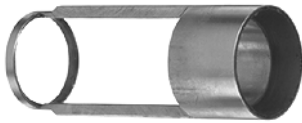
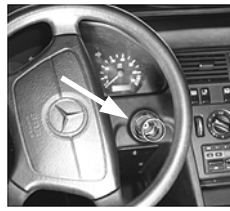


KL-0372-4



Mercedes W202, W210



### KL-0372-4 Sleeve for Ignition Switch

The mounting sleeve **KL-0372-4** is a special tool designed for removal and refitting the ignition switch on **Mercedes W202 and W210** up to '97.

The tool consists of tubular outer casing with a conical rubber insert.

KL-0372-5

Mercedes



### KL-0372-5 Braker Bar

Overcomes problems on **Mercedes W124 and W201** up to 1993.

If the ignition key should break in the ignition lock. In this event, the **KL-0372-5** allows the ignition switch assembly to be broken off the steering column so that a new switch assembly may be fitted.

#### Advantages of the tool:

- No damage to steering column and dash board.
- No drilling out of the locking switch.
- Increased job time saving.
- Low tool costs.
- No accidents.

KL-0372-6

Mercedes

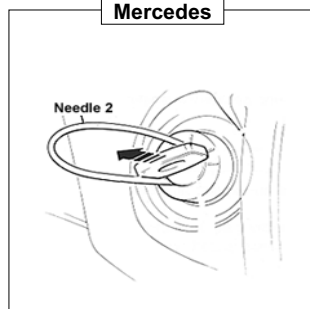
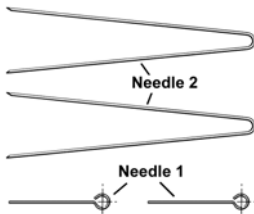


### KL-0372-6 Assembly Sleeve for Ignition Switch

For removal and replacement of the ignition switch retaining ring fitted to **Mercedes types W129, W140, W203, W208, W209, W210, W211, W220 and W230** with FBS 2 and FBS 3 Ignition Switch.

KL-0372-1

Mercedes



### KL-0372-1 Needle Set for Ignition Switch

For removal of ignition switch on **Mercedes** passenger cars

The needle set **KL-0372-1** contains needles of size 1 and size 2 with a diameter of 1.25 and 2.0 mm.

They are applicable for the removal of the ignition switch on following types:

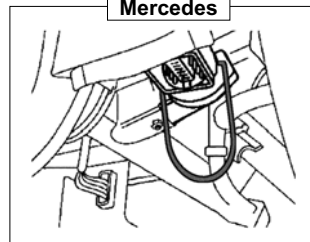
- Needle 1 on **Mercedes W116, W123 and W126**
- Needle 2 on **Mercedes W124 and W201**

#### Advantages:

- Problem-free and quick removal of the ignition switch on the specified types.

KL-0372-70

Mercedes



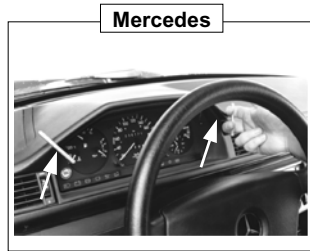
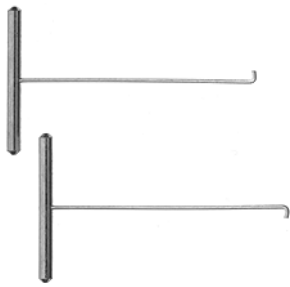
### KL-0372-70 Spring Tool for Steering Lock protection sleeve (2 Pcs.)

Suitable for **Mercedes W129, W140, W210 and W202** with FBS2 Ignition Switch

To remove the Protection Sleeve with the Ignition Switch from the Steering Lock, it is necessary to press in both Locking Bolts in the Steering Lock using **KL-0372-70**.

The Set contains 2 Spring Tools made from stainless steel.

KL-0372-3



### KL-0372-3 Pulling Hooks long

For easy removal of the instrument panel on **Mercedes passenger cars W116, W123, W124, W126, W129, W140, W201, W202, W203, W208, W209, W210, W211, W220 and W 230.**

KL-0191-10



VW- Audi, BMW, Mercedes



### KL-0191-10 Special Torx Driver Torx® T30

(with pilot)

This tool allows easy removal and replacement of the retaining screws on airbag fitted to **BMW, Mercedes.**

Access is permitted by special length of 85 mm with 1/4"-drive.

Length: ..... 85 mm  
 Drive: ..... 1/4"  
 Weight: ..... 22 g

KL-0191-11

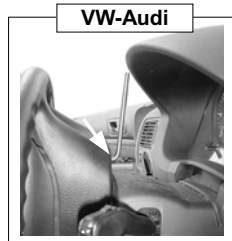


### KL-0191-11 Special Torx Driver Torx® T30

This Tool allows easy removal and replacement of the retaining screws on airbags fitted to **VW, Audi (A4 Bj. '96-'05), Opel, Renault** etc.

Length: ..... 85 mm  
 Drive: ..... 1/4"  
 Weight: ..... 22 g

KL-0242-10



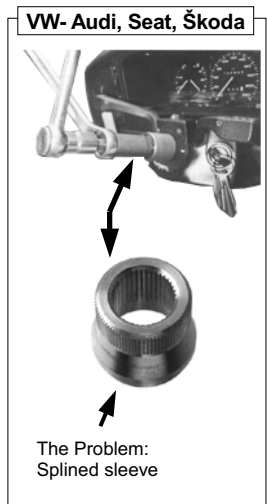
### KL-0242-10 Airbag Removal Tool Set (2 Pcs.)

**Suitable for Driver's air bag housing e.g. VW Golf IV, Lupo, New Beetle, Passat (B5) 97-onwards, Polo 99-onwards.**

In order for the driver's air bag housing to be removed, it is necessary to loosen the retaining bridge with the **KL-0242-10** Airbag Removal Tool Set.

KL-0240-1

KL-0240-2



### KL-0240-1 Steering Wheel Sleeve Puller vw

On **VW Golf II, Jetta, Golf III, Vento, Polo, Passat, etc.** from '88 onwards it is necessary to remove a splined sleeve after removal of the steering-wheel. The precise fit of this puller ensures a quick and easy removal of the sleeve without the risk of damage to the steering-column splines.

Chuck range: ..... 27 - 30 mm

### KL-0240-2 Drift for knocking out steering sleeves

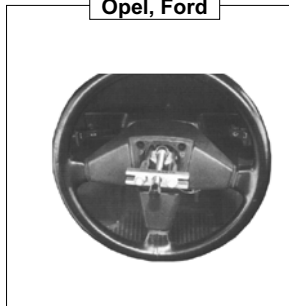
The Drift **KL-0240-2** made of brass allows the sleeves on the steering-column to be separated without risk of damage.

2

KL-0153-1



Opel, Ford



### KL-0153-1 Steering Wheel Puller

For Opel, Ford etc.

Steering wheels which are stuck on the steering column may be pulled off cleanly, quickly and without damage to the steering column and steering wheel with the puller KL-0153-1. The different length of the puller arms and the longitudinal groove in the yoke allows an almost universal application of this puller tool.

Adjusting Range: ..... max. 90 mm      Height: ..... 135 mm

#### Advantages:

- Universal application.
- No damage to the steering wheel during pulling action.

KL-0153-2



Mercedes



### KL-0153-2 Steering Wheel Puller

Suitable for Mercedes Transporters and trucks.

Allows easy removal of stubborn steering wheels without risk of damage to either steering column splines or the steering wheel.

Adjusting Range: ..... 40 - 88 mm      Screws: .... M10 x 60

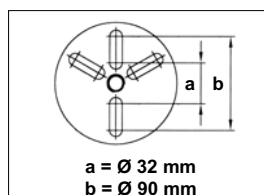
#### Advantages of the puller tool:

- Due to the longitudinal grooves in the puller plate, this puller can be universally used as a two arm puller as well as a three arm puller.
- Flanged nut of the spindle prevents a slip off of the operating tool.
- No damage to the steering wheel during extraction.

KL-0153-5 K



Universal



### KL-0153-5 K Puller Set

Puller Set for Steering Wheels, Sprockets, Pulleys and Shafts, etc.

Range: ..... Ø 32 - Ø 90 mm

#### Consists of:

- Puller Disc: ..... Ø-110mm (2+3 Hole mounting) with Spindle.
- |                     |                 |        |
|---------------------|-----------------|--------|
| Allen® -bolt: ..... | M8x1,25 x 100   | 3 Pcs. |
| Allen® -bolt: ..... | M10x1,25 x 100  | 3 Pcs. |
| ● Hex bolt: .....   | M8x1,25 x 80    | 3 Pcs. |
| ● Hex bolt: .....   | M10x1,5 x 50    | 3 Pcs. |
| ● Hex bolt: .....   | 1/4" UNF x 75   | 2 Pcs. |
| ● Hex bolt: .....   | 5/16" UNF x 90  | 2 Pcs. |
| ● Hex bolt: .....   | 5/16" UNC x 50  | 3 Pcs. |
| ● Hex bolt: .....   | 5/16" UNC x 110 | 3 Pcs. |
| ● Hex bolt: .....   | 3/8" UNF x 50   | 3 Pcs. |
| ● Hex bolt: .....   | 3/8" UNC x 100  | 3 Pcs. |
- Washers: ..... 1/4"x19 2 Pcs.; 5/16"x18 3 Pcs.; 3/8"x20 3 Pcs.

The Set is delivered in Plastic Storage Case.

KL-0284-8



VW-Audi



### KL-0284-8 Reaction Wrench

For locking the pulley on the steering-pump on e.g. **VW Polo, Golf, Passat and Audi A4**. Length:..... 250 mm

**Advantages:**

- The ½" □ drive in the tools handle enables an extension of the tool by e.g. a ratchet.
- Easy loosening of stubborn bolts on the steering-pump pulley.

KL-0284-81



VW-Audi



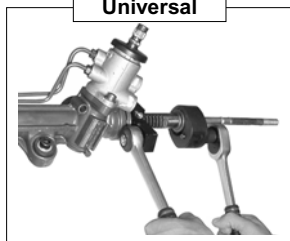
### KL-0284-81 Reaction Wrench

As **KL-0284-8** but especially suitable for **VW Passat ('97 onwards) and Audi A4 ('99 onwards) etc.**

KL-0167-20



Universal



### KL-0167-20 Steering Rack eccentric Socket Ø 33 - 42 mm

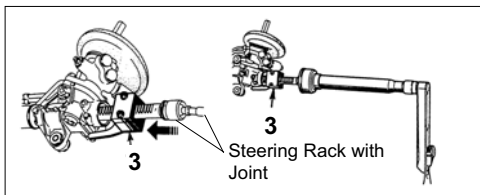
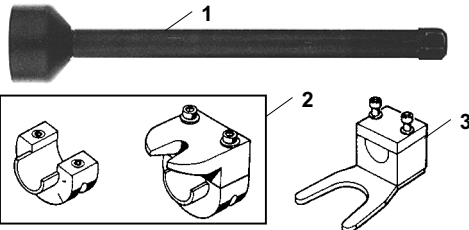
This tool allows quick and easy replacement of the inner ball-joint on the Steering Rack.

Removal of the Rack from the bulkhead is not necessary.

For Ball-Joints with Ø 33 - 42 mm. Drive: ..... ½" □

KL-0167-10

Renault



### KL-0167-10 Mounting tool set

**Suitable for Renault-Vehicles.**

The Tool Set **KL-0167-10** allows a quick and easy removal and replacement of the inner steering ball joint without the need to dismantle the steering rack from the bulkhead.

Drive head range Ø 35-39 mm.

**Time saved: 4 hours (approx).**

**Mounting instructions:**

Fit the appropriate locking tool (2 or 3) to the exposed steering rack. Using the special socket (1) undo the ball joint of the rack. Simultaneous locking the rack using the chosen locking tool. After the removal of the ball joint it is now possible to replace the sealing ring in the rack housing.

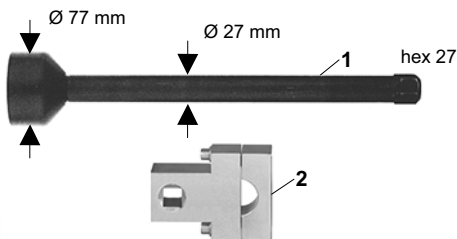
**Specification:**

Pos.	Part No.	Description
	<b>KL-0167-10</b>	<b>Mounting Tool Set (Weight 2,3 kg)</b>
<i>consists of:</i>		
1	KL-0167-115	Special socket (for Ø 35-39 mm; Length 410 mm)
2+3	KL-0167-131	Locking Tool Set

**Accessories:**

Pos.	Part No.	Description
	<b>KL-0167-131</b>	<b>Locking Tool Set</b>
<i>consists of:</i>		
2	KL-0167-1314	Locking Tool Clio, Twingo
3	KL-0167-1313	Locking Tool Clio 2, Laguna, R19, Safrane

KL-0167-11



Toyota, ZF

Remove or replace rack ball-joint.



### KL-0167-11 Mounting tool set

Similar as **KL-0167-10**.

**Applicable for power steering systems Type 7832 (974 115), mounted for example in Toyota vehicles.**

**Specification:**

Pos.	Part No.	Description
	<b>KL-0167-11</b>	<b>Assembly Tool Set (Weight: 2.1 kg)</b>
<i>consists of:</i>		
1	KL-0167-115	Special socket (for Ø 35-39 mm; Length 410 mm)
2	KL-0167-141	Locking tool (for racks - Ø to 25 mm)

KL-0121-83

Universal



### KL-0121-83 Hose Band Cutter straight

To open or cut „earless“ Hose-Bands on CV-Joints, Drive-Shafts, Radiator Hoses, Fuel-lines, etc.

Universal application.

KL-0121-81

Universal



### KL-0121-84 Hose Band Cutter angled (not ill.)

As KL-0121-83 but with angled head for inaccessible locations.

### KL-0121-81 Hose Band Pliers

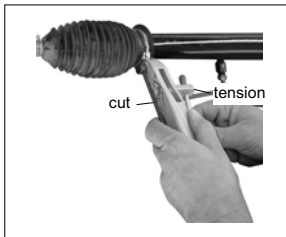
Works on „earless“ Hose-Bands on axle collars, water and fuel hoses.

