types
- Made of aluminium

Application range: For most European models, e.g. Alfa Romeo, Audi, BMW, Citroën, Dacia, Ford, Fiat, Lancia, Mazda, Mercedes, Mini, Opel, Peugeot, Porsche, Rover, Seat, Škoda, Volkswagen, Volvo etc.



160.0713	Bleed nozzle Euro adapter E 20 with swivel angle connector for brake bleeding	118
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Bleed nozzle thread adapter G 75 for brake bleeding

- Thread adapter
- Ideal for brake maintenance when installing on the reservoir
- Quick and easy to use
- Special seal for brake fluid
- With connection nipple for quick coupling
- Suitable for many vehicle types
- Made of aluminium

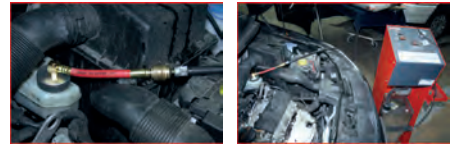
Application range: Volvo V40, Suzuki, Mitsubishi, Subaru etc.



160.0715	Bleed nozzle thread adapter G 75 for brake bleeding	215
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Bleed nozzle adaptor set for brake bleeding

- Usable in connection with brake maintenance devices
- Valuable supplement
- Including a selection of adapters for brake fluid reservoir
- Quick and easy to use
- With connection nipple for quick coupling
- Special seal for brake fluid
- Suitable for >98% of all vehicle types
- Indispensable for all vehicle work shops
- Aluminium adapter
- In durable plastic storage case



160.0710	4 pcs	Bleed nozzle adaptor set for brake bleeding	840
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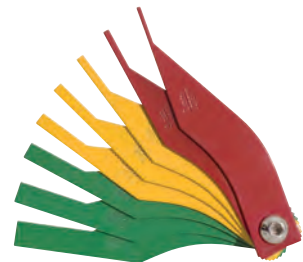
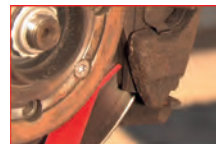
consists of:

160.0708	Bleed nozzle universal adapter U 90 for brake bleeding	270
160.0709	Bleed nozzle bayonet adapter B 35 for brake bleeding	175
160.0713	Bleed nozzle Euro adapter E 20 for brake bleeding	118
160.0715	Bleed nozzle thread adapter G 75 for brake bleeding	215

BRAKE MEASURING TOOL

Brake lining wear indicator set

- For quick assessment of the brake force strength on disk brakes
- With colour coding
- With mm display on the wear gauge
- Can measure from 2 mm to 12 mm



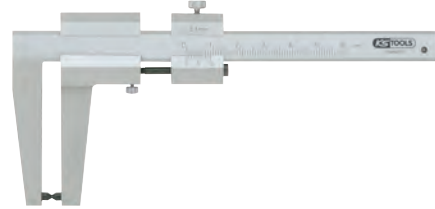
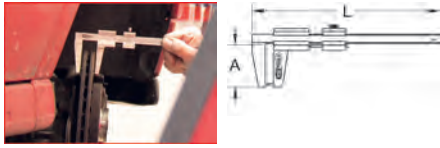
Technical data:

Red:	lining thickness poor, replacement necessary
Gold:	lining thickness good to satisfactory
Green:	lining thickness very good to good - replacement not necessary

300.0570	8 pcs	Brake lining wear indicator set	265
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Brake disk vernier calliper

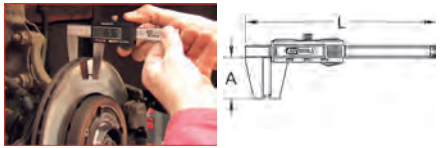
- In accordance with DIN 862
- Locking screw
- Scale division in black
- Measuring bar in mm divisions
- Entirely hardened, finely engineered
- Stainless steel
- In durable wooden case



	Measuring range mm	A mm	L mm	Display accuracy mm	Weight kg
300.0535	0 - 60	55.0	162.0	+/- 0,01	130
300.0536	0 - 90	120.0	255.0	+/- 0,01	135

Digital brake disk vernier calliper 0 - 60 mm

- In accordance with DIN 862
- Locking screw
- For internal measurements
- Scale division in black
- Measuring bar in mm and imperial divisions
- mm/imperial switching
- Hold button for fixing measured
- Reset (to zero) in every position possible
- Large LCD display figure height 10.0 mm
- Automatic switching off
- Entirely hardened, finely engineered
- Stainless steel
- In durable plastic case



	Measuring range mm	A mm	L mm	Display accuracy mm	Weight kg
300.0540	0 - 60	55.0	160.0	+/- 0,03	130



Digital calliper for brake discs HGV 0 - 100 mm

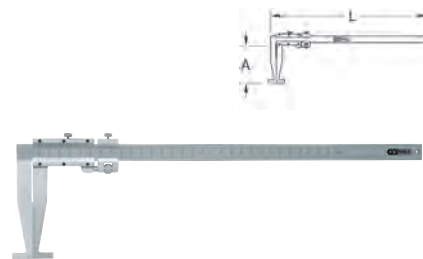
- In accordance with DIN 862
- mm/imperial switching
- Hold button for fixing measured value
- Reset (to zero) in every position possible
- LCD display - figure height 6,0 mm
- With automatic switching off
- Stainless steel, hardened
- In durable plastic case



