



**WK 4**

## **Brake service equipment and tools**



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## Test and inspection equipment



### 3rd generation AST sensor tester

**Order no: 03.9301-0110.4**

**Short order no.: 760132**

The ATE 3rd generation AST sensor tester is used for testing virtually all ABS wheel sensors, the ATE ESP sensors (in conjunction with the ESP testing set 03.9301-0113.2 /760137) and other ABS sensors. During diagnosis of the active and passive wheel speed sensors and their sensor wheels, the ATE AST sensor tester automatically recognizes which type of sensor is being diagnosed. The function of the sensors - the sensor signal - as well as the "number of teeth" of the pulse-generating wheel are checked and displayed.

The ESP testing set (03.9301-0113.2 /760137) allows the ATE ESP sensors (yaw rate, acceleration, pressure) to be tested. It is also possible to test other sensors if the rated values are known. Users are guided through the testing process step-by-step, so they need no operating instructions when working on site. A universal connection adapter is included so that the unit can be connected to the various wheel sensors. For the power supply (12 Volt), two adapters are included, one for the cigarette lighter and one for the battery.

Its state-of-the-art flash technology make the ATE AST sensor tester updatable and thus perfectly prepared for the future.



#### Benefits:

- Simple to use, reliable
- Inexpensive diagnosis option

#### Scope of supply:

- Complete unit
- Set of test cables with pincer clips
- Power supply adapter for cigarette lighter
- Power supply adapter for battery
- Operating instructions
- Robust case

#### Technical data:

Dimensions: H x W x D	217 x 113 x 38 mm
Voltage requirements:	9 - 16 Volt DC
Power consumption:	170 mA

## ESP testing set

**Order no: 03.9301-0113.2**

**Short order no.: 760137**

The ATE ESP testing set is an accessory for the ATE 3rd generation AST sensor tester. The ATE ESP testing set extends the range of application of the ATE AST sensor tester by providing the possibility of testing ATE ESP sensors (yaw rate, acceleration and pressure sensors).

### Benefits:

provides the possibility of testing ATE ESP sensors effectively

connection to all kind of ATE ESP sensors (non car specific)

### Scope of supply:

- 3 testing cables
- 1 pincer clip



## Test card for magnetic sensor wheels

**Order no: 03.9301-0200.1**

**Short order no.: 760130**

The new active wheel speed sensors work with magnetic sensor wheels, which are integrated in the rubber sealing ring of the wheel bearing. For this, the rubber is enriched with iron dust and then given magnetic fields which are highly sensitive. It is not possible to check the magnetic sensor wheels visually.

Before a new wheel bearing is installed, it is therefore absolutely necessary that the wheels be checked. The part could be faulty, and the direction of installation must be determined. But when checking errors in the ABS it may also be necessary in the case of sensor errors to check the magnetic sensor wheels.

With the ATE test card for magnetic sensor wheels, these tests can be carried out reliably, easily and inexpensively. The magnetic fields of the sensor wheel are shown visually in the display window of the ATE test card, making it possible to check them.

The ATE test card for magnetic sensor wheels comes with an integrated protective case.

### Benefits:

Fast, simple and inexpensive.

### Scope of supply:

Test card with integrated protective case, with brief operating instructions.





## Brake fluid test unit BFT 320

Order no: 03.9311-0080.4

Short order no.: 730071

Brake fluid is hygroscopic, which means that it absorbs water over the course of time, thus causing the boiling point to drop (risk of vapor lock). That is why it needs to be checked regularly and, if necessary, replaced. The particularly inexpensive ATE BFT 320 allows measurement of the boiling points of all glycol-based brake fluids (DOT 3, DOT 4, DOT 5.1) with the same precision as in a laboratory.

The ATE BFT 320 is an extremely practical tester with a 12-Volt power supply.

This means that it is simple to perform the measurement at the expansion tank in the vehicle. A specimen vial and a pipette are supplied to allow measurements to be performed away from the vehicle.

The simple menu guidance for users is a highlight of the ATE BFT 320. Measurement takes only around 30 seconds and the measured value is shown on a digital display. A recommendation as to whether to replace the brake fluid is then shown. This means that it is no longer necessary to change brake fluid merely on suspicion.

### Benefits:

- The immersion heater method is the only one that provides exact measurements, regardless of the brake fluid type
- Menu guidance makes it extremely simple to use
- Digital display of the boiling point and recommendation as to whether to change the brake fluid
- Practical tester, measurement can be performed in the expansion tank
- 12 Volt power supply
- Suitable for brake fluids with boiling points up to 320 °C

### Scope of supply:

- Complete test unit
- Specimen vial and pipette
- Operating instructions
- Robust case



### Technical data:

Accuracy:	
at 100-180° C:	+/- 3%
> 180° C:	+/- 5%
Measuring time:	approx. 30 seconds
Power supply:	12 Volt

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## Sampling set BFT 320

**Order no: 03.9311-0093.3**

**Short order no.: 730076**

The disposal pipette is used to extract the brake fluid being tested from the vehicle and fill it into the disposable specimen vial so that the boiling point can be determined with the ATE BFT 320

**Scope of supply:**

- 10 disposable pipettes
- 10 disposable specimen vials

**Hint:**

Every time a measurement is taken, it is recommended that both a new pipette and a new specimen vial are used, so as to avoid falsifying the results



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## Cable repair set BFT 320

**Order no: 03.9311-0090.3**

**Short order no.: 730075**

If the brakefluid tester ATE BFT 320 will not show any function after connecting to 12 volt, it is possible, that the connecting cable is broken near to the clamps.

With the cable repair set BFT 320 the malfunction could be repaired quickly.



**Scope of supply:**

- two clamps with cables and connectors

## Brake fluid test equipment BFCS 300

**Order no: 03.9311-0070.4**

**Short order no.: 730060**

Brake fluid is hygroscopic, which means that it absorbs water over the course of time, thus causing the boiling point to drop (vapor lock). That is why it needs to be checked regularly and, if necessary, replaced. The ATE BFCS 300 allows rapid measurement of the in-service boiling points of all glycol-based brake fluids (DOT 3, DOT 4, DOT 5.1) with the same precision as in a laboratory.

This is done by taking a sample (10 ml) with a disposable pipette (ATE sampling set) transferring it to a disposable specimen vial (ATE sampling set) and bringing it to boiling point in the ATE BFCS (immersion heater method). Measurement takes only around 20 seconds and the measured value is shown on a digital display.

This means that it is no longer necessary to change brake fluid merely on suspicion. The number of measurements carried out can be determined using an integrated short-term and long-term counter.



### Benefits:

- The immersion heater method is the only one that provides exact measurements, regardless of the brake fluid type
- Extremely easy to use
- Suitable for brake fluids with boiling points up to 300 °C

### Scope of supply:

- Unit
- 1 disposable pipette
- 1 disposable specimen vial
- Operating instructions

### Approval mark:

CE

### Hint:

Never use the equipment without a specimen.

### Technical data:

Accuracy:	
at 150-200 °C	+/- 4 to +/- 6 °C
at 200-280 °C	+/- 7 to +/- 9.5 °C
at 280-300 °C	+/- 10 to +/- 15 °C
Measuring time:	15 to 35 seconds
Power consumption:	during measurement 170 VA
	on standby 33 VA
Dimensions: H x W x D	180 x 225 x 225 mm
Weight:	5.4 kg



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## Sampling set BFCS 300

**Order no: 03.9311-0019.2**

**Short order no.: 730066**

The disposable pipette is used to extract the brake fluid being tested from the vehicle and fill it into the disposable specimen vial so that the boiling point can be determined with the ATE BFCS 300.

**Scope of supply:**

- 50 disposable pipettes
- 50 disposable specimen vials

**Hint:**

Every time a measurement is taken, it is recommended that both a new pipette and a new specimen vial are used, so as to avoid falsifying the results.



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## Sensor head

**Order no: 03.9311-0072.1**

**Short order no.: 730061**

If the ATE BFCS 300 is no longer able to bring the brake fluid sample to boiling point, the reason is often that the heating coil is damaged. This is located in the sensor head and can easily be replaced.

**Work flow:**

Prior to any work on the unit, disconnect the unit from the electric power supply. Remove the sensor head carefully in a downward direction, and do not twist it. Align the new sensor head as indicated by the two arrow markings, and, without twisting it, push it into its mounting. The sensor head clicks into place. Now test that the unit operates correctly, preferably with new brake fluid.