Universal Application.

Specially suitable for VW-Audi etc.

KL-0121-85

Universal



Length.....230 mm Weight:..... 340 g

### KL-0121-85 Hose Band Tool

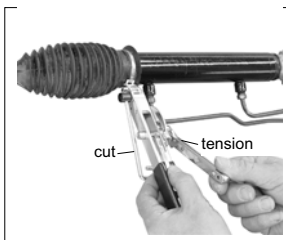
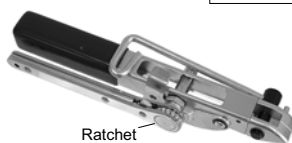
Suitable for Endless Hose-Bands (e.g. Bandimax) up to 9,5 mm, example drive-shaft gaiters, etc.

For quick and easy tensioning and cutting endless Hose-Bands.

Length.....160 mm Weight:..... 450 g

KL-0121-86

Universal



### KL-0121-86 Hose Band Tool with Ratchet

Suitable for Endless Hose-Bands (e.g. Bandimax) up to 9,5 mm, example drive-shaft gaiters, etc.

For quick and easy tensioning and cutting endless Hose-Bands.

Length.....200 mm Weight:..... 360 g

KL-0322-6

Mercedes



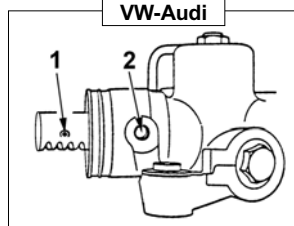
### KL-0322-6 Retention Bolt Set

With conical tip for middle positioning of the steering while adjusting the steering geometry.

Application: Mercedes W107, W114, W115, W116, W123, W126.

KL-0241-1

VW-Audi



### KL-0241-1 Locking screw

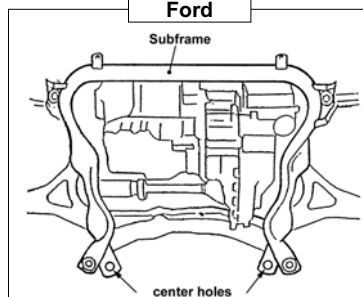
Applicable for Audi A4, A6, VW Passat from '97 upwards etc.

Mounting instruction:

Move the steering rack as far as possible so that Pos. 1 and Pos. 2 are level. Then screw in the retention bolt KL-0241-1. The rack is now in the central position and therefore it is possible to find the basic adjustment of the right and left handle bar.

KL-0690-1

Ford



### KL-0690-1 Location Pin Set (2 Pcs.)

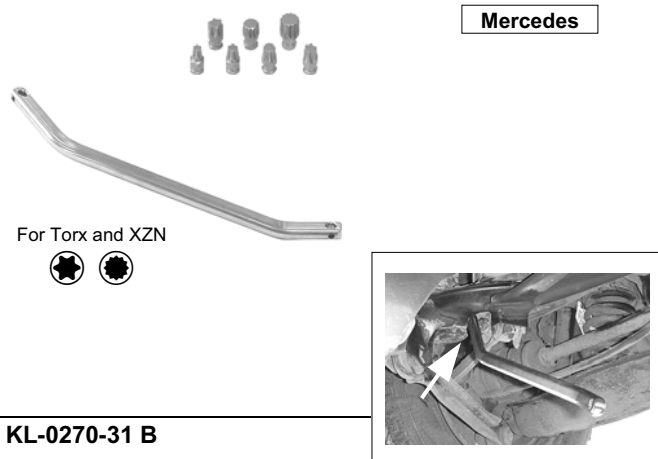
Application: Ford Mondeo and Fiesta from '96 upwards

Overhaul and replacement of engine, transmission, clutch, etc. often require the removal of the front sub-frame.

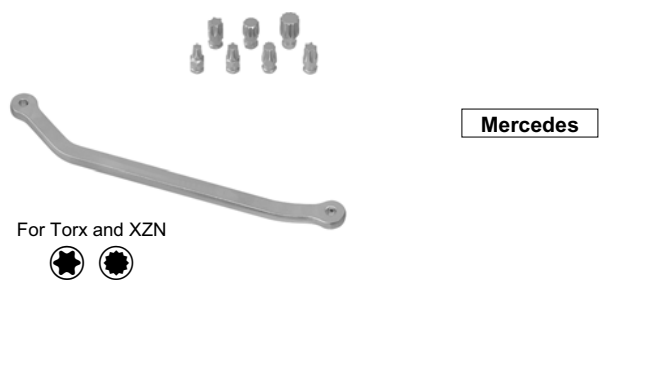
When the sub-frame has been removed for work on the above items it is important to ensure that on re-assembly it is aligned accurately with the chassis to maintain alignment of the wheels. Steering problems and tyre wear will result if the correct geometry is not achieved.

The Location Pin Set KL-0690-1 ensures that accurate alignment is achieved.

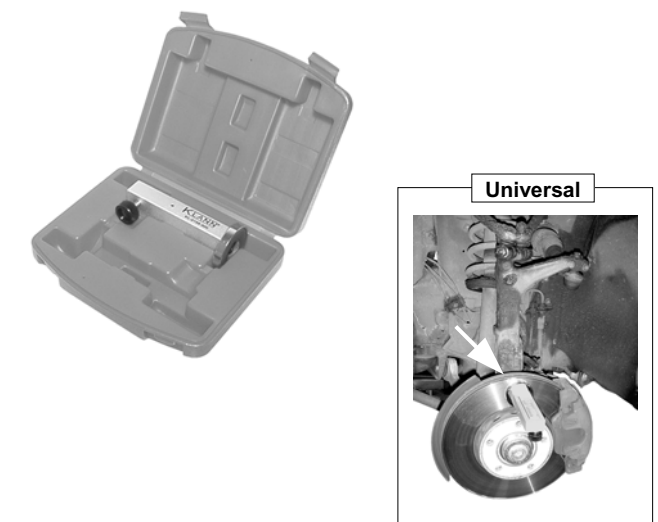
### KL-0270-3 B



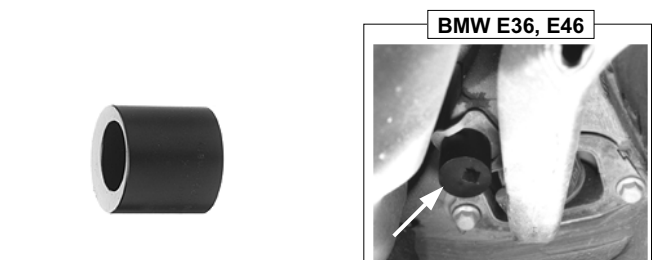
### KL-0270-31 B



### KL-0168-90 K



### KL-0540-1



### KL-0270-3 B Wrench with 7 Bit Inserts

#### Suitable for Door Hinge Bolts

e.g. Audi 97 - onwards; Renault Safrane / Laguna; Seat Arosa / Cordoba / Ibiza; VW Golf III / Golf IV / Passat 97-onwards / Polo / Vento; Škoda etc.

To quickly and easily loosen and tighten the bolts in door hinges.

#### Suitable for Mercedes Toe Adjustment

e.g. 190 Series (W201), C-Class (W202), C-Class (W203), 200 - 300 E (W124), E-Class (W210), S-Class (W220)

To adjust the Toe on the rear axle. Due to its special form, this tool allows easy and precise adjustments to the inaccessible adjustment bolts.

#### Technical Data:

Size 5/16"-Drive Bit-Inserts:

T30, T40, T45, T50, XZN-8, XZN-10, XZN-12

Length: ..... 310 mm

Weight: ..... 430 g

Bit-Drive: ..... 5/16" ●

#### Accessories: KL-0270-303 Bit-Inserts Set 7 pcs.

Consists of 5/16" Drive Bit-Inserts size:

T30, T40, T45, T50, XZN-M8, XZN-M10, XZN-M12

### KL-0270-31 B Wrench with 7 Bit Inserts

As KL-0270-3B, however in forged design.

#### Suitable for Mercedes ToeAdjustment e.g.

190 Series (W201), C-Class (W202), C-Class (W203), 200 - 300 E (W124), E-Class (W210), S-Class (W220)

Due to its special form, this tool allows easy and precise adjustments to the inaccessible adjustment bolts.

#### Technical Data:

Size 5/16"Drive Bit-Inserts:

T30, T40, T45, T50, XZN-8, XZN-10, XZN-12

Length: ..... 320 mm

Weight: ..... 520 g

Bit-Drive: ..... 5/16" ●

#### Accessories: KL-0270-303 Bit-Inserts Set 7 pcs.

Consists of 5/16" Bit-Inserts size:

T30, T40, T45, T50, XZN-M8, XZN-M10, XZN-M12

### KL-0168-90 K Camber Gauge (in Case)

The KL-0168-90 K Camber Gauge with magnetic foot allows the existing camber angle to be memorised before the suspension is dismantled. After re-assembly the camber can be set to the previous setting without time-consuming geometry check. Weight: ..... 500g

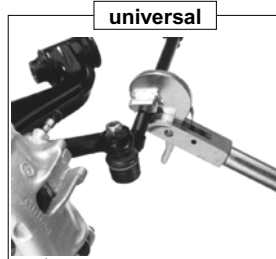
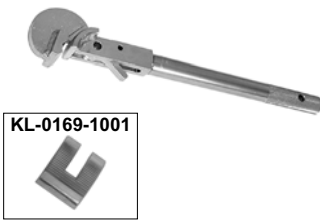
### KL-0540-1 Eccentric Socket

To adjust the toe-on at the rear axle on BMW E36, E46.

Therefore the bolts on the lower control arm have to be loosened. Then the eccentric socket has to be set on the control arm bolt. By turning the eccentric socket around the control arm gets to the right alignment position.

Drive: ..... 1/2"

KL-0169-1



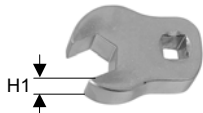
### KL-0169-1 Track-Rod Adjusting Tool

For loosening and adjusting stubborn Track-Rods. The broad serrated jaws prevent damage to the Track-Rod.  
Application: Track-Rods Ø 14-23 mm

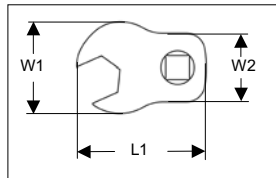
**Accessories:**

**KL-0169-1001 Adaptor for Track-Rods**  
from Ø 11 mm upwards.

KL-0169-318 / KL-0169-321



1/2"



### KL-0169-318 Open Ended Spanner Socket

Suitable for Steering Rack Opel Vectra B, etc.

Extra-strong version, ideal for unscrewing or turning track rods.

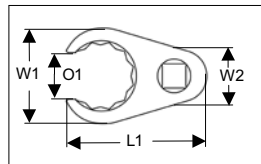
Drive:..... 1/2" □

Part No.	Hex (mm)	Length [L1]	Height [H1]	Width 1 [W1]	Width2 [W2]	Weight [g]
KL-0169-318	18	70 mm	20 mm	45,5 mm	32 mm	300

KL-4072-301



1/2"



### KL-0169-321 Open Ended Spanner Socket

As KL-0169-318, but with hex 21 mm e.g. suitable for Steering Rack Opel Sintra, etc.

Drive:..... 1/2" □

Part No.	Hex (mm)	Length [L1]	Height [H1]	Width 1 [W1]	Width2 [W2]	Weight [g]
KL-0169-321	21	70 mm	20 mm	49,5 mm	37 mm	330

### KL-4072-301 Open Ended Ring Spanner Socket Set

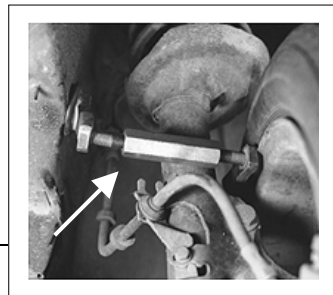
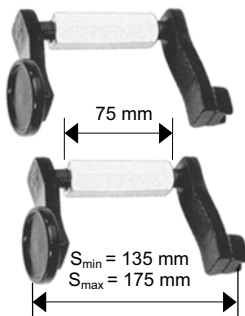
Open 12-sided spanners are exceptionally compact and strong, so that even screws and nuts that are difficult to reach or turn can be loosened and tightened. Drive:..... 1/2" □

Part-No.	Hex (mm)	Length [L1]	Height [H1]	Width 1 [W1]	Width 2 [W2]	Opening [O1]	Weight [g]
KL-4072-3017	17	60 mm	20 mm	31 mm	31 mm	12 mm	150
KL-4072-3018	18	63 mm	20 mm	34 mm	31 mm	14 mm	150
KL-4072-3019	19	63 mm	20 mm	34 mm	31 mm	14 mm	150
KL-4072-3022	22	65 mm	25 mm	39 mm	31 mm	15,5 mm	325
KL-4072-3024	24	70 mm	25 mm	44 mm	31 mm	18 mm	350

**Note:** Further Sockets and Track Rod Tools see chapter 11.

KL-0168-1

VW-Audi, Seat, Škoda



### KL-0168-1 Alignment Tool Set (2 Pcs.)

With extra strong spindle (M14).

**Application:** VW Golf, Jetta, Seat Toledo, etc.

This pair of pressure fixtures allows a single technician working alone to adjust and set camber angles. Not only quick and easy, but eliminates the need for additional labour.

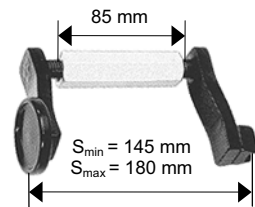
The tool is placed between the strut or bodywork and the wheel-rim and camber may be adjusted by rotating the hexagonal drive.

**Technical Data:**

Spin width <sub>min</sub>:.....135 mm Spin width <sub>max</sub>:..... 175 mm

KL-0168-2

VW-Audi, Seat, Škoda



### KL-0168-2 Alignment Tool Set (2 Pcs.)

With extra strong spindle (M14).