	Measuring range mm	A mm	L mm	Display accuracy mm	Weight kg
300.0539	0 - 100	95.0	207.0	+/- 0,03	155

Brake drum calliper

- In accordance with DIN 862
- Locking screw
- For external and internal measurements
- Scale division in black
- Thread table
- Measuring bar in mm divisions
- Thread table
- Internal measure has direct reading
- Entirely hardened, finely engineered
- Stainless steel
- In durable wooden case



	Inner measuring range mm	Outer measuring range mm	A mm	L mm	Display accuracy mm	Weight kg
300.0525	0 - 300	40 - 340	95.0	410.0	+/- 0,02	500
300.0530	0 - 500	60 - 560	150.0	660.0	+/- 0,05	1380

Brake disc calliper gauge

- Allows identification of the brake disc diameter without disassembling the wheels
- Universal usage
- Quick identification of the braking system
- No wrong ordering of brake pads or brake discs
- Quick and efficient
- Saves a lot of time



	Span width mm	Length mm	Weight kg
300.0506	200-400	455.0	1.52

Micrometer

- In accordance with DIN 863
- With measurement locking screw
- Measuring force rule through ratchet sensation
- Spindle made out of hardened steel
- Measuring surfaces with hard metal tips
- With hand warmth insulation
- Stainless steel
- In durable plastic case



	Measuring range mm	A mm	L mm	Display accuracy mm	Spindle mm	Drum mm	Spindle pitch mm	Weight kg
300.0555	0-25	30.0	130.0	+/- 0,01	6,5	17,0	0,5	300



Digital outside micrometre

- DIN 863
- With measured value locating screw
- Measuring force rule through ratchet sensation
- Measuring surfaces with hard metal tips
- With hand warmth insulation
- Stainless steel
- 2 mm feed enables quick measurement
- IP54
- Large LCD display
- With automatic switching off
- In durable plastic case



	Measuring range mm	A mm	L mm	Display accuracy mm	Spindle mm	Drum mm	Spindle pitch mm	Weight kg
300.0580	0-25	24.0	160.0	+/- 0,01	6,5	17,0	0,5	310

Precision dial indicator gauge 0 - 10 mm

- In accordance with DIN 878
- With fixed adjusting screw and revolving scale reading
- Shockproof
- Splash proof
- Measuring tip protected against contamination by a bellowed sleeve
- Clamping shaft Ø 8 mm H6
- With 2 measuring scales
- Spindle and clamping shaft made from stainless steel
- In durable plastic case



	Measuring range mm	D mm	Dial accuracy mm	Pointer resolution mm	
300.0560	0 - 10	60.0	+/- 0.01	1.0	260

Digital precision dial indicator gauge 0 - 10 mm

- mm/imperial switching
- Reset (to zero) in every position
- Large LCD display figure height 6,0 mm
- Clamping shaft Ø 8 mm H6
- Automatic switching off
- Spindle and clamping shaft made from stainless steel
- In durable wooden case



	Measuring range mm	D mm	Display accuracy mm	
300.0565	0 - 10	60.0	+/- 0,02	280



Magnetic measurement stand with 2 joints

- For clamping of the dial indicator
- Revolving base
- Transverse arm with joint and fine adjustment
- With on and off switchable magnetic base
- High adhesive force on burnished steel and cast areas
- Also adhesive on convolutions
- Foot with prismatic base and stop area mounted edges
- With dial gauge reception Ø 8 mm



	Radius mm	Magnet foot L x W x H mm	Total depth mm	Adhesive force N	Stand Ø mm	
300.0625	180,0	60x50x55	280,0	600,0	16,0	2,00

Magnetic measurement stand with 3 joints

- For clamping of the dial indicator
- Revolving base
- Transverse arm with joint and fine adjustment
- With on and off switchable magnetic base
- High adhesive force on burnished steel and cast areas
- Also adhesive on convolutions
- Foot with prismatic base and stop area mounted edges
- With dial gauge reception Ø 8 mm



	Radius mm	Magnet foot L x W x H mm	Total depth mm	Adhesive force N	Stand Ø mm	
300.0623	280,0	50x55x60	380,0	600,0	12,0	1,70

Brake disc measuring tool set

- For measuring the radial and axial runout of wheel hubs and brake discs
- Exact positioning of the dial gauge on the test object with magnetic dial gauge holder
- Quick and easy attachment of stand with prismatic support and activated magnets
- Precise setting of the measuring scale with adjustable tolerance marks
- With rotating, knurled outer ring
- Suitable for measuring the brake disc thickness, and for detection of irregularities and distortion
- With measured value fixing lever and measuring force control with ratchet function
- In durable plastic storage case



150.2230 3 pcs Brake disc measuring tool set	4.00

consists of:

300.0625 Magnetic-measurement stand	2.00
300.0560 Dial gauge 0 - 10 mm, mechanical	0.28
300.0556 Outside micrometre 25 - 50mm.	0.32

Brake disc measuring tool set

- Gauge stand with 3-point connection for the assembly of the bumper
- Ideal for identifying of vertical and lateral wobble on the brake disk
- Transverse arm with joint and fine adjustment
- Includes dial gauge and micrometre for identifying wear limit
- Universal usage
- Simple handling
- In durable plastic storage case



300.0690 4 pcs Brake disc measuring tool set	2.26

consists of:

300.0691 3-point connection	660
300.0692 Stand	600
300.0560 Precise dial gauge, 0-10 mm	260
300.0555 Micrometre, 0-25 mm	300