## Pressure gauge unit

**Order no: 03.9305-1020.4**

**Short order no.: 730032**

The ATE pressure gauge unit is extremely versatile. It allows measurement of all pressures throughout the hydraulic brake system and in the vacuum system (brake power assist unit etc.). Thanks to two measuring circuits with high-pressure manometers, the pressure in both brake circuits can be measured simultaneously, allowing simple comparison. This is the only way to check or adjust the regulators.

One of the measuring circuits also has a low-pressure manometer that is switched off at approx. 9.5 bar. This allows both low-pressure and high-pressure leakage tests to be carried out. The unit is connected to the hydraulic system by means of an adapter instead of bleeder valves as well as plug-and-socket connectors and low-stretch mini-hoses. Suitable adapters for connection to the test connectors are also supplied with the unit.

The vacuum manometer allows the vacuum system to be tested for leaks and correct operation. Suitable adapters for connecting the unit are also supplied. All accessories are stored in appropriate holders inside the unit.



### Benefits:

- Robust construction
- Measurement of directly applied pressure /vacuum
- The use of mini-hoses avoids hose stretching, thus providing high measuring accuracy
- Connection fittings are also supplied and are stored in the unit

### Scope of supply:

- Unit complete with connecting hoses
- 2 sets of connection nipples (7 items M 6 to M 12 x 1.5)
- 2 test connection adapters
- 2 plug-on nipples (male)
- 4 vacuum connecting sleeves
- 1 elbow connection complete (banjo screw, ring support)
- Operating instructions

### Approval mark:

CE

### Hint:

Unit is supplied uncalibrated, but can be calibrated subsequently.

### Technical data:

Low-pressure measuring range	0 to 9.5 bar
High-pressure measuring range	0 to 250 bar
Vacuum measuring range	0 to -1.0 bar
Automatic cutoff of the low-pressure manometer at	approx. 9.5 bar
Length of connecting hose:	3.0 m
Length of vacuum hose:	2.0 m
Dimensions: H x W x D	420 x 350 x 220 mm
Weight:	10 kg

## Pressure gauge

**Order no: 03.9305-0200.4**

**Short order no.: 730029**

The ATE pressure gauge allows all pressures to be measured in one brake circuit of the hydraulic brake system.

The measuring circuit consists of a high-pressure and low-pressure manometer that cuts off automatically at approx. 9.5 bar. This allows both low-pressure and high-pressure leakage tests to be carried out. The unit is connected to the hydraulic system by means of an adapter instead of bleeder valves as well as plug-and-socket connectors and low-stretch mini-hoses.

All accessories are stored in the unit in suitable holders.



### Benefits:

- Robust construction
- Measurement of directly applied hydraulic pressure
- The use of mini-hoses avoids hose stretching, thus providing high measuring accuracy
- Connection fittings are also supplied with the unit

### Scope of supply:

- Unit complete with connection hose
- 1 coupling head
- 7 connector nipples ( M 6 to M 12x 1.5)
- Operation instructions

### Hint:

Unit is supplied uncalibrated, but can be calibrated subsequently.

### Technical data:

Low-pressure measurement range	0 to 9.5 bar
High-pressure measurement range	0 to 250 bar
Automatic shutoff of the low-pressure manometer at	approx. 9.5 bar
Length of connecting cable:	1.5 m
Dimensions: H x W x D	320 x 230 x 160 mm
Weight:	5.5 kg

## Extension hose

**Order no: 03.9305-1042.2**

**Short order no.: 730043**

With the ATE extension hoses, each of the connecting hoses on the pressure gauge unit (3.9305-1020.4 /730032) can be lengthened by 5 meters.

**Benefits:**

If 2 extension hoses are used on the pressure-gauge unit, a total hose length of 16.0 m can be achieved.



**Technical data:**

Length:	5.0 m
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## Pedal arrester

**Order no: 03.9312-0100.4**

**Short order no.: 760032**

When carrying out leakage checks on the hydraulic brake system it is necessary to maintain a constant brake-pedal pressure over a long period. Constant brake-pedal pressure is also needed to check and adjust brake-pressure regulators or limiters. The ATE pedal arrester is ideal for this purpose.

The soft support plate is placed against the driver's seat and the serrated side against the brake pedal. The required pressure can be set using the handwheel, that operates on a toothed rack. A catch locks the unit at the required value.

**Benefits:**

The required pressure can be set precisely with the handwheel and toothed rack.





## Digital brake disk caliper gauge

**Order no: 03.9314-0010.3**

**Short order no.: 760138**

The digital ATE brake disk caliper gauge is an indispensable tool for precisely determining brake disk wear. It enables quick and easy measurement of brake disk thickness, i.e., the degree of wear. The measuring range is 125 mm and the length of the measuring jaws is 85 mm. The design of the measuring jaws permits exact measurement even if the disc has a ridge.

Work with the digital ATE brake disc caliper gauge couldn't be easier. After the measuring jaws have been positioned on the brake disk, the result of measurement is shown in figures on the display. The reading is saved by briefly pressing the hold button. The caliper gauge then can be opened and removed from the brake disk. The reading remains saved until the hold button is pressed again. This is a big advantage especially if accessibility is a problem or poor lighting conditions in the wheel well impede reading. The result of measurement thus can be conveniently read and compared with the desired value.

If required, null balancing of the gauge can be quickly initiated at the push of a button. The user can freely choose between 'mm' and 'inch' as units of measure.

The big advantage of the digital ATE brake disk caliper gauge is that no special know-how is required for taking readings. The digital reading display is self-explanatory even to laypersons and can be nicely used for sales talks with the customer.

### Benefits:

- Convenient, reliable reading of measurements
- Easy saving of readings
- Measuring jaw design permits accurate measurement even if a brake disk has a ridge
- Sturdy design suited for workshop use

### Scope of supply:

- Complete instrument in sturdy plastic box
- Substitute battery
- Operating instructions



## Dial gauge with large measuring range

**Order no: 03.9304-0034.2**

**Short order no.: 760093**

The ATE dial gauge with 1/100 mm reading accuracy is used to measure brake disks and wheel hubs. If measurement is to be carried out in situ on the vehicle, an ATE dial-gauge holder is required.

The 8 mm clamping shaft diameter of the ATE dial gauge is standardized.

The long probe allows measurement of a wheel hub despite wheel studs.

The special exchangeable ball-shaped probe allows easy measurement of brake disks such as the ATE Power Disc.

The knurled, rotatable outer ring with 360° tick scale allows pointer zero adjustment and makes the ATE dial gauge easy to read. Two adjustable tolerance marks make it easy to take an accurate reading.

### Benefits:

- Wheel hub can be measured despite wheel studs
- With exchangeable ball-shaped probe

### Scope of supply:

- Dial gauge with probe
- Special ball-shaped probe



## Magnetic dial-gauge holder

**Order no: 03.9314-0019.2**

**Short order no.: 760092**

The ATE magnetic dial-gauge holder, used in conjunction with the ATE dial gauge, enables lateral and radial run-out measurements to be taken on brake disks and wheel hubs. Its 70 movable steel pins provide a perfect fit on uneven surfaces. This means that the 60 N strong magnet adheres optimally. The three swivel arms can be secured by means of a clamping screw and allow the ATE dial gauge to be aligned with any measuring point. A fine adjustment mechanism at the clamp of the dial-gauge permits precise zero point calibration of the ATE dial gauge.

**Benefits:**

- 70 flexible steel segments adapt perfectly to any shape surface
- Constant securing force of 60 N
- One clamping screw fixes all three swivel arms at the same time
- Fine tuning via a knurled screw

**Scope of supply:**

Supplied without dial gauge



## Straight edge

**Order no: 03.9314-0022.1**

**Short order no.: 760094**

Before a brake disk is mounted, the wheel hub should be checked for flatness (distortion). This is easily done with the ATE straight edge, and the light gap method. Its length of 200 mm allows even larger surfaces to be easily checked.

**Benefits:**

- quick and easy and universal use with the light gap method

**Scope of supply:**

- ATE straight edge
- handy case to protect the straight edge



## Brake disk measurement equipment

**Order no: 03.9304-0100.4**

**Short order no.: 730072**

The ATE brake disk measurement equipment allows precise measurement of the lateral run-out and thickness tolerance of brake disks which have been removed from the vehicle (without bearing seat). Brake disks of diameters up to 360 mm can be measured. Precise measurement of the brake disk is ensured by the no-play bearing and the polished contact surface of the support cups. The brake disk to be measured is centered precisely using a cone. The exchangeable support cups mean that there is a small support area available for measuring small brake disks.

A dial gauge (with a 0.1 mm scale) is included with the unit. When combined with the ball-shaped probe, measurements can be carried out on all types of brake disks (e.g. ATE Power Disc).