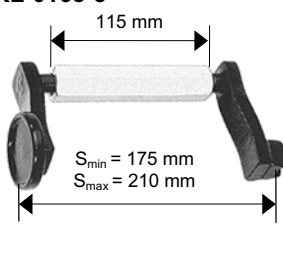
As KL-0168-1 but for VW Polo from '95, Seat Cordoba etc.

**Technical Data:**

Spin width <sub>min</sub>:.....155 mm Spin width <sub>max</sub>:..... 180 mm

KL-0168-3

Chrysler Voyager etc.



### KL-0168-3 Alignment Tool Set (2 Pcs.)

With extra strong spindle (M14).

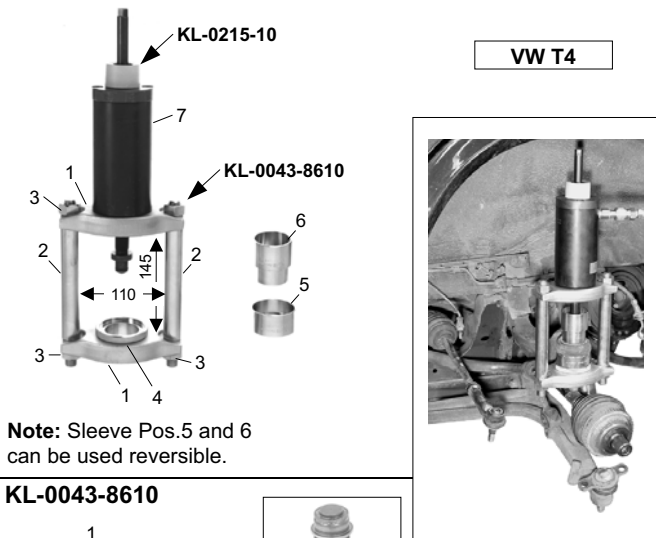
As KL-0168-1 but for Chrysler Voyager etc.

**Technical Data:**

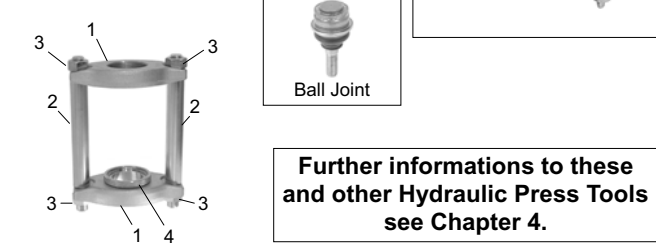
Spin width <sub>min</sub>:.....175 mm Spin width <sub>max</sub>:.....210 mm



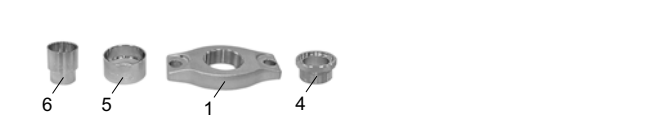
### KL-0043-861



### KL-0043-8610



### KL-0043-8611



**Note:** Conversion items to press frame KL-0043-8510

### KL-0043-8502-P



### KL-0043-8501-A



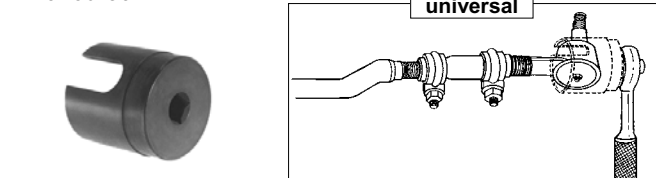
### KL-0043-8204



### KL-4031-3014



### KL-0169-50



## KL-0043-861 Press Tool with hydr. Cylinder (17t.)

Suitable for VW T4 front axle upper ball-joint.

The upper ball-joint may be removed and replaced within 30 minutes using the new Press Tool **KL-0043-861**, without the need to dismantle the upper wishbone.

### Advantages

- Large time savings (2 - 3 hours).
- Simple and precise to use.
- High safety.

### Specification:

Pos.	Part No:	Description	Qty.
	<b>KL-0043-861</b>	<b>Hydraulic Press Tool 17t. VW-T4</b>	<b>1</b>
	<i>consists of:</i>		
	KL-0043-860	Press Tool VW-T4	1
7	KL-0215-10	Hydraulic Cylinder with Spindle	1
	<b>KL-0043-860</b>	<b>Press Tool VW-T4 (not illustrated)</b>	<b>1</b>
	<i>consists of:</i>		
	KL-0043-8610	Press Frame	1
5	KL-0043-8661	Lower Sleeve VW-T4	1
6	KL-0043-8662	Upper Sleeve VW-T4	1

### KL-0043-8610 Press Frame

*consists of:*

Pos.	Part No:	Description	Qty.
1	KL-0043-8501-C	Base Plate 2¼"-14 UNS	2
2	KL-0215-4004	Frame Rods	2
3	KL-0049-3004	Hex Nut M18	4
4	KL-0043-8601	Adaptor 2¼"-14UNS to Ø60	1

### KL-0043-8611 Supplement Kit VW T4 for KL-0215-4...

The Bush Tool **KL-0215-4...** Series may also be used to replace the upper ball-joint on VW T4 by using the Supplementary Kit **KL-0043-8611**.

*consists of:*

Pos.	Part No:	Description	Qty.
1	KL-0043-8501-C	Base Plate 2¼"-14 UNS	1
4	KL-0043-8601	Adaptor 2¼"-14UNS to Ø60	1
5	KL-0043-8661	Lower Sleeve VW-T4	1
6	KL-0043-8662	Upper Sleeve VW-T4	1

### Note: Component parts required to convert the press frame to KL-0043-8510

The Press Tool **KL-0043-861** can be converted to press frame **KL-0043-8510**, by using the base plate M42 x 2 **KL-0043-8501-A**, the adaptor from M42x2 to Ø30 **KL-0043-8204** and the pair of frame rods M18 with hex. nuts **KL-0043-8502-P**.

(⇒ KL-0043-8510 see Page 4-14)

## KL-4031-3014 Special Socket Insert xZN M14

For removal of the upper ball-joint on **VW T4 Transporters**.

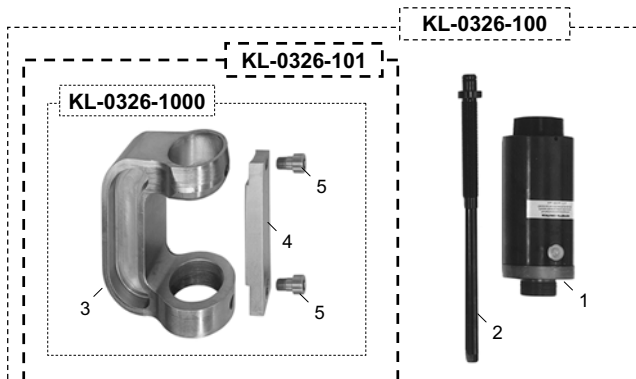
Length: ..... 60 mm Drive: ..... ½"  
Weight: ..... 110 g

## KL-0169-50 Tie Rod End Socket

This tool is used to replace worn out tie rod ends. After separating the ball joint from steering knuckle, slip tool over end of worn tie rod and remove.

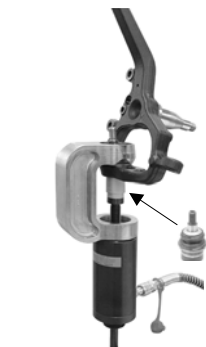
U-opening:.... 34.9 × 19 mm Inner-Ø: ..... 23.8 mm  
Drive:..... 1/2" Length: ..... 57 mm  
Weight: ..... 490 g

### KL-0326-10

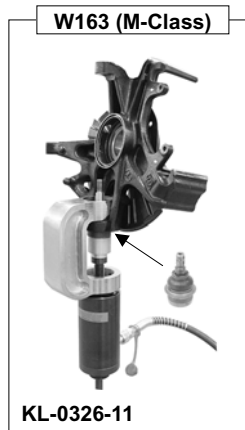
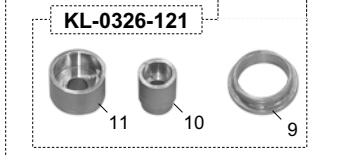
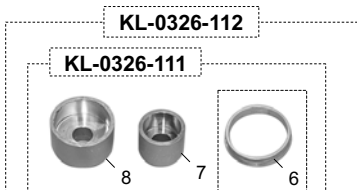


Mercedes

W211 (E-Class)  
W220 (S-Class)



KL-0326-12



KL-0326-11



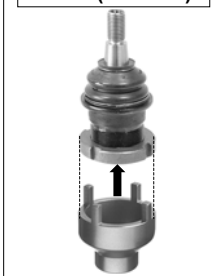
KL-0326-13

**Note:** An hydraulic pump will be required to drive the KL-0040-2500. Further informations about hydraulic tools see Chapter 4.

### KL-0326-20



W163 (M-Class)



### KL-0326-10 Press Tool with hydr. Cylinder (17 t.) (German Utility Model)

Suitable for Mercedes W163 (M-Class) Front Axle / Rear Axle and W211 (E-Class), W220 (S-Class), W124, W201 Front Axle. The support joint can be pressed into and out of the lower wishbone quickly and easily with the KL-0326-10 hydraulic press tool kit. The support joint can often be removed or installed from the vehicle in only a few minutes, without removing the wishbone.

#### Specification:

Pos.	Part-No.	Description	Qty.
	<b>KL-0326-10</b>	<b>Press Tool with Hydraulic. Cylinder. 17t.</b>	<b>1</b>
	<i>consists of:</i>		
	KL-0326-100	Hydraulic Press Frame	1
	KL-0326-112	Sleeve Set W163, W211, W220	1
	KL-0326-131	Sleeve Set W124, W201	1
	<b>KL-0326-100</b>	<b>Hydraulic Press Frame</b>	<b>1</b>
	<i>consists of:</i>		
1	KL-0040-2500	Hydraulic Cylinder 17 t.	1
2	KL-0040-2510	Spindle	1
	KL-0326-1000	Press Frame (without Drive and Sleeves)	1
	<b>KL-0326-1000</b>	<b>Press Frame (without Drive and Sleeves)</b>	<b>1</b>
	<i>consists of:</i>		
3	KL-0326-1001	Press Frame	1
4	KL-0326-1002	Screwable Ledge	1
5	KL-0326-1003	Cylinder Screw M12x20	2
	<b>KL-0326-112</b>	<b>Sleeve Set W163, W211, W220</b>	<b>1</b>
	<i>consists of:</i>		
6	KL-0326-1111	Support Ring 1	1
7	KL-0043-8568	Press/Support Sleeve short 42/34	1
8	KL-0043-8576	Press/Support Sleeve short 58/50	1
9	KL-0326-1211	Support Ring 2	1
10	KL-0043-8564	Press/Support Sleeve short 34/26	1
11	KL-0043-8572	Press/Support Sleeve short 50/42	1
	<b>KL-0326-131</b>	<b>Sleeve Set W124, W201 (Front Axle)</b>	<b>1</b>
	<i>consists of:</i>		
12	KL-0326-1311	Press Ring	1
13	KL-0326-1312	Support Ring	1
14	KL-0326-1313	Support Ring	1
15	KL-0043-8566	Press- / Support Sleeve short 38/30	1

### KL-0326-101 Hydraulic-Press Tool Kit without Drive

As KL-0326-10 but without the Hydraulic Cylinder KL-0040-2500 and the Spindle KL-0040-2510.

### KL-0326-11 Press Tool with hydr. Cylinder (17 t.) (not ill.)

As KL-0326-10, but specially for W163 (M-Class).

*consists of:*

Part-No.	Description	Qty.
KL-0326-100	Hydraulic Press Frame	1
KL-0326-111	Sleeve Set W163	1

### KL-0326-12 Press Tool with hydr. Cylinder (17 t.) (not ill.)

As KL-0326-10, but specially for W211 (E-Class), W220 (S-Class).

*consists of:*

Part-No.	Description	Qty.
KL-0326-100	Hydraulic Press Frame	1
KL-0326-121	Sleeve Set W211, W220	1

### KL-0326-13 Press Tool with hydr. Cylinder (17 t.) (not ill.)

As KL-0326-10, but specially for W124, W201.

*consists of:*

Part-No.	Description	Qty.
KL-0326-100	Hydraulic Press Frame	1
KL-0326-131	Sleeve Set W124, W201	1

### KL-0326-20 Toothed Socket

For tightening the support joint retaining nut on the Mercedes W163 (M-Class) steering knuckle.

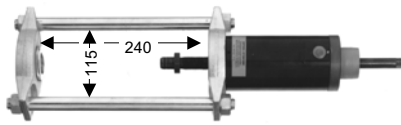
#### Technical Data

Diameter - outer:.....63,0 mm      Diameter - inner:..... 52,5 mm  
Tooth Width:.....7,5 mm      Weight:..... 0,50 kg

**Note:** Ball Joint Extractor to remove Ball Joint connections see page 2-18 – 2-28.

KL-0043-854

Mercedes  
W124, W129, W201



KL-0043-8592



### KL-0043-854 Press Tool with hydr. Cyl. (17 t.)

For Mercedes W124, W129 and W201.

To renew suspension joints on the vehicle without dismantling the wishbone.

consists of:

Part No.	Description
KL-0040-2500	Hydr. Cylinder
KL-0040-2510	Press Spindle
KL-0043-8510	Press Frame Short
KL-0043-8592	Press/Support Tube Set

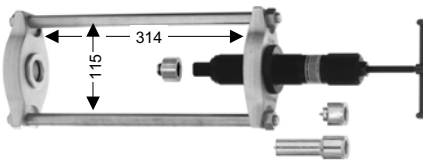
### KL-0043-8592 Press/Support Tube Set

consists of:

Part No.	Description	Qty.
KL-0043-8565	Press/Support Tube	1
KL-0043-8575	Press/Support Tube	1
KL-0043-8277	Press/Support Tube	1

KL-0043-822

Mercedes  
W124, W129, W201



KL-0043-8292



### KL-0043-822 Press Tool Set with hydr. Spindle

For Mercedes W124, W129 und W201.