### Benefits:

- Extremely simple to use
- Lateral run-out and thickness measured with one tool
- Measurements read on a single dial gauge

### Scope of supply:

- Complete brake disk measurement equipment with large and small support cup
- Dial gauge with probe
- Ball-shaped probe
- Operating instructions

### Technical data:

Accuracy:	1/100 mm
Dimensions: L x W x H	300 x 170 x 230 mm
Weight:	6.85 kg





# Bleeding equipment



## 5 liter electrical brake bleeding unit FB 5e

Order no: 03.9302-1500.4

Short order no.: 740295

The ATE FB 5e is a particularly easy to operate, robust and economical brake bleeding unit. It fulfils all the requirements for filling, flushing and bleeding of modern electronic braking systems. Two pressure stages are available: 1.0 and 2.0 bar. This corresponds to the stipulations of leading automobile manufacturers and avoids faulty settings of the working pressure. The working pressures are set using a rocker switch. Checking with a pressure gauge is not necessary because of the predetermined pressure. The current low-viscosity brake fluids set stringent standards for the safe operation of a brake filling and bleeding unit, and these were taken into account particularly in the development of the ATE FB 5e. A special pump creates a pulsing fluid flow which supports the complete flushing and bleeding of the braking system. The ATE FB 5e works directly from the 5 litre ATE can, which is securely fixed in the unit with a clamping strap. It is no longer necessary to carry out time-consuming transfer of the brake fluid. The suction lance is held securely in the container with a screwed fitting. When the brake fluid container being used is empty, the ATE FB 5e switches off in good time. This ensures that air can never be directed into the braking system.

Practical features are the holders mounted on the side of the ATE FB 5e for the filling hose and the mains cable, and the mountings for three bleeding spigots at the rear of the unit. The large handle can be used for carrying the unit. All materials used on the ATE FB 5e are absolutely resistant to brake fluid.

The ATE FB 5e is fitted with a bleeding spigot No.: 20 (Europe spigot).

### Benefits:

- economical
- particularly robust
- easy to operate
- two pressure stages, avoids incorrect settings
- suitable for low-viscosity brake fluids
- pulsing brake fluid flow

### Scope of supply:

- complete unit
- Operating instructions
- Bleeding spigot No.: 20 (Europe spigot)

### Approval mark:

CE

### Technical data:

Brake fluid capacity:	5 liters
Power supply:	230 V ~ , 50 - 60 Hz
Delivery rate of pump:	approx. 12 l/h at 2 bar pressure
Automatic cut-off of pump:	at approx. 9mm remaining fluid level in the can
Length of connecting cable:	4.2 m
Filling hose length:	3.5 m
Dimensions: H x W x D:	530 x 270 x 250 mm
Weight:	8.5 kg



## 5-liter pneumatically operated brake bleeding unit FB 5p

**Order no: 03.9302-1350.4**

**Short order no.: 740230**

The ATE FB 5p is a pneumatically operated bleeding unit for 5 liters of brake fluid. With the wide range of ATE accessories, all hydraulic clutch and brake systems - including ABS, EDS or ESP - can be filled, flushed and bled. A low-pressure leakage test of a brake or clutch system can also be easily carried out. Only one person is needed to operate the ATE FB 5p.

A particular advantage of the ATE FB 5p is that, once it has been topped up with compressed air, it can be used anywhere, so it is ideal for "off-premises" work.

The ATE FB 5p works according to the principle of medium separation, i.e. the brake fluid is separated from the compressed air by a diaphragm, so that air can never enter the brake system. One single filling of compressed air is sufficient to drain 5 liters of brake fluid. The working pressure (the pressure with which the new brake fluid is fed into the brake system) is adjustable and can be seen on the working-pressure manometer. At 3.5 meters, the length of the filling hose is sufficient for all requirements.

It goes without saying that all materials used on the FB 5p are completely resistant to brake fluid.

The ATE FB 5e is fitted with a bleeding spigot No.: 20 (Europe spigot).

### Benefits:

- Particularly robust unit
- Once topped up, the unit is mobile and can be used anywhere

### Scope of supply:

- Unit complete
- Operating instructions
- Bleeding spigot No.: 20 (Europe spigot)

### Technical data:

Brake fluid capacity:	5 liters
Working pressure (compressed air):	6.5 bar
Operating pressure (brake fluid):	2 bar (0 to 3 bar adjustable)
Filling hose length:	3.5 m
Total height:	510 mm
Diameter:	310 mm
Weight:	10 kg





## 15 liter electrical brake bleeding unit - FB 15

**Order no: 03.9302-1650.4**

**Short order no.: 740229**

The new ATE FB 15 is an electrically operated bleeder with a capacity of 15 liters of brake fluid. It has a particularly robust construction. With the wide range of ATE accessories, all hydraulic clutch and brake systems - including ABS, EDS or ESP - can be filled, flushed and bled. The pump of the ATE FB 15 is sufficiently powerful to be used on truck transmission control systems. A low-pressure leakage test of a brake or clutch system can be easily carried out with the ATE FB 15. Only one person is needed to operate the ATE FB 15.

Its large casters and the convenient steering handle allow it to be moved easily. Practical holders are provided on the unit for the filling hose, the power cable and for four ATE bleeding unit adapters. The clearly-arranged control elements make the ATE FB 15 easy to operate. The fluid-level indicator allows you to check the amount remaining in the brake fluid tank. If it is necessary to top up the brake fluid, this can be done while the unit is running, because the ATE FB15 does not need to be bled again. If there is insufficient brake fluid in the unit, the pump is automatically switched off, a clear warning signal sounds, and no air can be drawn in. The working pressure can be adjusted by a pressure regulator that is protected against inadvertent adjustment and can be monitored with the working-pressure manometer. At 3.5 meters, the length of the filling hose is sufficient for all requirements.

It goes without saying that all materials used on the FB 15 are completely resistant to brake fluid.



The ATE FB 5e is fitted with a bleeding spigot No.: 20 (Europe spigot).

### Benefits:

- Well-proven, particularly robust unit for workshop use

### Scope of supply:

- Unit complete
- Operating instructions
- Bleeding spigot No.: 20 (Europe spigot)

### Approval mark:

CE

### Technical data:

Brake fluid capacity:	15 liters
Power supply:	230 V ~ , 50-60 Hz
Delivery rate of pump:	1.3 l/min
Working pressure:	2 bar (0 to 3 bar adjustable)
Automatic cut-off of pump:	at approx. 9 mm remaining fluid level
Length of connecting cable:	4.20m
Filling hose length:	3.5 m
Dimensions: H x W x D :	745 x 380 x 705 mm
Weight:	20.5 kg



## 15 liter electrical brake bleeding unit FB 15 for mineral oil

**Order no: 03.9302-1660.4**

**Short order no.: 740231**

The new ATE FB 15 in the version for use with mineral oil is an electrically operated bleeding unit with a tank capacity of 15 liters. It has a particularly robust construction. The powerful pump allows all hydraulic clutch and brake systems, including ABS, EDS or ESP, can be filled, flushed and bled and also permits use on transmission control systems and other hydraulic systems. A low-pressure leakage test of a brake or clutch system can be easily carried out with the ATE FB 15. An ATE accessory set is available for the mineral oil version of the ATE FB 15. Only one person is needed to operate the ATE FB 15.

Its large casters and the convenient steering handle allow it to be moved easily. Practical holders are provided on the unit for the filling hose, the power cable and for four ATE bleeding unit adapters. The clearly-arranged control elements make the ATE FB 15 easy to operate. The fluid-level indicator allows you to check the amount remaining in the brake fluid tank. If it is necessary to top up the brake fluid, this can be done while the unit is running, because the ATE FB15 does not need to be bled again. If there is insufficient brake fluid in the unit, the pump is automatically switched off, a clear warning signal sounds, and no air can be drawn in. The working pressure can be adjusted by a pressure regulator that is protected against inadvertent adjustment and can be monitored with the working-pressure manometer. At 3.5 meters, the length of the filling hose is sufficient for all requirements.

It goes without saying that all materials used on the FB 15 are completely resistant to mineral oil.



### Benefits:

- Well-proven, particularly robust unit for workshop use

### Scope of supply:

- Unit complete
- Adapters for connecting the unit must be ordered separately
- Operating instructions

### Approval mark:

CE

### Typ:

For mineral oil

### Technical data:

Brake fluid capacity:	15 liters
Power supply:	230V ~ , 50-60 Hz
Delivery rate of pump:	1.3 l/min
Working pressure:	2 bar (0 to 3 bar adjustable)
Automatic cut-off of pump:	at approx. 9 mm remaining fluid level
Length of connecting cable:	4.20m
Filling hose length:	3.5 m
Dimensions: H x W x D :	745 x 380 x 705 mm
Weight:	20.5 kg

## 30-liter electric brake bleeding unit FB 30 EDR

**Order no: 03.9302-3000.4**

**Short order no.: 740273**

The ATE FB 30 EDR is an electrically operated bleeding unit using ATE brake fluid cans of 5, 12, 20 or 30 liters capacity. The cans are mounted directly in the unit. The wide range of ATE accessories makes it possible to fill, flush and bleed all hydraulic clutch and brake systems including ABS, EDS, ESP and SBC.

The ATE FB 30 EDR is fitted with an electronic pressure control facility (EDR) with preset pressure levels of 0.4 bar, 1.0 bar and 2.2 bar (suitable for all applications). The selected pressure is maintained at a constant level under all operating conditions by the electronic control system, this can be checked with the integrated manometer.

The brake fluid level in the can is monitored by a float switch. If the level falls too low, the float switch switches off the pump and a clear acoustic signal is sounded. This means that no air is drawn in and the user is informed when the can is empty.

The ATE FB 30 EDR also allows modern, low-viscosity brake fluids to be used (in particular ESP brake fluids). All the operating and monitoring controls are clearly and ergonomically arranged on the tilted front panel of the unit.

To allow it to be moved easily, the ATE FB 30 EDR has large wheels and a convenient steering handle. Holders for the filling hose and power cable are provided on the sides of the unit. The ATE FB 30 EDR also features a practical storage tray for small components.

It goes without saying that all materials used on the FB 30 EDR are completely resistant to brake fluid.

The most up-to-date technology means that the ATE FB 30 EDR is ideally equipped for today's and tomorrow's fields of application.

The ATE FB 5e is fitted with a bleeding spigot No.: 20 (Europe spigot).

### Benefits:

- Brake fluid container can be used directly without being refilled
- Versatile, suitable for various container sizes /shapes from 5-30 liters
- Absolutely constant working pressure thanks to electronic pressure control (EDR)
- Automatic cut-off with acoustic warning if the can is empty
- Suitable for low-viscosity brake fluids

### Scope of supply:

- Complete unit (without brake fluid cans)
- Operating instructions
- Bleeding spigot No.: 20 (Europe spigot)

### Approval mark:

CE

### Technical data:

Brake fluid capacity:	5 to 30 liters
Power supply:	230 V ~ , 50 - 60 Hz
Delivery rate of pump:	1.1 l/min
Electronic pressure control system (EDR), pressure levels:	pressure-less /0.4 bar /1.0 bar and 2.2 bar
Automatic cut-off of pump:	at approx. 9 mm remaining fluid level in the can
Length of connecting cable:	4.2 m
Filling hose length:	3.5 m
Dimensions: H x W x D:	915 x 440 x 365 mm
Weight:	15.9 kg



## FB 30 S - 30-litre electric brake bleeding unit with integrated suction device

**Order no: 03.9302-3010.4**

**Short order no.: 740288**

Changing the brake fluid and filling or bleeding the brake systems on current vehicles with their electronic brake systems and also where low-viscosity brake fluid is involved requires modern service equipment. A professional brake fluid change includes cleaning the reservoir. The old, contaminated brake fluid must therefore be extracted from the reservoir.

The innovative technology of "Electronic Pressure Regulation" with preset pressure steps together with the new, integrated suction device for used brake fluid make the new ATE FB 30 S the benchmark for the future among brake filling and bleeding units. With just one centrally located rotary switch on the new ATE FB 30 S, it is possible to select between extracting brake fluid and filling or bleeding the brake system with preset pressure steps. Corresponding signal lights indicate that the selected working range is operating correctly.

An integrated, independent and especially robust pump is used for extracting the used brake fluid. Even difficult-to-access reservoirs are easy to empty with the approximately 3 metre long extendable coiled hose and long suction lance. A filter integrated into the suction hose protects the pump from coarse dirt particles.

The extracted brake fluid is collected in a transparent drain bottle which has a capacity of one litre. This is connected to the ATE FB 30 S by means of a quick-release coupling. It is easy to uncouple the drain bottle and, using a further quick-release coupling in its base, empty it into the ATE disposal system. Conventional emptying is also possible via the screw cap.

There are four pressure steps available for filling, flushing and bleeding the brake system: unpressurised /0.4 /1.0 /2.2 bar. These are selected by means of the central rotary switch. The "Electronic Pressure Regulation" holds the preset operating pressure constant - this can be checked on the gauge.

The rotary switch, the check gauge and the signal lights are located on the ergonomically designed sloping operating panel. Present day low viscosity brake fluids place stringent demands on the safe operation of a brake filling and bleeding unit, and particular emphasis was placed on this aspect during the development of the ATE FB 30 S.

The new ATE FB 30 S enables you to fill, flush and bleed all modern electronically controlled and also conventional brake and clutch systems without problems.

The ATE FB 30 S brake filling and bleeding unit works directly from 5, 20 and 30 litre brake fluid containers, which are securely fixed to the unit by means of a retainer. There is no need for time-consuming decanting of the brake fluid. Other common containers can also be used in addition to the ATE brake fluid canisters. Special brackets provide secure seating for the suction lance with the rubber sealing cone in the container. If the container of fluid in use becomes empty, the ATE FB 30 S will be shut off automatically. This ensures that air can never enter the brake system. A clearly audible signal and a third signal light prompt replacement of the container.

The ATE FB 30 S has convenient brackets for the filling hose and mains cable located at the side, as well as a storage tray on the unit. The large wheels, ergonomic handle and favourable position of its centre of gravity mean that the ATE FB 30 S can be moved around comfortably and safely. The ATE FB 5e is fitted with a bleeding spigot No.: 20 (Europe spigot).



## FB 30 S - 30-litre electric brake bleeding unit with integrated suction device

Order no: 03.9302-3010.4

Short order no.: 740288

### Benefits:

- quick and effective operation
- suitable for all standard brake and clutch systems
- extraction of used brake fluid
- constant operating pressure due to electronic pressure regulation, EPR
- particularly suitable for low viscosity brake fluids
- various brake fluid containers can be used directly without decanting
- automatic shutdown with warning sound when the container is empty
- three signal lights for the respective operating conditions

### Scope of supply:

- complete unit incl. drain bottle (but without new fluid container)
- operating instructions
- Bleeding spigot No.: 20 (Europe spigot)



### Technical data:

Brake fluid capacity:	5 to 30 liters
Power supply:	230 V ~ , 50 - 60 Hz
Delivery rate of pressure pump:	approx. 1.1 l/min
Suction pump delivery rate:	approx. 1.0 l/min
Electronic pressure control system (EDR), pressure level:	pressure-less /0.4 bar /1.0 bar /2.2 bar
Automatic cut-off of pump:	at approx. 9mm remaining fluid level in the can
Length of connecting cable:	4.2 m
Filling hose length	3.5 m
Dimensions: H x W x D:	915 mm x 475 mm x 380 mm
Weight:	16.8 kg



## Set of bleeding unit adapters (standard)

**Order no:** 03.9302-0800.3

**Short order no.:** 740271

Set of two the most common standard bleeding unit adapters, the auxiliary hose and the filling gun in a handy plastic case.

### Benefits:

- set of the most common accessories to fill and bleed brake systems
- clearly arranged

### Scope of supply:

- Plastic case
- Bleeding unit adapters :  
no. 50S = 03.9302-0927.2 /740120  
no. 55A = 03.9302-0906.2 /740097
- Auxiliary hose:  
no. 67 = 03.9302-0704.2 /740012
- Filling gun:  
03.9302-0795.2 /740085



## Set of bleeding unit adapters for Asian vehicles

**Order no:** 03.9302-0709.3

**Short order no.:** 740225

Set of six of the most common standard bleeding unit adapters for Asian vehicles and an auxiliary hose in a handy plastic case.

### Benefits:

- set of the most common standard bleeding unit adapters for Asian vehicles
- clearly arranged

### Scope of supply:

- Plastic case
- Bleeding unit adapters:  
no. 37 = 03.9302-0736.2 /740039  
no. 41 = 03.9302-0786.2 /740073  
no. 43 = 03.9302-0774.2 /740063  
no. 49 = 03.9302-0746.2 /740044  
no. 55A = 03.9302-0906.2 /740097  
no. 77 = 03.9302-0914.2 /740107
- Auxiliary hose:  
no. 67 = 03.9302-0704.2 /740012



## Mineral oil accessory set

**Order no: 03.9302-0720.3**

**Short order no.: 740232**

The mineral oil accessory set is required for bleeding and filling systems with mineral oil using the bleeding unit 03.9302-1660.4. It has been specially designed to be completely resistant to mineral oil for this purpose. The bleeding unit adapter has a 45-mm diameter buttress thread.