To renew suspension joints on the vehicle without dismantling the wishbone.

consists of:

Part No.	Description
KL-0045-70	Hydr. Spindle 12 t
KL-0043-8200	Press Frame long
KL-0043-8292	Press/Support Tube Set

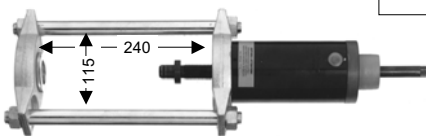
### KL-0043-8292 Press/Support Tube Set

consists of:

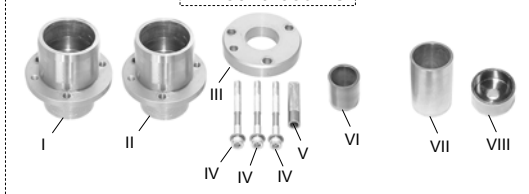
Part No.	Description
KL-0043-8265	Press/Support Tube
KL-0043-8275	Press/Support Tube
KL-0043-8277	Press/Support Tube

KL-0043-855 C

Mercedes Sprinter  
VW LT



KL-0043-8591 C



### KL-0043-855 C Press Tool with hydr. Cyl. (17 t.) (Patented)

Suitable for: Mercedes Sprinter 1995-onwards and  
VW LT 1996-onwards.

The insertion and extraction of the ball-joint on vehicles is with the special manufactured press and support tubes is in a few minutes done. ⇒ High time saving.

consists of:

Part No.	Description
KL-0043-8510	Press Frame Short
KL-0040-2500	Hydraulic Cylinder (17t)
KL-0040-2510	Press Spindle
KL-0043-8591C	Press/Support Tube

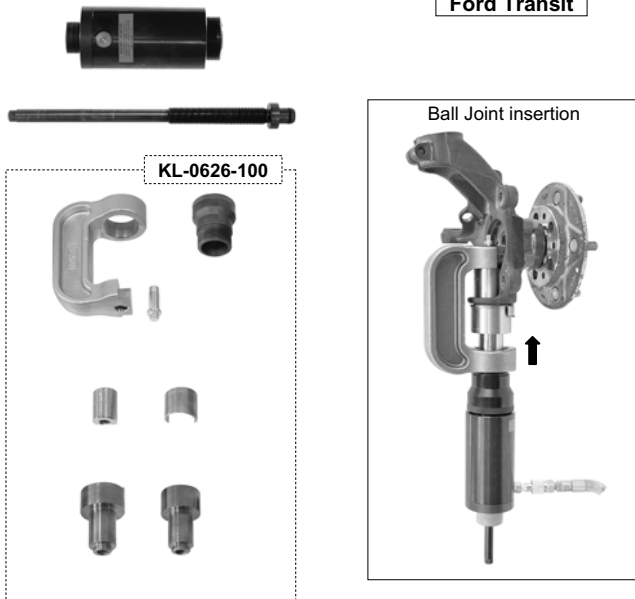
### KL-0043-8591 C Press/Support Tube Set

consists of:

Part No.	Description
KL-0043-8236-1	Support Tube (i)
KL-0043-8236-2	Support Tube (II)
KL-0043-8236-3	Tension Ring (III)
KL-0043-8236-4	Allen Bolt (IV) 3 pcs.
KL-0043-8236-5	Distance Tube (V)
KL-0043-8531	Press Tube (VI)
KL-0043-8279	Press Tube (VII)
KL-0043-8578	Press/Support Tube (VIII)

KL-0626-10

Ford Transit



### KL-0626-10 Press Tool with hydr. Cylinder (17t.) (German Utility Model)

Suitable for Ford Transit onwards 2002 front axle.

The support joint can be pressed out of or into the wheel bearing housing quickly and without difficulty, using Press Tool **KL-0626-10**. The support joint can be removed from or installed on the vehicle in just a few minutes, without the wheel bearing housing having to be removed.

consists of:

Part No.	Description
<b>KL-0626-100</b>	<b>Press Tool without Hydraulic Cylinder</b>
KL-0040-2500	Hydraulic Cylinder 17t.
KL-0040-2510	Press Spindle

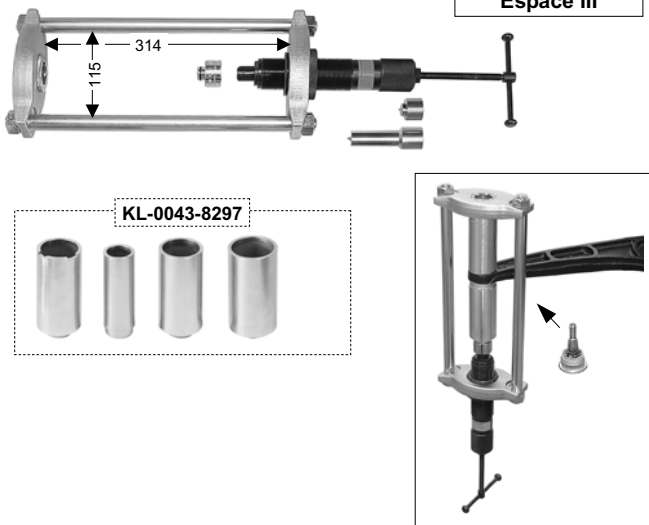
### KL-0626-100 Press Tool without Hydr. Cyl.

consists of:

Part No.	Description
KL-0626-1001	Press Frame
KL-0626-1002	Coil screw
KL-0174-559	Adaptor 2 1/4"-14UNS to 2 1/4"-14UNS
KL-0626-1003	Press Tube (removal) Ø: 38mm
KL-0626-1004	Support Tube (removal) Ø: 66,5mm
KL-0626-1005	Support Tube (replacement) Ø: 54mm
KL-0626-1006	Press Tube (replacement) Ø: 56mm

KL-0043-826

Renault Laguna  
Espace III



### KL-0043-826 Press Tool Set with hydr. Spindle (12 t.)

Suitable for Renault Laguna und Espace III

The **KL-0043-826** allows quick, easy and safe extraction and replacement of the Ball-Joint in the lower front wishbone. Replacement of the Ball-Joint is performed within a few minutes without the need to remove the wishbone from the vehicle.

consists of:

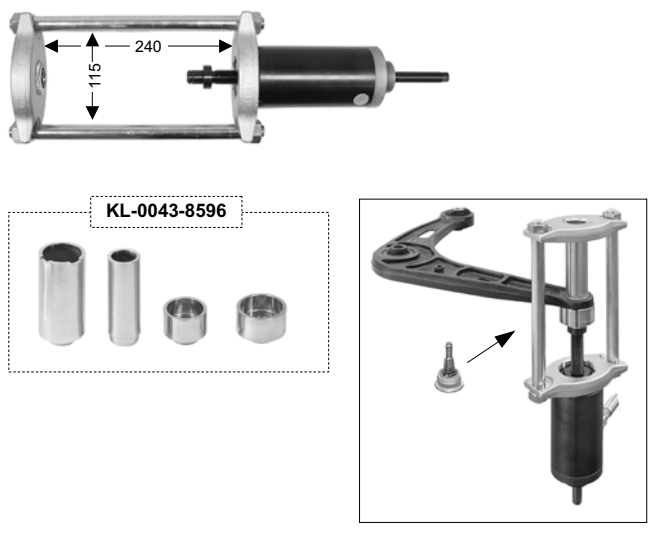
Part No.	Description
KL-0045-70	Hydr. Spindle 12 t
KL-0043-8200	Press Frame long
KL-0043-8297	Press/Support Tube Set

### KL-0043-8297 Press/Support Tube Set

consists of:

Part No.	Description
KL-0043-8232	Press Tube
KL-0043-8264	Press/Support Tube
KL-0043-8271	Press/Support Tube
KL-0043-8274	Press/Support Tube

KL-0043-840



### KL-0043-840 Press Tool with hydr. Cylinder (17t.)

Suitable for Renault Laguna und Espace III

The **KL-0043-840** allows quick, easy and safe extraction and replacement of the Ball-Joint in the lower front wishbone. Replacement of the Ball-Joint is performed within a few minutes without the need to remove the wishbone from the vehicle.

consists of:

Part No.	Description
KL-0040-2500	Hydraulic Cylinder 17 t.
KL-0040-2510	Press Spindle
KL-0043-8510	Press Frame Short
KL-0043-8596	Press/Support Tube

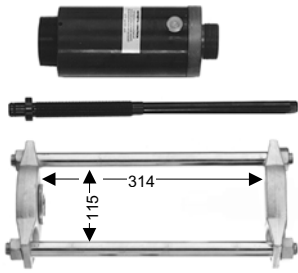
### KL-0043-8596 Press/Support Tube Set

consists of:

Part No.	Description
KL-0043-8232	Press Tube for Renault Laguna
KL-0043-8264	Press/Support Tube 34 mm
KL-0043-8571	Press/Support Tube short 48/40
KL-0043-8574	Press/Support Tube short 54/46

KL-0043-829

Opel/Vauxhall,  
Renault

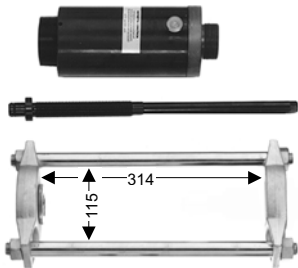


KL-0043-8298



KL-0043-810

Opel/Vauxhall,  
Renault



KL-0043-8101



### KL-0043-829 Press Tool with hydr. Cylinder (17 t.)

Suitable for Renault Master II ('98 onwards) and Movano I ('98 onwards).

The Press Tool **KL-0043-829** allows quick, easy and safe removal and replacement of the **Ball-Joint in the upper front wishbone**. Stubborn and corroded Ball-Joints may easily be replaced within minutes.

Replacement of the Ball-Joint is performed on the vehicle, thus eliminating the need to remove and replace the wishbone.

consists of:

Part No.	Description
KL-0040-2500	Hydraulic-Cylinder
KL-0040-2510	Press Spindle
KL-0043-8200	Press Frame long
KL-0043-8298	Press/Support Tube Set

### KL-0043-8298 Press/Support Tube Set

consists of:

Part No.	Description
KL-0043-8269	Press/Support Tube
KL-0043-8233	Support Tube
KL-0043-8276	Press/Support Tube
KL-0043-8279	Press/Support Tube

### KL-0043-810 Press Tool with hydr. Cylinder (17 t.)

Suitable for Renault Master II ('98 onwards) and Opel/Vauxhall Movano I ('98 onwards).

The Press Tool **KL-0043-810** allows quick, easy and safe removal and replacement of the **Ball-Joint in the lower front wishbone**. Stubborn and corroded Ball-Joints may easily be replaced within minutes.

Replacement of the Ball-Joint is performed on the vehicle, thus eliminating the need to remove and replace the wishbone.

consists of:

Part No.	Description
KL-0040-2500	Hydr. Cylinder 17 t.
KL-0040-2510	Pressing Spindle
KL-0043-8200	Press Frame
KL-0043-8101	Press/Support Tube Set

### KL-0043-8101 Press/Support Tube Set

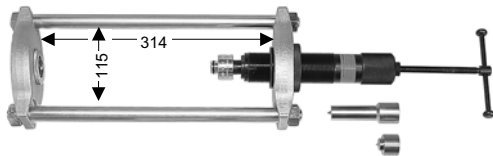
consists of:

Part No..	Description
KL-0043-8237	Press/Support Tube
KL-0043-8238	Press/Support Tube
KL-0043-8274	Press/Support Tube
KL-0043-8276	Press/Support Tube

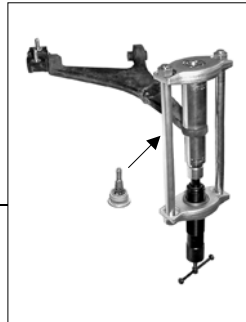
**Note:** An hydraulic pump (see Chapter 4) will be required to drive the **KL-0040-2500**.

KL-0043-828

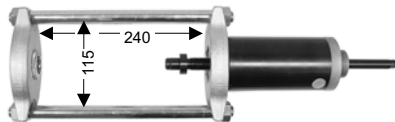
Citroën,  
Peugeot



KL-0043-8293



KL-0043-858



KL-0043-8593



Citroën,  
Peugeot

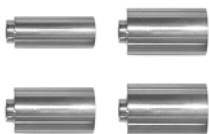
KL-1340-10

Citroën, Peugeot



KL-0043-8296

BMW E30



### KL-0043-828 Press Tool Set with hydr. Spindle (12 t.)

Suitable for Citroën AX, Saxo und Peugeot 106.

The Press Tool Set **KL-0043-828** allows quick and easy removal and replacement of the bottom ball-joint in the wishbone. Removal and replacement of the ball-joint can be performed on the vehicle within a few minutes without the need to dismantle the wishbone from the car. Time-saving 2 hours plus.

consists of:

Part No.	Description	Part No.	Description
KL-0045-70	Hydr. Spindle 12 t	KL-0043-8293	Press/Support Tube Set
KL-0043-8200	Press Frame long		

### KL-0043-8293 Press/Support Tube Set

consists of:

Part No.	Description	Part No.	Description
KL-0043-8234	Press/Support Tube	KL-0043-8268	Press/Support Tube
KL-0043-8262	Press/Support Tube	KL-0043-8272	Press/Support Tube

### KL-0043-858 Press Tool with hydraulic Cyl. (17 t.)

Suitable for Citroën AX, Saxo und Peugeot 106.

The Press Tool Set **KL-0043-858** allows quick and easy removal and replacement of the bottom ball-joint in the wishbone. Removal and replacement of the ball-joint can be performed on the vehicle within a few minutes without the need to dismantle the wishbone from the car. Time-saving 2 hours plus.

consists of:

Part No.	Description	Part No.	Description
KL-0040-2500	Hydraulic-Cylinder (17t)	KL-0043-8510	Press Frame Short
KL-0040-2510	Press Spindle	KL-0043-8593	Press/Support Tube Set

### KL-0043-8593 Press/Support Tube Set

consists of:

Part No.	Description	Part No.	Description
KL-0043-8534	Press/Support Tube	KL-0043-8568	Press/Support Tube
KL-0043-8262	Press/Support Tube	KL-0043-8272	Press/Support Tube

### KL-1340-10 Toothed Socket

For removal and replacement of the bottom ball joint on:  
**Citroën BX ('82 to '94), Peugeot 305 ('82 to '90), Peugeot 405 ('87 onwards) etc.**

#### Technical Data

Diameter - outer..... 52.0 mm      Diameter - inner:....42.5 mm  
Tooth Width:..... 5.5 mm      Weight: ..... 0.52 kg

### KL-0043-8296 Press/Support Tube Set long

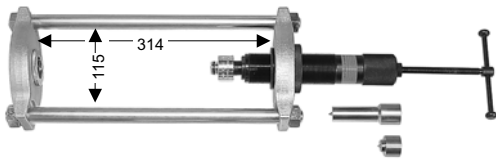
Suitable for BMW E30 front lower wishbone.