The auxiliary hose allows the bleeding unit to be connected to one of the bleed valves in the system. The filling gun permits easy refilling without spillage. Spare seals for the bleeding unit adapter and the filling gun are included in the set.

### Scope of supply:

- Bleeding unit adapter with 45-mm buttress thread
- Filling gun
- Auxiliary hose
- Spare seal for bleeding unit adapter
- Spare seal for auxiliary hose



## Auxiliary hose

**Order no: 03.9302-0704.2**

**Short order no.: 740012**

To connect the bleeding units to a bleed valve of the brake or clutch system.



## Filling gun

**Order no: 03.9302-0795.2**

**Short order no.: 740085**

The filling gun is used to fill fluid reservoirs using a bleeding unit.

### Benefits:

Easy-to-use lever for actuates the valve, allowing precise dosage of the fluid.



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## Collection bottle

**Order no: 03.9302-1424.2**  
**Short order no.: 740151**

The ATE collection bottle is connected to the bleeder valves of a hydraulic brake system via its silicon hose to collect the used brake fluid when the system is bled or the brake fluid is changed. The ATE collection is transparent, allowing the brake fluid to be checked thoroughly.



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### Technical data:

Capacity:	2,2 liters
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## Bleed hose

**Order no: 03.9302-0538.1**  
**Short order no.: 750008**

The ATE bleed hose is a spare part for the ATE collection bottle 03.9302-1424.2 and the ATE collection container 03.9302-0516.2



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### Technical data:

length:	700 mm
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## Suction bellows

**Order no: 03.9314-5900.3**

**Short order no.: 760068**

The ATE suction bellows is used to draw off brake fluid from the fluid reservoir.

Before the brake fluid is changed or a hydraulic brake system is bled, the old contaminated brake fluid should be drained from the fluid reservoir to prevent any contaminants being distributed throughout the entire brake system. After the brake fluid has been changed or the system has been bled, the brake fluid level should be reduced to the MAX mark using the suction bellows.



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## Suction bottle

**Order no: 03.9314-5910.3**

**Short order no.: 760069**

The ATE suction bottle is used to draw off brake fluid from the fluid reservoir. Before the brake fluid is changed or a hydraulic brake system is bled, the old contaminated brake fluid should be drained from the fluid reservoir to prevent any contaminants being distributed throughout the entire brake system. After the brake fluid has been changed or the system has been bled, the brake fluid level should be reduced to the MAX mark using the suction bottle.



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### Technical data:

Capacity:	0.5 liters
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## Set of bleed wrenches

**Order no: 03.9314-1500.3**  
**Short order no.: 760041**

ATE bleeder wrenches can be used to open and close all common bleed valves easily and without damage thanks to the internal hexagon of the ring end that is angled by 10°.

**Benefits:**

Ring end is designed as an internal hexagon wrench.

**Scope of supply:**

6 wrenches in a case Sizes: 7, 8, 9, 11, 12, 14 mm





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## Set of special bleed wrenches

**Order no: 03.9314-1510.3**

**Short order no.: 760103**

The special ATE bleed wrenches are ring wrenches with an internal hexagonal head to prevent the damage of bleed valves. Thanks to a long offset and a short offset, they can be used without removing the wheel.

**Benefits:**

- Hexagonal head
- Can be used without removing the wheel

**Scope of supply:**

5 wrenches

Sizes: 7, 8, 9, 10, 11mm



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## Pouring spout

**Order no: 03.9314-5940.3**

**Short order no.: 760070**

With the ATE pouring spout, the ATE bleeding units can be filled precisely and without spilling from 5, 12 and 20 liter ATE brake fluid cans.

**Benefits:**

There is no need for any other equipment, such as funnels etc.



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## Barrel outlet valve

**Order no: 03.9314-5950.3**

**Short order no.: 760071**

The ATE barrel outlet valve allows brake fluid to be filled into the ATE bleeding units from ATE 30 and 60-liter barrels without spilling, using a 700 mm outlet hose.



## Disposal equipment



## Brake fluid disposal unit System 220

**Order no: 03.9302-0504.3**

**Short order no.: 750001**

Used brake fluid is a recyclable material, provided it is collected properly segregated in a closed system. This can be achieved with the ATE System 220. Segregated used brake fluid is considerably less expensive to dispose of.

The ATE System 220 consists of the 2,2-liter collection container and the 220-liter storage container. The collection container is connected to the bleed valve with a long-life silicon hose. When it is full, it is connected to the 220-liter storage container to be drained with a quick-release coupling. When the 220-liter storage container is full, the segregated used brake fluid can be picked up by a local waste disposal specialist.

### Benefits:

- Used brake fluid is an asset whose components can be recycled
- Reduction of disposal costs
- Protection of the environment

### Scope of supply:

- 220-liter storage container
- 2.2-liter collection container



## Brake fluid disposal unit System 222

**Order no: 03.9302-0506.3**

**Short order no.: 750002**

Used brake fluid is a recyclable material, provided it is collected properly segregated in a closed system. This can be achieved with the ATE System 222. Segregated used brake fluid is considerably less expensive to dispose of. The ATE System 222 consists of two 2,2-liter collection containers and the 220-liter storage container with two couplings. The collection container is connected to the bleed valve with a long-life silicon hose. When it is full, it is connected to the 220-liter storage container to be drained with a quick-release coupling. The 2-liter capacity of the collection container allows several changes of brake fluid or bleeding operations.

When the 220-liter storage container is full, the segregated used brake fluid can be picked up by a local waste disposal specialist. Because two collection containers are available, it is possible to work on two vehicles at the same time.

### Benefits:

- Used brake fluid is an asset whose components can be recycled
- Reduction of disposal costs
- Protection of the environment

### Scope of supply:

- 220-liter storage container
- 2 collection containers, each holding 2,2 liters
- dual drainage connector





## Brake fluid disposal unit System 224

**Order no: 03.9302-0508.3**

**Short order no.: 750003**

Used brake fluid is a recyclable material, provided it is collected properly segregated in a closed system. This can be achieved with the ATE System 224. Segregated used brake fluid is considerably less expensive to dispose of. The ATE System 224 consists of four 2,2-liter collection containers and the 220-liter storage container with four couplings. The collection container is connected to the bleed valve with a long-life silicon hose. When it is full, it is connected to the 220-liter storage container to be drained with a quick-release coupling. The 2,2-liter capacity of the collection container allows several changes of brake fluid or bleeding operations.

When the 220-liter storage container is full, the segregated used brake fluid can be picked up by a local waste disposal specialist. Because four collection containers are available, it is possible to work on four vehicles at the same time.

### Benefits:

- Used brake fluid is an asset whose components can be recycled
- Reduction of disposal costs
- Protection of the environment

### Scope of supply:

- 220-liter storage container
- 4 collection containers, each holding 2.2 liters
- Quadruple drainage connector



## Dual drainage connector

**Order no: 03.9302-0521.2**

**Short order no.: 750007**

- Spare part for ATE brake fluid disposal system 222
- Upgrading a System 220 to four collection containers

### Benefits:

2 collection containers can be connected to the 220 liter storage container at the same time and drained.



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## Quadruple drainage connector

**Order no: 03.9302-0520.2**

**Short order no.: 750006**

- Spare part for ATE brake fluid disposal system 224
- Upgrading a System 220 or 222 to four collection containers

**Benefits:**

4 collection containers can be connected to the 220 liter storage container at the same time and drained.



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## 2,2-liter collection container

**Order no: 03.9302-0516.2**

**Short order no.: 750005**

Spare part for all ATE brake fluid disposal systems



**Technical data:**

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Capacity:	2,2 liters
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## 220-liter storage container

Order no: 03.9302-0514.2

Short order no.: 750004

Spare part for all ATE brake fluid disposal systems



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### Technical data:

Capacity:	220 liters
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## Special tools for brakes



## Piston return tool set

**Order no: 03.9314-4999.4**

**Short order no.: 760133**

With floating calipers with an integrated parking brake (combined calipers), the piston must not simply be pushed back, as this would destroy the automatic adjustment mechanism in the caliper. In many cases the piston must be turned and pressed. This can be done using the ATE piston return tool set. With its right- and left threaded spindle and its 9 interchangeable adapters, it can be used for all common vehicles. It can also be used to return pistons in standard floating calipers.

### Benefits:

9 assorted adapters for all common caliper types, including ATE and older Lucas calipers

### Scope of supply:

- Metal case
- Right threaded spindle
- Left threaded spindle
- spacer sleeve and pressure plate
- 9 adapters



## Spindle left

**Order no: 03.9314-4994.2**

**Short order no.: 760135**

For returning combination calipers with left thread return for piston return set 03.9314-4980.4 /760102.





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## Piston return device

**Order no: 03.9314-4950.3**  
**Short order no.: 760049**

The ATE piston return device returns the pistons in the disk brake calipers. It avoids damage to the pistons and brake disks.

**Benefits:**

Parallel running ensures that the piston movement cannot cause damage and cannot jam.

**Hint:**

Do not use tire levers /large screwdrivers!



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## Piston turning tool

**Order no: 03.9314-5720.3**  
**Short order no.: 760066**

The ATE piston turning tool makes it possible to completely turn back the pistons with slot in Altecna and Bendix combined calipers.



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## Piston turning tool

**Order no: 03.9314-5700.3**  
**Short order no.: 760064**

The ATE piston turning tool is used to turn pistons with a shoulder to the correct position in the caliper. The ATE 20° piston gauge is also needed for this operation.

The ATE piston turning tool has hardened teeth to allow the piston to be gripped tightly. Its size can be adjusted using the three stop notches.

**Benefits:**

Size adjustable via 3 stop notches



### 20° piston gauge

**Order no: 03.9314-1700.1**

**Short order no.: 760044**

Adjustment and testing gauge for 20° piston adjustment in the brake caliper in combination with the ATE piston turning tool.

**Technical data:**

For piston diameter	35 - 38 mm
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### 20° piston gauge

**Order no: 03.9314-0900.1**

**Short order no.: 760037**

Adjustment and testing gauge for 20° piston adjustment in the brake caliper in combination with the ATE piston turning tool.

**Technical data:**

For piston diameter	42 - 48 mm
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### 20° piston gauge

**Order no: 03.9314-0600.1**

**Short order no.: 760036**

Adjustment and testing gauge for 20° piston adjustment in the brake caliper in combination with the ATE piston turning tool.

**Technical data:**

For piston diameter	52 - 57 mm
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## 20° piston gauge

**Order no: 03.9314-5300.1**  
**Short order no.: 760058**

Adjustment and testing gauge for 20° piston adjustment in the brake caliper in combination with the ATE piston turning tool.



### Technical data:

For piston diameter	60 mm
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## Brake pad withdrawal tool

**Order no: 03.9314-6100.3**  
**Short order no.: 760073**

The ATE brake pad withdrawal tool removes firmly seated disk brake pads with retaining holes from fixed calipers. It prevents damage to brake calipers and disks. The fact that the pulling rod is integrated into the sliding weight means that there is no risk of injury.

### Benefits:

Pulling rod integrated in the sliding weight, so that there is no risk of injury



### Technical data:

Pulling pin diameter:	5.0 mm
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## Brake caliper guide file

**Order no: 03.9314-1300.3**  
**Short order no.: 760038**

The ATE brake caliper guide file allows the brake pad guide surfaces on brake calipers and holders to be filed to a bright finish. Single-sided cutting ensures that no damage is caused to the dust cap. The special coarse teeth mean that the work is completed quickly and cleanly.

### Benefits:

Special single-sided cut causes no damage to the dust cap.



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## Special wire brush

**Order no: 03.9314-1320.3**

**Short order no.: 760039**

The ATE special wire brush is used to remove slight soiling on the brake pad guide surfaces of brake calipers and holders.

**Hint:**

Wire brushes whose strands are seriously out of shape may cause damage to rubber protective caps. In this event, always use a new brush!



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## Honing Brush

**Order no: 03.9314-1395.1**

**Short order no.: 760154**

After a certain run time it may be useful to replace the (rubber) guide sleeves in the ATE floating calipers. The mounting hole in the caliper housing is often corroded to a greater or lesser degree. This will cause the guide bush to be squashed and the guide pins will stick in them. The brake caliper can no longer move freely which can lead to additional braking problems.

After removing the old guide sleeves, the mounting holes in the brake caliper housing are polished out with the ATE Honing Brush to produce a bright metallic surface. This is best done using a battery-powered screwdriver with a maximum speed of 500 r.p.m. and which turns only in a clockwise direction (to the right). After cleaning the holes in the caliper housing they should be coated with a thin layer of ATE Plastilube. This prevents future corrosion and the new guide sleeves can be fitted more easily.

**Attention:** Never grease the guide sleeves on the inside or the guide pins! These sliding surfaces must remain dry!

**safety note:**

- Maximum speed: 500 r.p.m.
- Use only right-hand rotation (clockwise)



## Wheel hub cleaning set 1

**Order no: 03.9314-1330.4**

**Short order no.: 760109**

The ATE wheel hub cleaning set 1 for standard wheel hubs allows you to clean the wheel hub quickly, safely and at low cost, before the brake disks are fitted. The mounting face for the brake disks on the wheel hub must be bright before the disk is mounted to ensure that it lies fully flush. Only then can it be guaranteed that the installation tolerances of the brake disks can be adhered to.

The cleaning process does not normally take more than 10 seconds per hub. The hole in the cleaning disk provides firm guidance and ensures that the disk does not slip off the hub. The fact that the entire surface of the disk is used ensures a lifetime of approx. 400 cleaning operations.



### Benefits:

- clean the wheel hub quickly
- safe and easy working

### Scope of supply:

- 1 holder
- 3 disks

### Technical data:

Disk external diameter	160 mm
Hole diameter	60 mm

## Spare disks, Set 1

**Order no: 03.9314-1331.1**

**Short order no.: 760125**

spare part

### Scope of supply:

- 3 disks

### Technical data:

Disk external diameter	160 mm
Hole diameter	60 mm





## Wheel hub cleaning set 2

**Order no: 03.9314-1340.4**

**Short order no.: 760110**

The ATE wheel hub cleaning set 2 for wheel hubs with studs allows you to clean the wheel hub quickly, safely and at low cost, before the brake disks are fitted. The mounting face for the brake disks on the wheel hub must be bright before the disk is mounted to ensure that it lies fully flush. Only then can it be guaranteed that the installation tolerances of the brake disks can be adhered to. Two different sizes of cleaning disks and the corresponding holders allow the best possible finish around the studs over which the disks are passed.

The cleaning process does not normally take more than 10 seconds per hub. The hole in the cleaning disk provides firm guidance and ensures that the disk does not slip off the hub. The fact that the entire surface of the disk is used ensures a lifetime of approx. 400 cleaning operations.



### Benefits:

- clean the wheel hub quickly
- safe and easy working

### Scope of supply:

- 2 holders
- 6 small disks
- 6 large disks

### Technical data:

Disk small, external diameter	40 mm
Disk small, hole diameter	13 mm
Disk large, external diameter	53 mm
Disk large, hole diameter	13 mm

## Spare disks small, Set 2

**Order no: 03.9314-1341.1**

**Short order no.: 760126**

spare part

### Scope of supply:

- 5 disks small

### Technical data:

Disk small, external diameter	40 mm
Disk small, hole diameter	13 mm



## Spare disks large, Set 2

**Order no: 03.9314-1342.1**  
**Short order no.: 760127**

spare part

**Scope of supply:**

- 5 disks large



**Technical data:**

Disk large, external diameter	53 mm
Disk large, hole diameter	13 mm

## Wheel hub cleaning set 3

**Order no: 03.9314-1350.4**  
**Short order no.: 760111**

The ATE wheel hub cleaning set 3 for large wheel hubs or wheel hubs with a large clooar (e.g. Transporters and BMW vehicles) allows you to clean the wheel hub quickly, safely and at low cost, before the brake disks are fitted. The mounting face for the brake disks on the wheel hub must be bright before the disk is mounted to ensure that it lies fully flush. Only then can it be guaranteed that the installation tolerances of the brake disks can be adhered to.

The cleaning process does not normally take more than 10 seconds per hub. The hole in the cleaning disk provides firm guidance and ensures that the disk does not slip off the hub. The fact that the entire surface of the disk is used ensures a lifetime of approx. 400 cleaning operations.

**Benefits:**

- clean the wheel hub quickly
- safe and easy working

**Scope of supply:**

- 1 holder
- 2 disks



**Technical data:**

Disk external diameter	200 mm
Hole diameter	85 mm

## Spare disks, Set 3

**Order no:** 03.9314-1351.1

**Short order no.:** 760128

spare part

**Scope of supply:**

- 2 disks

**Technical data:**

Disk external diameter	200 mm
Hole diameter	85 mm



## Brake caliper wrench

**Order no:** 03.9314-0024.1

**Short order no.:** 760097

The ATE brake caliper wrench allows simple loosening or tightening of the rear-axle brake caliper retaining bolts on the Opel Vectra B. It is a sharply cranked 19 mm hexagon wrench with a 1/2" square drive for a socket driver.