The Press/Support Tube Set **KL-0040-8296** allows quick and easy removal and replacement of the ball-joint if the Press Frame **KL-0043-8200** and Hydraulic Spindle **KL-0045-70** is already available.

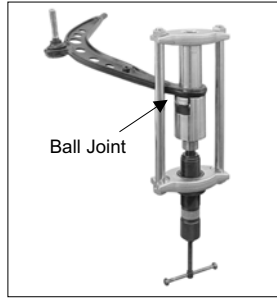
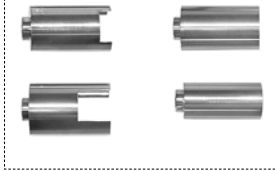
consists of:

Part No.	Description	Part No.	Description
KL-0043-8267	Press/Support Tube	KL-0043-8273	Press/Support Tube
KL-0043-8272	Press/Support Tube	KL-0043-8276	Press/Support Tube

KL-0043-823



KL-0043-8294

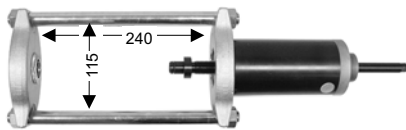


Accessories: KL-0043-8231

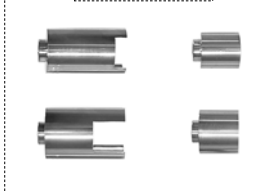


KL-0043-859

BMW E36



KL-0043-8594



### KL-0043-823 Press Tool Set with hydr. Spindle (12 t.)

Suitable for BMW E36 front lower wishbone.

Outer ball-joints on the lower front wishbone may be quickly and cleanly replaced using the tool KL-0043-823.

Replacement of the outer ball-joint can be carried out within minutes without the need to remove the wishbone from the car.

consists of:

Part No.	Description
KL-0045-70	Hydr.-Spindle 12 t
KL-0043-8200	Press Frame long
KL-0043-8294	Press/Support tube Set

### KL-0043-8294 Press/Support Tube Set long

Suitable for BMW E36 front lower wishbone.

KL-0043-8294 offers the same capability as KL-0043-823 to quickly and easily replace ball-joints if the Press Frame KL-0043-8200 and Hydraulic Spindle 12 t. KL-0045-70 is already available.

consists of:

Part No.	Description
KL-0043-8288-1	Press Tube E36
KL-0043-8289-1	Support Tube E36
KL-0043-8271	Press/Support Tube
KL-0043-8276	Support Tube

### Accessories: KL-0043-8231 Press Tube E36

Middle ball-joints on the lower front wishbone may be quickly and cleanly pressed in/out using the tool KL-0043-823 in association with the press tube KL-0043-8231.

### KL-0043-859 Press Tool with hydr. Cyl. (17 t.)

Suitable for BMW E36 front lower wishbone.

Outer ball-joints on the lower front wishbone may be quickly and cleanly replaced using the tool KL-0043-859.

Replacement of the outer ball-joint can be carried out within minutes without the need to remove the wishbone from the car.

consists of:

Part No.	Description
KL-0040-2500	Hydraulic-Cylinder 17 t
KL-0040-2510	Press Spindle
KL-0043-8510	Press Frame short
KL-0043-8594	Press/Support Tube Set

### KL-0043-8594 Press/Support Tube Set

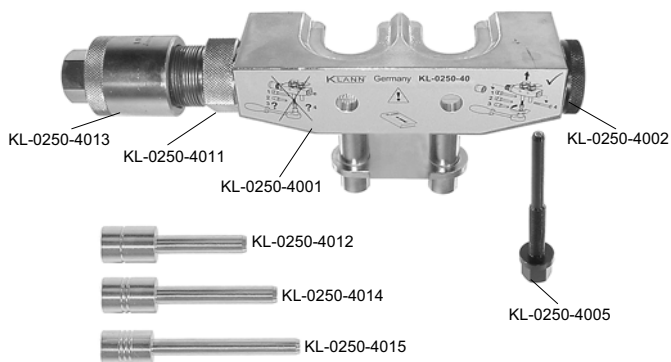
Suitable for BMW E36 front lower wishbone.

KL-0043-8594 offers the same capability as KL-0043-859 to quickly and easily replace ball-joints if the Press Frame KL-0043-8510, the Press Spindle KL-0040-2510 and the Hydraulic Cylinder 17 t. KL-0040-2500 is already available.

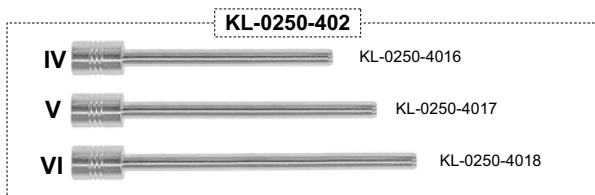
consists of:

Part No.	Description
KL-0043-8288-1	Press Tube E36
KL-0043-8289-1	Support Tube E36
KL-0043-8571	Press/Support Tube
KL-0043-8576	Press/Support Tube

Fig. 1: KL-0250-40



Accessory: KL-0250-402 Supplement- Pressure Drift Set



Accessory: KL-0250-403 T-Handle Puller



Fig. 2: Extractor with pressure unit assembled (Pos.1).

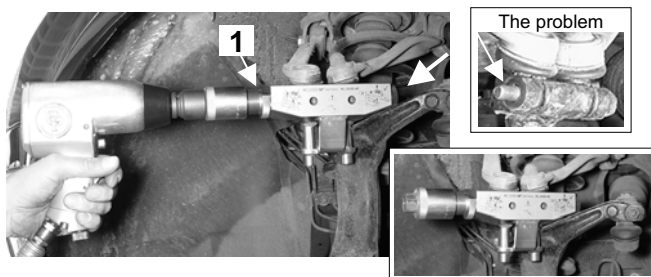


Fig. 3: Extraction of retaining bolt.

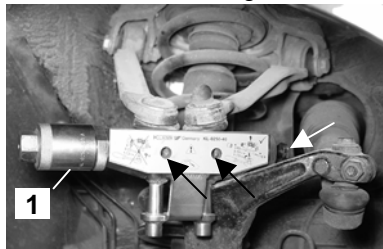
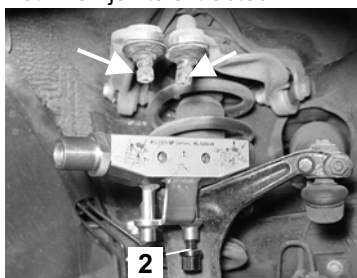


Fig. 4: Both Ball-joints extracted.



### KL-0250-40 Extractor (Pat.) for Clamping Bolt and Ball Joints Audi A4 (up to '2000) / VW Passat Front Axle (up to '2005)

#### Extraction of the upper wishbone clamping bolt and the ball joints.

Dismantling the upper wishbone clamping bolt and both upper ball-joints from the upper wishbone has presented the mechanic with a serious problem, especially when the components are corroded.

Until now the only method of extraction was using a hammer and drift, which is not only inefficient in terms of time, but also carries the very real risk of damage to the suspension.

**The Extractor KL-0250-40 allows quick, easy and safe extraction of the clamping bolt and both upper ball-joints. The tool functions on both left hand and right hand suspension assemblies.**

#### Contents (KL-0250-40):

Part No.	Description	Qty.
KL-0250-4013	Nut	1
KL-0250-4011	Housing	1
KL-0250-4001	Main body	1
KL-0250-4002	Thread adapter (with large drilling)	1
KL-0250-4005	Pressure screw M10x1,25x95 mm	1
KL-0250-4012	Pressure drift I (Length 78 mm)	1
KL-0250-4014	Pressure drift II (Length 98 mm)	1
KL-0250-4015	Pressure drift III (Length 118 mm)	1

#### Application:

1. Mount tool with pressure-unit **Pos.1** on upper wishbone as shown in Fig.2 (use pressure drift no: I).
2. Use 1/2" impact gun to rotate the drive nut of the pressure unit and press out the Clamp-Bolt. The initial movement of the Clamp-Bolt may be accompanied by a loud noise. (Fig.2).
3. The Clamp-Bolt must be removed in three stages, using the pressure drifts **II** and **III** in the pressure unit **Pos.1**. The final stage is to use both drifts **II** + **III** in combination (as shown in Fig.3).
4. Remove the hex clamp-bolt completely. In the event that the clamp-bolt remains stubborn, the Accessory Pressure Inserts Set **KL-0250-402** allows the bolt to be driven out completely.
5. Remove the hexagonal nut. Completely withdraw the Press Tool so that the clamp bore is free.
6. Both ball-joints may now be extracted by using Spindle **Pos.5**. (as shown in Fig.4).

#### Advantages:

- Large cost saving.
- Time savings of between 2 and 3 hours.
- No risk of damage to the suspension components.
- No risk of personal injury which can result from the hammer and drift method.

#### Technical data:

- Weight.....2,4 kg

#### Accessory:

##### KL-0250-402 Supplement- Pressure Drift Set

To press the hex. clamping screw completely out of the clamping hole (see point 4 of application).

consists of:

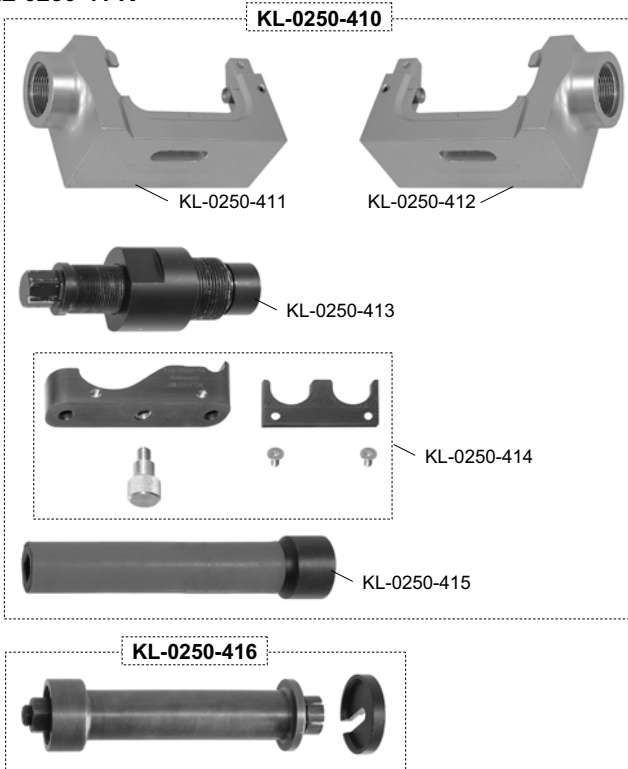
Part No.	Description	Qty.
KL-0250-4016	Pressure drift IV (Lenght 138 mm)	1
KL-0250-4017	Pressure drift V (Lenght 158 mm)	1
KL-0250-4018	Pressure drift VI (Lenght 178 mm)	1

##### KL-0250-403 T-Handle Puller

The **KL-0250-403** puller is suitable to extract the punches from the tool.



### KL-0250-41 K



**Note:**  
The Extractor is being supplied in a plastic case.

#### Application examples: ⇒ Extract clamping bolt left.

Fig. 1: Extractor KL-0250-410 assembled.

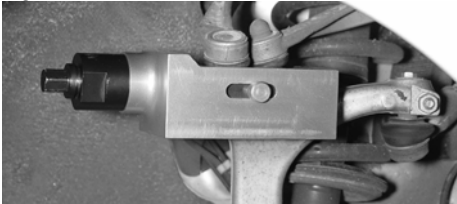


Fig. 2: Extraction of clamping bolt.

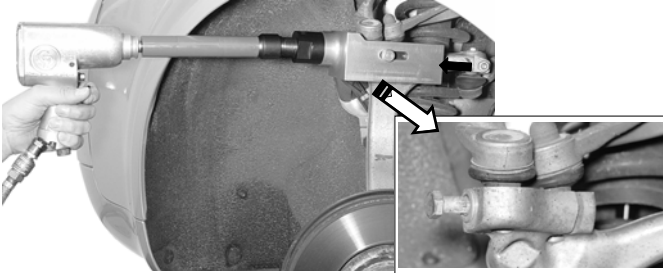


Fig. 3: Assemble extraction device. KL-0250-416.



Fig. 4: Clamping bolt is extracted.



### KL-0250-41 K Extractor for Clamping bolt and Ball Joints with extraction device Audi A4 (2001-onwards) (German Utility Model)

#### Extraction of the upper wishbone clamping bolt and the ball joints.

Dismantling the upper wishbone clamping bolt from the upper wishbone has presented the mechanic with a serious problem, especially when the components are corroded.

Until now the only method of extraction was using a hammer and drift, which is not only inefficient in terms of time, but also carries the very real risk of damage to the suspension.

The new extractor **KL-0250-41 K** with its proper pressure unit and extraction device, allows quick and clean extraction of the clamping bolt and upper ball joints. The loosen clamping bolts are removed by means of the extraction device. The tool works on both left hand and right hand suspension assemblies.

#### Specification:

#### KL-0250-41 K Extractor for Clamping bolt and Ball Joints with extraction device

Part No.	Description	Qty.
KL-0250-410	Extractor for clamping bolt	1
KL-0250-416	Extraction device	1
	Plastic case (not ill.)	1

#### KL-0250-410 Extractor for Clamping Bolt

Part No.	Description	Qty.
KL-0250-411	Extractor left	1
KL-0250-412	Extractor right	1
KL-0250-413	Pressure-unit	1
KL-0250-414	Fixing unit	1
KL-0250-415	Special-Impact Socket hex. 24	1

#### Application:

1. Mount Extractor with pressure unit on upper wishbone as shown in Fig. 1
2. Screw the hex. nut of the pressure unit by using the special socket wrench 24 mm and the ½" impact screwdriver. The clamping bolt shall be pulled out. The loosening takes place with a loud noise (Fig. 2).
3. Remove the extractor. Install the extraction device to extract the loosen clamping bolt (Fig. 3).
4. Screw the hex. nut of the extraction device by means of the special socket wrench 24 mm and extract completely the clamping bolt (Fig. 4).