**Benefits:**

- It is thus no problem to tighten and loosen bolts hidden by other components.
- Bolts can be tightened up to the correct torque



## Hexagon socket wrench 7 mm, short

**Order no:** 03.9314-0030.1

**Short order no.:** 760095

The short 7 mm hexagon socket wrench is used to screw in/unscrew the guide studs on floating calipers.



**Technical data:**

Width across flats:	7 mm
Blade length (short):	35 mm
Square drive:	3/8"

## Hexagon socket wrench 7 mm, long

**Order no: 03.9314-0031.1**  
**Short order no.: 760096**

The long 7 mm hexagon socket wrench is used to screw in/unscrew the guide studs on floating calipers.



### Technical data:

Width across flats:	7 mm
Blade length (long):	62 mm
Square drive:	1/2"

## Bush remover

**Order no: 03.9314-0022.2**  
**Short order no.: 760098**

The ATE bush remover is used to withdraw tightly seated bushes from the brake caliper guide on GMF floating calipers for the following types of vehicle: Opel Corsa A/B, Tigra, Kadett D/E, Ascona C, Vectra A, Calibra, Omega A/B, Senator B.

### Benefits:

The work can be carried out on the vehicle without disconnecting the caliper from the brake hydraulic system (no bleeding necessary).



## Protective cap insertion tool

**Order no: 03.9314-0020.2**  
**Short order no.: 760100**

The ATE protective cap insertion tool is used to insert the internal protective caps of the bushes on GMF floating calipers for the following types of vehicle: Opel Corsa A/B, Tigra, Kadett D/E, Ascona C, Vectra A, Calibra, Omega A/B, Senator B.

### Benefits:

Damage-free and tight-fit insertion of protective caps



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### Protective cap driver

**Order no: 03.9314-0028.1**

**Short order no.: 760099**

The ATE protective cap driver is used to drive on the external protective caps of the bushes on GMF floating calipers for the following types of vehicle: Opel Corsa A/B, Tigra, Kadett D/E, Ascona C, Vectra A, Calibra, Omega A/B, Senator B.

**Benefits:**

- damageless and tight drive on external protective caps



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### Parking brake cable spring pliers

**Order no: 03.9309-0080.3**

**Short order no.: 760087**

The ATE parking brake cable spring pliers allow simple and safe attachment of the parking brake cable to the brake shoe lever on drum brakes. It is particularly useful for mounting the ATE top kit.



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### Brake-spring pliers (small)

**Order no: 03.9309-0030.3**

**Short order no.: 760003**

The ATE brake-spring pliers (small) allow the brake shoe return springs on drum brakes to be removed and mounted very easily and safely. The small swiveling support plate has a fine, sharp, diamond-cut surface which means that it gives firm support on narrow brake lining surfaces. The double-sided delicate hooks for attaching the springs allow springs to be attached to the left or right with no difficulty.



**Technical data:**

Span approx.:	80 mm
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### Brake-spring pliers (medium-size)

**Order no: 03.9314-5750.3**

**Short order no.: 760067**

The ATE brake-spring pliers (small) allow the brake shoe return springs on drum brakes to be removed and mounted very easily and safely. The swiveling support plate has sharp claws to provide firm support on the brake lining surface. The hook allows the springs to be attached safely.



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#### Technical data:

Span approx.:	100 mm
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### Spring mounting pliers

**Order no: 03.9309-0090.3**

**Short order no.: 760105**

The ATE spring mounting pliers allow safe and problem-free mounting and removal of the drum-brake shoe retaining spring system from Lucas, e.g. on the Mercedes A class. Without the ATE spring mounting pliers it is virtually impossible to deal with the retaining spring.

#### Benefits:

The retaining spring can only be mounted and removed quickly and safely with the help of the ATE spring mounting pliers.



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### Spring mounting tool

**Order no: 03.9309-0051.3**

**Short order no.: 760104**

The ATE spring mounting tool is used for the safe and problem-free removal and mounting of the retaining plates of brake-shoe retaining springs. Two different size seating bells safely accommodate large and small spring plates of the brake-shoe retaining springs.



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### Spring mounting tool

**Order no: 03.9309-0040.3**

**Short order no.: 760004**

The ATE spring mounting tool is used for the safe and problem-free removal and mounting of brake-shoe retaining springs on AP-Lockheed drum brakes.



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### Spring mounting tool

**Order no: 03.9309-0060.3**

**Short order no.: 760006**

The ATE spring mounting tool is used for the safe and problem-free removal and mounting of brake-shoe retaining springs on Bosch-Bendix drum brakes.



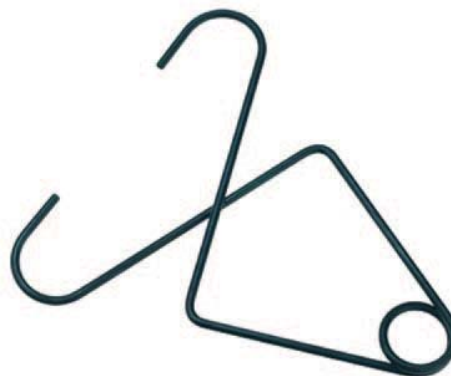
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### Piston clip

**Order no: 03.9309-0200.1**

**Short order no.: 760009**

The ATE piston clip prevents the pistons from slipping out of wheel brake cylinders over 25.4 mm and so facilitates mounting.



## Brake shoe adjustment wrench

**Order no: 03.9309-0010.3**

**Short order no.: 760001**

The ATE brake shoe adjustment wrench makes it simple to adjust the square eccentric bolts of the sizes z'' (6.3mm) and 5/16 (7.9mm) on difficult-to-access drum brakes.



## Dual pipe-flaring tool

**Order no: 03.9310-0015.4**

**Short order no.: 760134**

The ATE dual pipe-flaring tool allows brake pipes with a diameter of 4.75 mm to be flared easily and quickly to shapes E and F old and new (DIN 74 234 /ISO 4038).

The two thrust members are fitted in a holder which is simply slipped onto the flaring tool. Operation by means of an eccentric lever ensures that the flaring operation is completed quickly and safely. One particular feature is the smooth (non-serrated) jaws that clamp the brake pipe securely without damaging the surface.



### Benefits:

- for brake pipe diameters of 4.75 and 6 mm
- easily exchangeable thrust members in holder
- smooth jaws – no damage to the surface of the brake pipe
- tidily stowed in a plastic case

### Scope of supply:

- Plastic case
- Eccentric lever press with interlocking clamping device
- 2 sets of jaws
- 2 sets of thrust members for flaring

## Professional dual pipe-flaring tool

**Order no: 03.9310-0001.4**

**Short order no.: 760012**

The ATE professional pipe flaring tool allows brake pipes with diameters of 4.75, 6, 8 and 10 mm to be flared easily to shapes E and F (DIN 74 234 /ISO 4038). The thrust members which rotate within the revolver system and operation by means of an eccentric lever ensure that the flaring operation is completed quickly and safely. One particular feature is the smooth (non-serrated) jaws that clamp the brake pipe securely without damaging the surface.

### Benefits:

- for brake pipe diameters of 4.75, 6, 8 and 10 mm
- thrust members which rotate within the revolver system
- smooth jaws
- no damage to the surface of the brake pipe
- clearly stowed in a plastic case

### Scope of supply:

- Plastic case with shaped insert
- Eccentric lever press with interlock clamping device and revolving toothed rim
- 4 different jaws
- 4 different thrust members for flaring



## Miniature pipe cutter

**Order no: 03.9310-0010.3**

**Short order no.: 760023**

The small dimensions of the ATE mini-pipe cutter allow brake pipes with diameters from 3 to 16 mm to be cut to length in situ on the vehicle.

### Benefits:

Thanks to its compact size, it can be used in situ on the vehicle



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## Pipe deburring tool

**Order no: 03.9310-0020.3**  
**Short order no.: 760024**

This 3-cutter combined tool allows brake pipes with diameters from 4.75 to 10 mm to be deburred internally and externally.



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## Pipe bending device

**Order no: 03.9310-0030.3**  
**Short order no.: 760025**

The ATE pipe bending tool permits easy bending of brake pipes with diameters of 4.75mm (3/16 ") and 6mm (1/4") even in situ on the vehicle, without reducing the cross-section.



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## Pipe bending pliers

**Order no: 03.9310-0040.3**  
**Short order no.: 760026**

The ATE pipe bending pliers provide practical assistance for bending and mounting brake pipes with a diameter of 4.75 mm (3/16 ).