#### Advantages:

- Large cost saving
- Time savings of between 2 and 3 hours.
- No risk of damage to the suspension components.
- No risk of personal injury which can result from the hammer and drift method.

#### Technical data:

- Weight ..... 8,2 kg

#### Accessory:

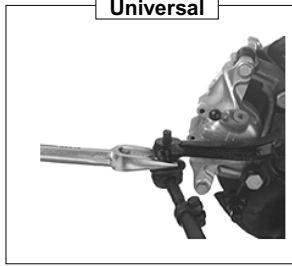
#### KL-0250-417 Supplement Kit for Audi A6 (2004 onwards)

Consists of pressure drift and fixing unit. (not ill.)

### KL-0160-Serie



Universal



### KL-0160-Series Separator Forks

The wedge profiled fork allows easy and quick separation of conical seat ball-joints.

Also useful for removal of shock-absorbers and steering-column clamps.

Warning: Separator Forks may damage the gaiter.

Part-No.	a (fork opening) =
KL-0160-1	18 mm
KL-0160-2	23 mm
KL-0160-3	30 mm
KL-0160-4	40 mm

### KL-0160-7 K



Universal



### KL-0160-7 K Separator Fork Set

5 piece Separator Fork Set.

**Consists of:**

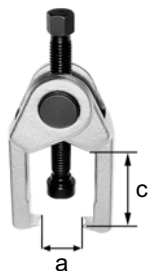
3 Fork heads with openings a = 17,5 mm, a = 23,5 mm und a = 28,5 mm, a 200 mm Handle and an Adaptor with 10 mm Ø Shaft and 175 mm Length, suitable for impact hammer.

The wedge form of the Forks allow quick and easy separating of Ball-Joints from their conical seats.

The Set is delivered in Plastic Storage Case.

Warning: Separator Forks may damage the gaiter.

### KL-0161-8



Universal



### KL-0161-8 Ball-Joint Extractor

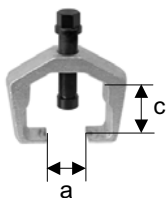
For quick and easy separation of ball joint connections.

e.g. Mercedes G-Class; S-Class (W220), Porsche Cayenne, VW Touareg; Golf IV etc.

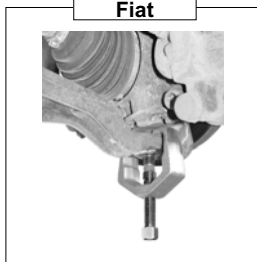
a = 18 - 45 mm

c = 60 mm

### KL-0161-9



Fiat



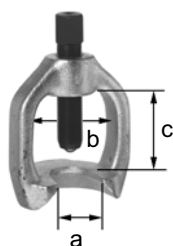
### KL-0161-9 Ball-Joint Extractor

To separate Ball-Joints from the steering stub axle. Especially for front axles e.g. on Fiat Ducato etc.

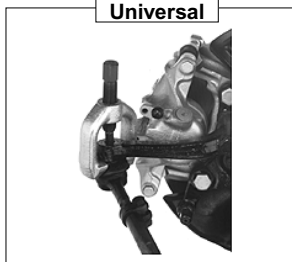
a = 34 mm

c = 51 mm

### KL-0161-Serie



Universal

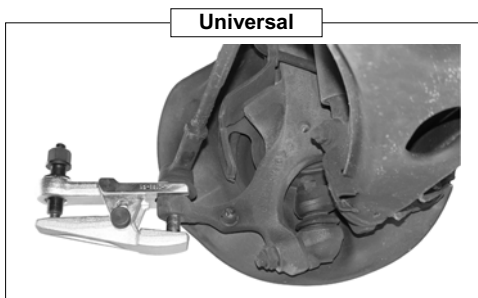
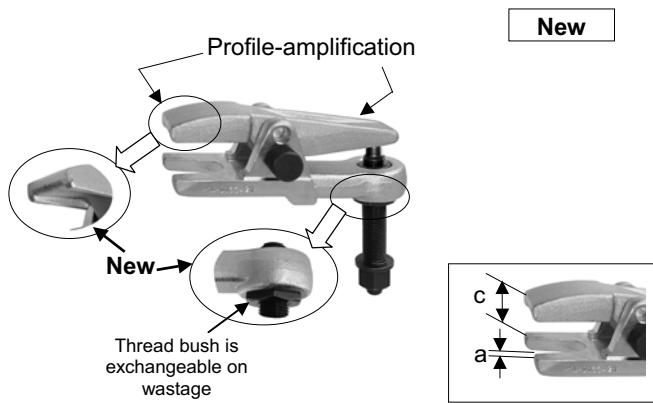


### KL-0161-Series Ball Joint Extractors

For quick and easy separation of ball joint connections.

Part-No.	a =	b =	c =
KL-0161-1	18 mm	40 mm	35 mm
KL-0161-2	23 mm	50 mm	45 mm
KL-0161-3	29 mm	60 mm	55 mm
KL-0161-4	40 mm	80 mm	80 mm
KL-0161-5	46 mm	90 mm	100 mm

KL-0163-21

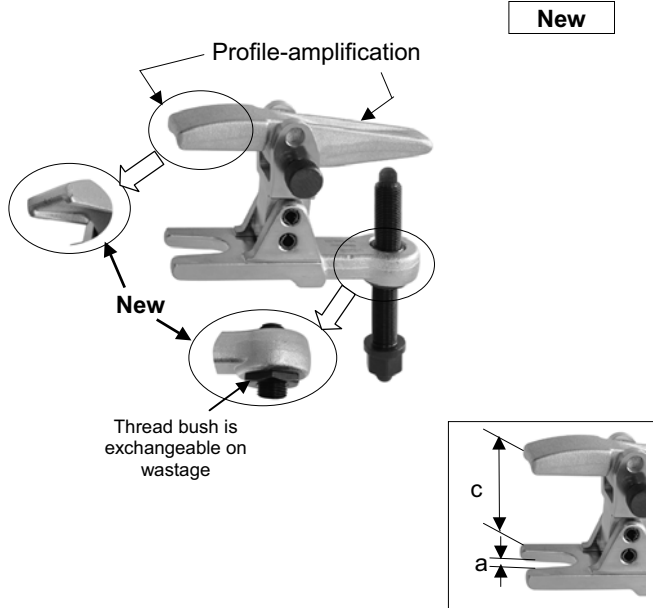


Accessory:

KL-0163-221 Adaptor with rolled pins



KL-0163-22



### KL-0163-21 Ball Joint Extractor reinforced version (universal) (German Utility Model)

For quick and easy separation of ball joint connections, especially on steering arms, steering knuckles, anti-roll bars etc.

Part No.	Description	Qty.
KL-0163-21	Ball Joint Extractor Reinforced version	
<i>consists of:</i>		
KL-0163-2101	Fork Body	1
KL-0163-2102	Pressing Lever	1
KL-0163-2103	Pressing Spindle	1
KL-0163-2104	Bolt	1
KL-0163-2105	Thread Bush	1

Technical data:

Part No.	suitable for	a =	c =
KL-0163-21	VW-Audi, BMW, Fiat, Ford, Mercedes, Nissan, Opel, Peugeot, Renault, Rover, Saab, Toyota, Volvo	20 mm	2-stage up to 50 mm

(Similar to KL-0163-1, but reinforced version)

Accessory:

KL-0163-221 Adaptor with rolled pins

Part No.	Description	Qty.
KL-0163-221	Adaptor with rolled pins	
<i>consists of:</i>		
KL-0163-2202	Adaptor	1
KL-0163-2204	Rolled pin	2

### KL-0163-22 Ball Joint Extractor reinforced version (universal) (German Utility Model)

For quick and easy separation of ball joint connections, especially on steering arms, steering knuckles, anti-roll bars etc.

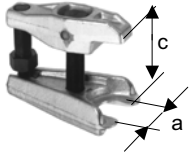
Part No.	Description	Qty.
KL-0163-22	Ball Joint Extractor Reinforced version with Adaptor	
<i>consists of:</i>		
KL-0163-221	Adaptor with rolled pins	1
KL-0163-2201	Fork Body	1
KL-0163-2102	Pressing Lever	1
KL-0163-2203	Pressing Spindle	1
KL-0163-2104	Bolt	1
KL-0163-2105	Thread Bush	1

Part No.	Description	Qty.
KL-0163-221	Adaptor with rolled pins	
<i>consists of:</i>		
KL-0163-2202	Adaptor	1
KL-0163-2204	Rolled pin	2

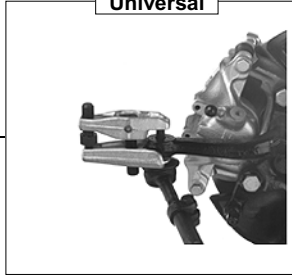
Technical data:

Part No.	suitable for	a =	c =
KL-0163-22	Opel, VW Transporter etc.	20 mm	2-stage up to 95 mm

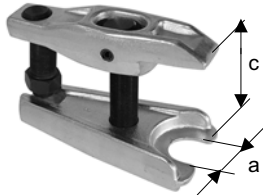
KL-0162-1



Universal



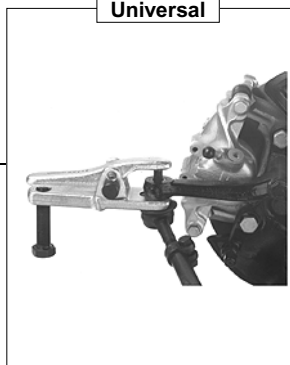
KL-0162-2



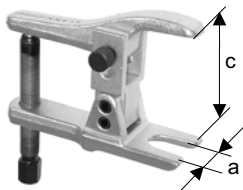
KL-0163-1



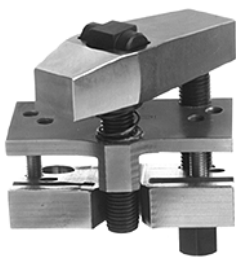
Universal



KL-0163-2



KL-0450-1



Opel



### KL-0162-1 Ball Joint Extractor (universal)

For quick and easy separation of ball joint connections.

**Advantage:**

Dimension c is infinitely adjustable so providing a wider range of application.

Part-No.	a =	c =
KL-0162-1	conical 18 - 22 mm	adjustable up to 50 mm max.

### KL-0162-2 Ball Joint Extractor

For quick and easy separation of ball joint connections.

**Advantage:**

Dimension c is infinitely adjustable so providing a wider range of application.

Part-No.	a =	c =
KL-0162-2	conical 30 - 80 mm	adjustable up to 80 mm max.

### KL-0163-1 Ball Joint Extractor (universal)

For quick and easy separation of ball joint connections.

Part-No.	for	a =	c =
KL-0163-1	VW-Audi, BMW, Fiat, Ford, Mercedes, Nissan, Opel/Vauxhall, Peugeot, Renault, Rover, Toyota, Volvo,	20 mm	2-stage up to 50 mm

### KL-0163-2 Ball Joint Extractor (universal)

For quick and easy separation of ball joint connections.

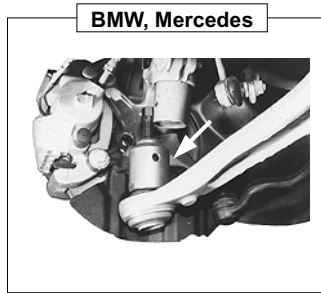
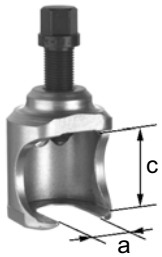
Part-No.	for	a =	c =
KL-0163-2	Opel/ Rekord, Senator, Monza, VW Transporter	20 mm	2-stage, 50-80 mm

### KL-0450-1 Ball Joint Extractor (Pat.)

For track-rod and steering arm joints on **Opel Omega B**.

For quick and easy separation of track-rod ball-joints and steering control-arm ball-joints.

KL-0164-5



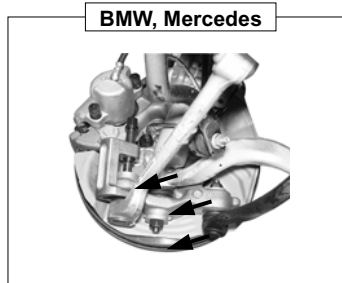
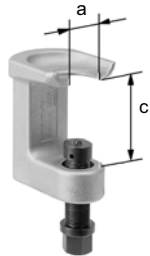
### KL-0164-5 Ball Joint Extractor

For quick and easy separation of ball joint connections. e.g. **Mercedes W211, W220** and especially in narrow space conditions like on **BMW E46** and **Mercedes W 168** etc.

**Technical Data:**

a : ..... 24 mm  
 c : ..... 45 mm  
 Drive: ..... 17 mm hex  
 Diameter - outside: ..... 55 mm

KL-0164-7



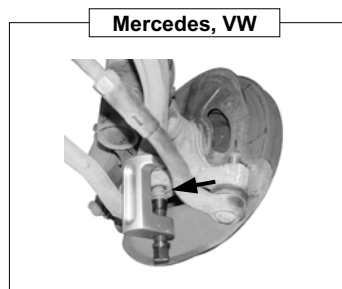
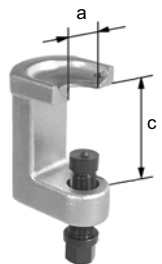
### KL-0164-7 Ball Joint Extractor

For quick and easy separation of ball joint connections, especially for front axle on **BMW E39 (5 series)** and **Mercedes W210** etc.

**Technical Data:**

a : ..... 24 mm  
 c : ..... 55 mm  
 Weight: ..... 900 g

KL-0164-8



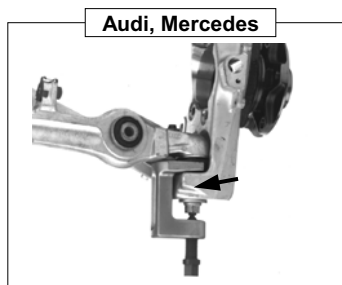
### KL-0164-8 Ball Joint Extractor

For quick and easy separation of ball joint connections, especially for front axle on **Mercedes e.g. W203, W210, W211, W163** and **VW e.g. T5** etc.

**Technical Data:**

a : ..... 26 mm  
 c : ..... 56 mm  
 Weight: ..... 750 g

KL-0164-3



### KL-0164-3 Ball Joint Extractor

For quick and easy separation of ball joint connections, especially for front axle on **Audi A4, A6** and **A8** as well as **VW Passat, Mercedes W203** etc.

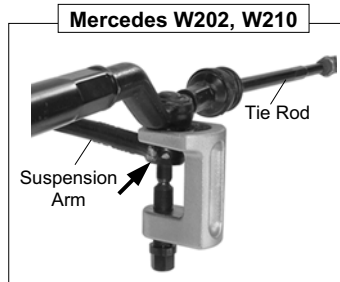
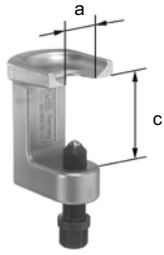
**Technical Data:**

a : ..... 28 mm  
 c : ..... 55 mm  
 Weight: ..... 900 g

**Note:**

Only for closed Ball Joint pivots or with centre hole.

KL-0164-2



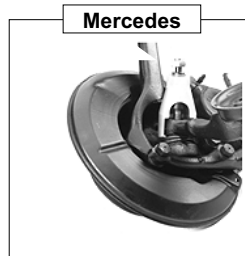
### KL-0164-2 Ball Joint Extractor

For quick and easy separation of ball joint connections, especially in small space conditions like on **Audi, VW, BMW, Ford, Mercedes (W163, W168, W170, W202, W210 etc), Opel etc.**

a : .....23 mm  
 c : .....55 mm  
 Weight : .....900 g

**Note:**  
 Only for closed Ball Joint pivots or with centre hole.

KL-0320



### KL-0320 Ball Joint Extractor

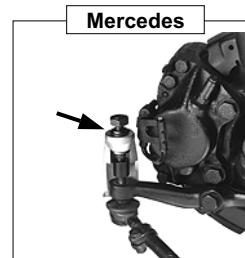
For **Mercedes Type W116, W123, W126, W169, W210, W245, W463, etc.**

For quick and easy separation of ball joint connections from the lower wishbone.

Also applicable for other vehicles, e.g.: Fiat, Toyota, etc.

a : .....27 mm (fork opening)

KL-0321



### KL-0321 Ball Joint Extractor

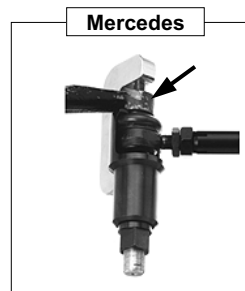
For **Mercedes Type W123, W124, W126, W129, W201 etc.**

For quick and easy separation of ball joint connections from the drag link.

Also applicable to other vehicles, eg: VW-Audi, BMW, Citroën, Fiat, Ford, Opel, Peugeot, Renault, Saab, Volvo, Japanese Passenger cars, etc.

a : .....21 mm (fork opening)

KL-0322



### KL-0322 Ball Joint Extractor

For **Mercedes Type W123, W124, W126, W129, W201 etc.**

For quick and easy separation of ball joint connections from the drag link.

Also applicable for other vehicles, e.g.: **BMW, etc.**

a : .....28 mm (fork opening)

### KL-0165-1 - Puller System with Case

*The right choice!*

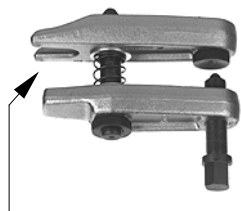
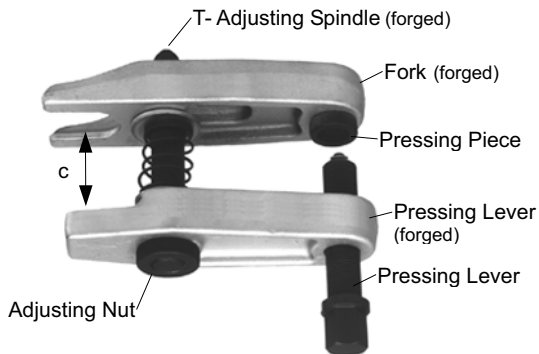


Suitable for Ball Joint Pivots.



**Note:** Specification and individual parts see page 2-27.

### KL-0165-10



Dimension **c** may be reduced by rotation of the Fork.

**KL-0165-1:  $c_{max.} = 65 \text{ mm}$**



Forks inter-changeable by 90° degree rotation.

**KL-0165-3:  $c_{max.} = 70 \text{ mm}$**

### KL-0165-Series Extractor System (Patented) (e.g. US-Patent 5 906 034)

**Application:** For all cars and trucks.

For quick and easy separation of ball joint connections in suspension and steering systems.

The ever increasing use of ball-joints in suspension and steering systems found in today's vehicles has led to the need for an ever-widening range of ball-joint splitters, due to the wide range of diameters and lengths of ball-joints.

In addition, the increasing use of conical ball-joint seats has led to the need for increased stability and strength of ball-joint splitters to achieve easy separation. This ease of operation relies on the precise relationship between the angle of the pressure piece and the threaded bolt of the ball-joint.

For the first time, the KL-0165 Series Ball-Joint Separators offer the mechanic a system of splitters which can be adjusted for both the angle of pressure and the diameter of the ball-joint. The angle is adjustable by a screw, while different diameters are handled by a series of inter-changeable forks.

**Ball Joint Extractor size 1** (see Page 2-27)  
For cars.

**Ball Joint Extractor size 2** (see Page 2-27)  
For small trucks.

**Ball Joint Extractor size 3** (see Page 2-28)  
For trucks.

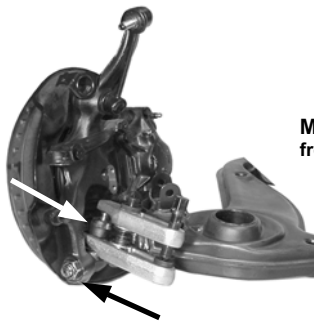
#### Advantages:

- The pressure fork is removed by a 90° rotation. Interchangeable forks provide universal applications.
- Threaded adjustment allows exact positioning of the pivot to provide the exact angle of pressure.
- The pressure forks are located by an interlock with a T-form threaded spindle which offers a high degree of stability.
- By rotation of the pressure spindle, the tool may be operated from above or below, offering a real advantage where working space is limited.
- The pressure-spindle is driven by a 19mm hex provided with a safety shoulder to prevent the risk of accidents resulting from the spanner slipping.
- Interchangeability of the forks allows a rapid adjustment of operating diameters for a wide variety of ball-joint sizes.

### KL-0165-Series Ball Joint Extractor

KL-0165-12

Patented



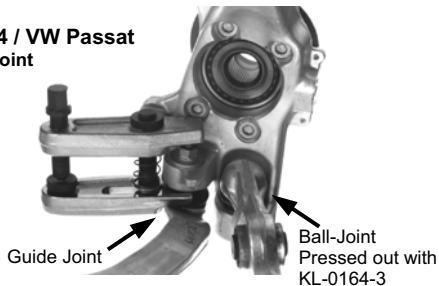
Mercedes W140 (S-Class) front axle etc.

KL-0165-14

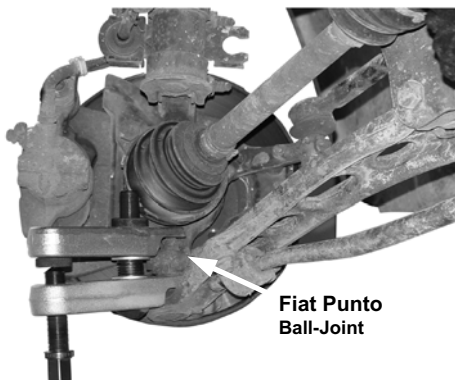


VW T4 Ball-Joint

Audi A4 / VW Passat Guide-Joint



KL-0165-15



Fiat Punto Ball-Joint

### KL-0165-12 Ball Joint Extractor size 1

Suitable for Mercedes W140 (S Class), W220 (S Class) Ball-Joint and Guide-Joint front axle, VW Golf IV Ball-Joint etc.

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 24 mm)

consists of:

Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18x1,5)
KL-0165-1201	Fork a=24 mm e=50 mm d=165 mm

**Note:** Spare Parts and further Forks see Page 2-27.

### KL-0165-14 Ball Joint Extractor size 1

Suitable e.g. for Audi A4 / VW Passat, Skoda Superb, Guide-Joint, VW T4 Track Rod Ball-Joint etc.

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 30 mm)

consists of:

Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18x1,5)
KL-0165-1401	Fork a=30 mm e=50 mm d=165 mm

**Note:** Spare Parts and further Forks see Page 2-27.

### KL-0165-15 Ball Joint Extractor size 1

**Specially for Ball-Joint on Fiat Punto.**

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 22 mm)

consists of:

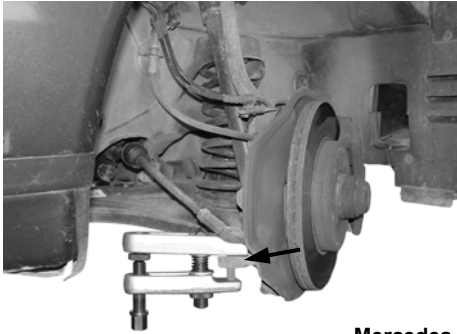
Part No.	Description
KL-0165-1502	Pressing Lever
KL-0165-1003	Pressing Lever (M18x1,5 x 110)
KL-0165-1004	Pressing Spindle (M18x1,5 x 70)
KL-0165-1005	Ball socket
KL-0165-1006	Adjusting Nut (M18x1,5)
KL-0165-1007	Spring
KL-0165-1008	Plain washer Ø 18
KL-0165-1501	Fork 22mm



### KL-0165-Series Ball Joint Extractor

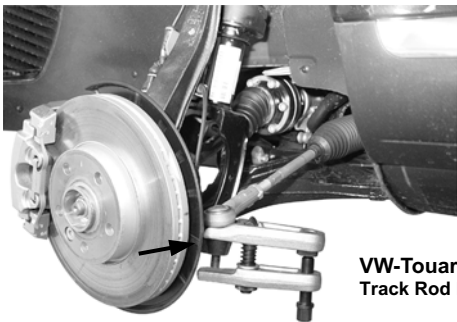
KL-0165-20

Patented



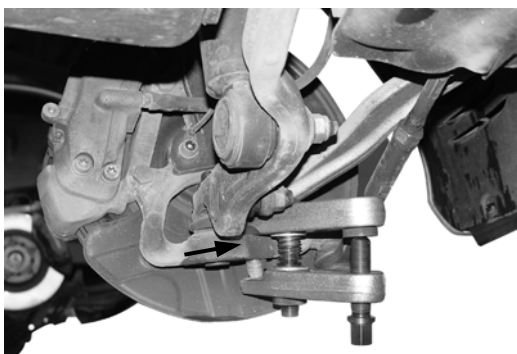
Mercedes W202 (C-Class)  
Track Rod Ball Joints etc.

KL-0165-22



VW-Touareg  
Track Rod Ball-Joint etc.

KL-0165-25



Mercedes W230 (SL)  
lower Ball Joint

### KL-0165-20 Ball Joint Extractor size 2

Suitable e.g. for Mercedes W163 (M-Class),  
W211 (E-Class), W220 (S-Class)  
upper Guide-Joint W170 (SLK),  
W202 (C-Class), W220 (S-Class)  
Track Rod Ball-Joint etc.

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 22 mm)

consists of:

Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18×1.5)
KL-0165-2001	Fork a=22 mm e=60 mm d=165 mm

**Note:** Spare Parts and further Forks see Page 2-27.

### KL-0165-22 Ball Joint Extractor size 2

Suitable e.g. for VW Touareg / Porsche Cayenne  
Track Rod and upper Guide-Joint,  
Mercedes W210 Sprinter Track Rod  
Ball-Joint. Ford Transit Track Rod  
Ball-Joint. VW Golf IV lower Ball-Joint etc.

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 26 mm)

consists of:

Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18×1.5)
KL-0165-2201	Fork a=26 mm e=60 mm d=165 mm

**Note:** Spare Parts and further Forks see Page 2-27.

### KL-0165-25 Ball Joint Extractor size 2

Suitable e.g. for Mercedes W211 (E-Class), W220 (S-Class)  
and W230 (SL) lower Ball-Joint

**Advantage:** Universal using.  
Further Informations see Page 2-23.

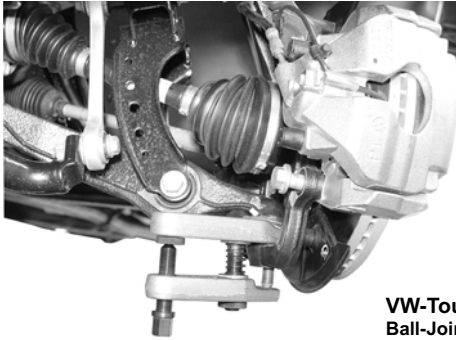
(Fork opening a = 24 mm)

consists of:

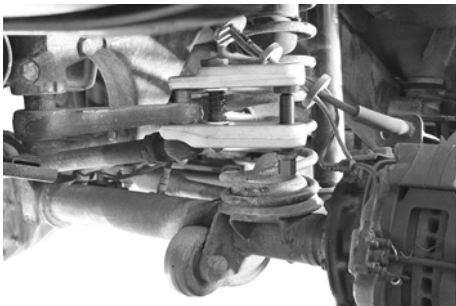
Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18×1.5)
KL-0165-2501	Fork a=24 mm e=60 mm d=165 mm

**Note:** Spare Parts and further Forks see Page 2-27.

KL-0165-23



VW-Touareg Ball-Joint etc.



Mercedes G-Class reversing lever from the steering box etc.

### KL-0165-23 Ball Joint Extractor size 2

Suitable z.B. for VW Touareg / Porsche Cayenne Ball-Joint, VW T4 lower Ball Joint, Mercedes G-Class Track rod Ball-Joint and Reversing lever from the steering box, Ford Transit lower Ball Joint

**Advantage:** Universal using.  
Further Informations see Page 2-23.

(Fork opening a = 30 mm)

consists of:

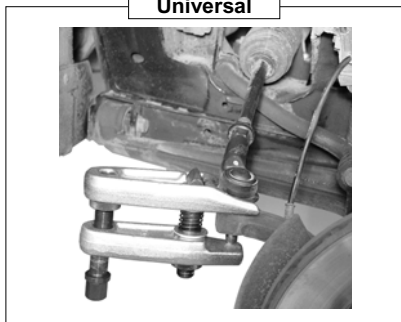
Part No.	Description
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2301	Fork a=30 mm e=60 mm d=165 mm

**Note:** Spare Parts and further see Page 2-27.

KL-0165-0 K



Universal



### KL-0165-0 K Ball Joint Extractor Set size 1

Suitable for cars and small trucks e.g.

⇒ with fork **KL-0165-1201** for:  
**Mercedes W140, W220 (S-Class) Ball-Joint / Guide-Joint Front axle, VW Golf IV Track rod Ball-Joint etc.**

⇒ with fork **KL-0165-1401** for:  
**Audi A4 / VW Passat, Skoda Superb Guide-Joint, VW T4 Track rod Ball-Joint etc.**

For quick and easy separation of ball joint connections at suspension and steering systems.

Weight: ..... 6,5 kg

**Specification:**

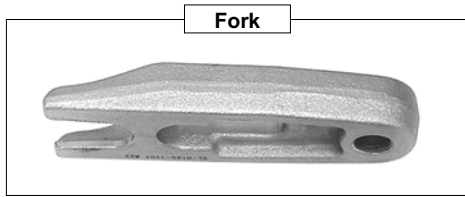
Part No.	Description
KL-0165-0 K	Ball Joint Extractor Set
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1,5)
KL-0165-1001	Fork a=20 mm e=50 mm d=165 mm
KL-0165-1101	Fork a=22 mm e=50 mm d=165 mm
KL-0165-1201	Fork a=24 mm e=50 mm d=165 mm
KL-0165-1301	Fork a=27 mm e=50 mm d=165 mm
KL-0165-1401	Fork a=30 mm e=50 mm d=165 mm
KL-0165-1090	Plastic storage case

**Absolutely necessary for VW-Audi, Seat, Škoda, Mercedes, Opel etc.**

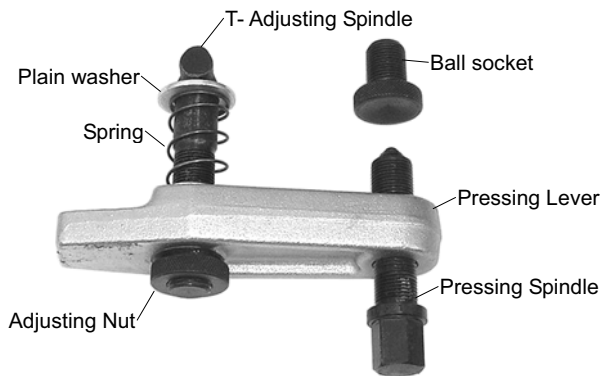
**Note:** Further forks size 2 see page 2-27.

### Cars up to small trucks

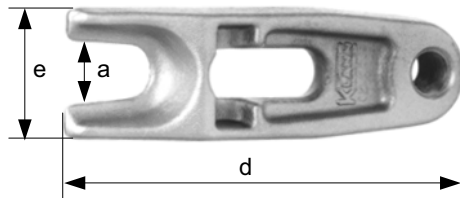
Patented



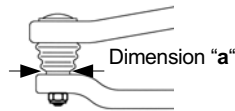
### Ball Joint without Fork



### Fork for KL-0165 Extractor-Series

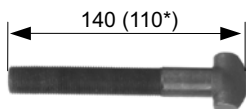


**Note:** For determination of the suitable fork dimension "a", please measure on the car (see ill.) and choose the appropriate fork.

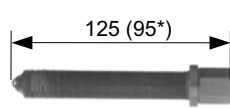


### Accessories: Extended T-Adjusting Spindle and Pressing Spindle

**KL-0165-1013**  
T-Adjusting Spindle M18x1,5



**KL-0165-1014**  
Pressing Spindle M18x1,5



## KL-0165-1 Ball Joint Extractor Set

For cars up to small trucks. (size 1 and size 2) Weight:..... 10,5 kg

Part No.	Description
<b>KL-0165-1</b>	<b>Ball Joint Extractor Set</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1001	Fork a=20 mm e=50 mm d=165 mm
KL-0165-1101	Fork a=22 mm e=50 mm d=165 mm
KL-0165-1201	Fork a=24 mm e=50 mm d=165 mm
KL-0165-1301	Fork a=27 mm e=50 mm d=165 mm
KL-0165-1401	Fork a=30 mm e=50 mm d=165 mm
KL-0165-2001	Fork a=22 mm e=60 mm d=165 mm
KL-0165-2101	Fork a=24 mm e=60 mm d=165 mm
KL-0165-2201	Fork a=26 mm e=60 mm d=165 mm
KL-0165-2301	Fork a=30 mm e=60 mm d=165 mm
KL-0165-1090	Plastic storage case

### KL-0165-100 Base Tool without Fork

Part No.	Description
<b>KL-0165-100</b>	<b>Base Tool without Fork</b>
<i>consists of:</i>	
KL-0165-1002	Pressing Lever
KL-0165-1003	T- Adjusting Spindle M18x1,5 x 110
KL-0165-1004	Pressing Spindle M18x1,5 x 70
KL-0165-1005	Ball socket
KL-0165-1006	Adjusting Nut M18x1,5
KL-0165-1007	Spring
KL-0165-1008	Plain washer Ø18

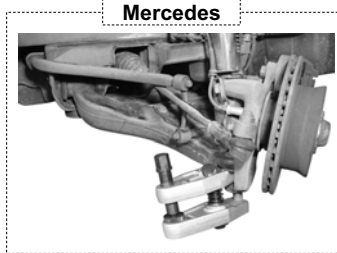
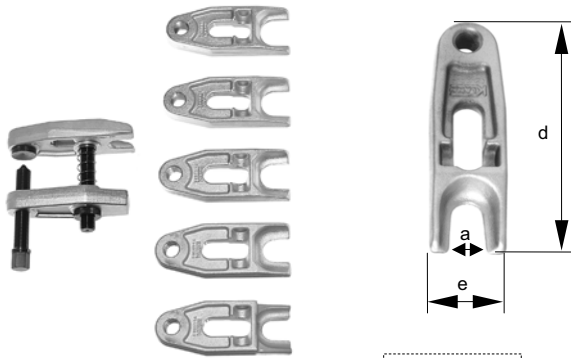
### Ball Joint Extractor size 1

Part No.	Description
<b>KL-0165-10</b>	<b>Ball Joint Extractor size 1</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1001	Fork a=20 mm e=50 mm d=165 mm
<b>KL-0165-11</b>	<b>Ball Joint Extractor size 1</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1101	Fork a=22 mm e=50 mm d=165 mm
<b>KL-0165-12</b>	<b>Ball Joint Extractor size 1</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1201	Fork a=24 mm e=50 mm d=165 mm
<b>KL-0165-13</b>	<b>Ball Joint Extractor size 1</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1301	Fork a=27 mm e=50 mm d=165 mm
<b>KL-0165-14</b>	<b>Ball Joint Extractor size 1</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-1401	Fork a=30 mm e=50 mm d=165 mm

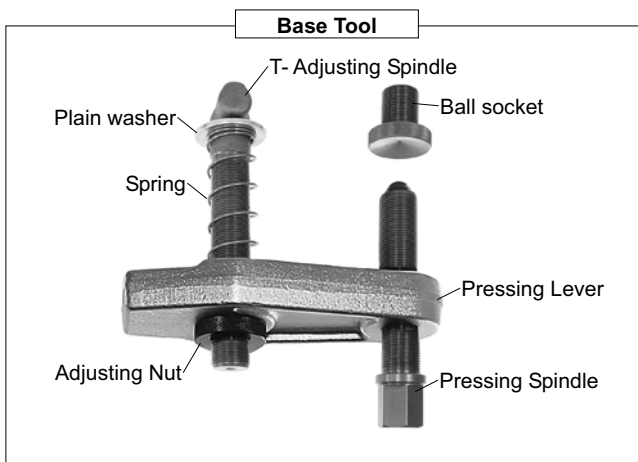
### Ball Joint Extractor size 2

Part No.	Description
<b>KL-0165-20</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2001	Fork a=22 mm e=60 mm d=165 mm
<b>KL-0165-21</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2101	Fork a=24 mm e=60 mm d=165 mm
<b>KL-0165-22</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2201	Fork a=26 mm e=60 mm d=165 mm
<b>KL-0165-23</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2301	Fork a=30 mm e=60 mm d=165 mm
<b>KL-0165-24</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2401	Fork a=34 mm e=60 mm d=165 mm
<b>KL-0165-25</b>	<b>Ball Joint Extractor size. 2</b>
<i>consists of:</i>	
KL-0165-100	Base Tool without fork (Spindles with thread M18x1.5)
KL-0165-2501	Gabel a=24 mm e=60 mm d=165 mm

### KL-0165-3 A

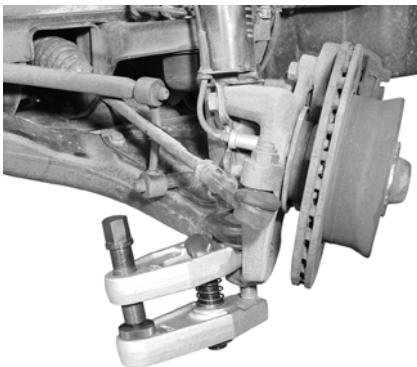


### KL-0165-300



### Application examples:

#### Suitable for Ball Joint Pivots



### KL-0165-35

suitable e.g. for MB Sprinter, VW LT '98 onwards, VW T4 Guide Joint

## KL-0165-3 A Ball Joint Extractor Set

(with 6 forks)

(Pat.)

Suitable for Mercedes HGV etc.

Ball Joint Extractor **KL-0165-3 A** is ideal for separating ball joints at axles and steering systems, and is particularly suitable for Mercedes commercial vehicles.

Part No.	Description	Qty.
<b>KL-0165-3 A</b>	<b>Ball Joint Extractor Set</b>	<b>1</b>
<i>consists of:</i>		
<b>KL-0165-300</b>	Base Tool without fork (Spindles with thread M24x1,5)	1
KL-0165-3001	Fork a=30 mm, e=80 mm, d=200 mm e.g. suitable for Landini-Tractors	1
KL-0165-3101	Fork a=34 mm, e=80 mm, d=200 mm	1
KL-0165-3201	Fork a=40 mm, e=80 mm, d=200 mm e.g. suitable for Mercedes, MAN, Scania, Volvo, etc.	1
KL-0165-3301	Fork a=42 mm, e=80 mm, d=200 mm e.g. suitable for Mercedes, MAN, Scania, Volvo, etc. and John Deere-Tractors	1
KL-0165-3401	Fork a=47 mm, e=80 mm, d=200 mm	1
KL-0165-3501	Fork a=30 mm, e=80 mm, d=200 mm e.g. suitable for MB Sprinter '95 onwards, VW LT '98 onwards Ball Joint, VW T4 Guide Joint etc.	1

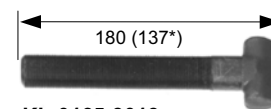
### KL-0165-300 Base Tool without Fork

Part No.	Description
<b>KL-0165-300</b>	<b>Base Tool without Fork</b>
<i>consists of:</i>	
KL-0165-3002	Pressing Lever
KL-0165-3013	T- Adjusting Spindle M24x1,5 x 180
KL-0165-3014	Pressing Spindle M24x1,5 x 135
KL-0165-3005	Ball socket
KL-0165-3006	Adjusting Nut M24x1,5
KL-0165-3007	Spring
KL-0165-3008	Plain washer Ø24

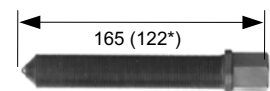
## Ball Joint Extractor size 3 for trucks

Part No.	Description
<b>KL-0165-30</b>	<b>Ball Joint Extractor size 3</b> suitable e.g. for MAN and Landini-Tractors, etc.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3001	Fork a=30 mm e=80 mm d=200 mm
<b>KL-0165-31</b>	<b>Ball Joint Extractor size 3</b> e.g. suitable for MAN, etc.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3101	Fork a=34 mm e=80 mm d=200 mm
<b>KL-0165-32</b>	<b>Ball Joint Extractor size 3</b> suitable e.g. for Mercedes, MAN, Scania, Volvo, etc.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3201	Fork a=40 mm e=80 mm d=200 mm
<b>KL-0165-33</b>	<b>Ball Joint Extractor size 3</b> suitable e.g. for Mercedes, MAN, Scania, Volvo, etc. and John Deere-Tractors.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3301	Fork a=42 mm e=80 mm d=200 mm
<b>KL-0165-34</b>	<b>Ball Joint Extractor size 3</b> e.g. suitable for Mercedes van, etc.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3401	Fork a=47 mm e=80 mm d=200 mm
<b>KL-0165-35</b>	<b>Ball Joint Extractor size 3</b> suitable e.g. for MB Sprinter '95 onwards, VW LT '98 onwards Ball Joint VW T4 Guide Joint etc.
<i>consists of:</i>	
KL-0165-300	Base Tool without fork (Spindles with thread M24x1,5)
KL-0165-3501	Fork a=30 mm e=80 mm d=200 mm

### Accessories for KL-0165-3: Extended T-Adjusting Spindle and Pressing Spindle



**KL-0165-3013**  
T-Adjusting Spindle M24x1,5



**KL-0165-3014**  
Pressing Spindle M24x1,5

\* Values in brackets are for normal length components.