### Benefits:

- Bending of the brake pipe in a confined space
- Bending up to 90° is possible without causing damage
- Alignment of the pipe screw connections
- Holding the brake pipe while it is being cut





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## Brake pipe bending tool

**Order no: 03.9310-0010.1**

**Short order no.: 760101**

The ATE brake pipe bending tool is a simple yet very practical aid for bending brake pipes with diameters of 4.75mm, 5.0mm or 3/16 .

**Benefits:**

- Small handy tool
- Can be used in situ on the car and allows very small bending radii.



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## Brake pipe wrench set

**Order no: 03.9310-0050.3**

**Short order no.: 760027**

The reinforced open ring wrench heads of the ATE brake pipe wrench set with hexagon heads hold the brake pipe screw joints firmly so that even tight joints can easily be loosened. The heads angled by 15 degrees.

**Scope of supply:**

6 double ring wrenches in a tool bag:

8 + 10, 10 + 11, 11 + 13, 12 + 14 mm, 3/8 + 7/16 inches, 1/2 + 9/16 inches)



## Reamer set for ABS sensor locating hole

**Order no: 03.9301-0001.3**

**Short order no.: 760106**

The ATE reamer set for ABS sensor locating holes is used to quickly and accurately clean the locating hole of the ABS wheel-speed sensors. Reamer heads for two different diameters make the ATE reamer set universally usable.

The ratchet driver with the minimum possible drive angle allows it to be used even in confined spaces. Damage to the transducer rings is excluded. A clean, well-fitting sensor locating hole allows the sensors to be reinstalled easily.

### Benefits:

- Reamer heads for two different diameters
- Ratchet driver with an extremely small drive angle means it can be used without difficulty even in a confined space
- Damage to the transducer rings is excluded

### Scope of supply:

- Rigid plastic container
- ratchet driver
- Reamer head diameter 15 mm
- Reamer head diameter 18 mm



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**Reamer head diameter 15 mm****Order no: 03.9301-0003.1****Short order no.: 760108**

Spare part for reamer set for ABS sensor locating hole

**Technical data:**

Reamer head diameter	15 mm
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**Reamer head diameter 18 mm****Order no: 03.9301-0002.1****Short order no.: 760107**

Spare part for reamer set for ABS sensor locating hole

**Technical data:**

Reamer head diameter	18 mm
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## Brake hose clamp

**Order no: 03.9310-0060.3**

**Short order no.: 760028**

The ATE brake hose clamp is used to clamp brake hoses during brake repairs or troubleshooting. This prevents the brake system from draining while repairs are underway. During troubleshooting, an individual wheel brake can be disabled.

**Benefits:**

The round shape of the clamping arms (diameter 10 mm) prevents damage to the brake hose.

**safety note:**

- Always use the hose clamp in the middle of the brake hose.
- When work is complete, make sure that you remove the hose clamp!



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## Cap screws for fluid reservoir

**Order no: 03.9302-0784.2**

**Short order no.: 740071**

The ATE aluminum fluid reservoir cap screws, without bleeder holes for a 45-mm buttress thread allow the fluid reservoir to be completely sealed. This prevents any water entering the reservoir during engine cleaning. The brake system cannot drain during assembly work.

**Hint:**

When the work has been completed, replace the cap screws with the original connectors!



## ATE brake cylinder paste (in tube)

**Order no:** 03.9902-0501.2

**Short order no.:** 700009

ATE brake cylinder paste is used for repair, assembly and conservation of hydraulic brake components. It is applied thinly and evenly to cylinder sleeves, pistons and seals.

**Benefits:**

compatible with DOT 3, DOT 4 and DOT 5.1 brake fluids

**Scope of supply:**

180 g tube.

**Hint:**

Safety note: No mineral greases or oils may be used in places that come into contact with brake fluid.

**Technical data:**

Contents:	180 g
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## ATE Plastilube 35 ml

**Order no:** 03.9902-1001.2

**Short order no.:** 700014

ATE Plastilube lubricates and provides protection against corrosion for the guide surfaces of brake calipers and brake pads. To prevent squealing, ATE Plastilube is applied to the backing plates of the brake pads.

**Benefits:**

- Free from metal soaps and fatty acids, so it is not corrosive.
- Long-lasting, hence reduced maintenance frequency.
- Insoluble in water and outstanding resistance to leaching.
- Versatile as it is compatible with all metals and most O-ring materials.

**Scope of supply:**

24 tubes each holding 35 ml

**Hint:**

Caution: Do not apply on brake pad friction surfaces

**Technical data:**

Contents:	35 ml
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## ATE Plastilube 75 ml

**Order no: 03.9902-1002.2**

**Short order no.: 700015**

ATE Plastilube lubricates and provides protection against corrosion for the guide surfaces of brake calipers and brake pads. To prevent squealing, ATE Plastilube is applied to the backing plates of the brake pads.

### Benefits:

- Free from metal soaps and fatty acids, so it is not corrosive.
- Long-lasting, hence reduced maintenance frequency.
- Insoluble in water and outstanding resistance to leaching.
- Versatile as it is compatible with all metals and most O-ring materials.

### Scope of supply:

12 tubes each holding 75 ml in display package

### Hint:

Caution: Do not apply on brake pad friction surfaces



### Technical data:

Contents:	75 ml
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## Bleeding unit adapters



**ALFA ROMEO**

All passenger cars	1985-	03.9302-0702.2/02	20		
Giulietta	1981-1986	03.9302-0703.2/02	27	03.9302-0740.2/02	38A
Gulietta	2007-	03.9302-0734.2/02	76		

**ASTON MARTIN**

DB7 Vantage		03.9302-0702.2/02	20	03.9302-0702.2/02	20
V12 Vanquish		03.9302-0702.2/02	20		

**AUDI**

All passenger cars	1980-	03.9302-0702.2/02	20		
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**BENTLEY**

All passenger cars	2001-	03.9302-0702.2/02	20		
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**BMW**

All passenger cars	1980-	03.9302-0702.2/02	20		
Motorcycle R60-R100 if brake master cylinder below tank	1973-1980	03.9302-0702.2/02	20		

**BRILLIANCE**

All passenger cars	2007-	03.9302-0702.2/02	20		
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**BUGATTI**

Veyron	2006-	03.9302-0702.2/02	20		
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**CADILLAC**

All passenger cars	1996-	03.9302-0923.2/02	61A		
BLS	2005-	03.9302-0702.2/02	20		
CTS ( DOT 3 ) !	2001-	03.9302-0923.2/02	61A		

**CHEVROLET**

All passenger cars	1999-	03.9302-0923.2/02	61A		
Astro-Van	1996-	03.9302-0930.2/02	12		
Aveo	2007-	03.9302-0702.2/02	20		
Blazer	1996-1998	03.9302-0931.2/02	13		
Cruze	2009-	03.9302-0702.2/02	20		
Epica	2007-	in Vorbereitung			
Hummer H2 + H3	2003-	03.9302-0923.2/02	61A		
Kalos	2007-	03.9302-0702.2/02	20		
Lacetti	2007-	03.9302-0702.2/02	20		
Matiz	2007-	03.9302-0916.2/02	35		
Nubira	2007-	03.9302-0702.2/02	20		
S10 Pick-Up 2WD + 4WD	1996-	03.9302-0931.2/02	13		
Surburban	1996-	03.9302-0930.2/02	12		
Tahoe	1996-2002	03.9302-0930.2/02	12		

**CHRYSLER**

All passenger cars	1988-	03.9302-0901.3/02	22+22/1		
Crossfire	2003-	03.9302-0702.2/02	20		
300M 2.7 Executive	1999-	03.9302-0914.2/02	77		
300C Touring + Sedan	2005-	03.9301-0902.2/02	22		
Reservoir in cast iron	-1996	03.9302-0931.2/02	13		
Neon Sport 16V	1996-	03.9302-0914.2/02	77		
Neon LE 1,6	2001-	03.9302-0902.2/02	22	03.9302-0702.2/02	20
New Yorker		03.9302-0914.2/02	77		
PT Cruiser	2001-	03.9302-0902.2/02	22	03.9302-0702.2/02	20
Sebring	2001-	03.9302-0914.2/02	77		
Stratus	1999-	03.9302-0914.2/02	77		
Viper	2003-	03.9302-0902.2/02	22		
Vision		03.9302-0923.2/02	61A		



Grand Voyager	1999-2001	03.9302-0914.2/02	77		
Grand Voyager	2002	03.9302-0902.2/02	22		
Voyager LE	1996 -	03.9302-0902.2/02	22		
Voyager SE	1994-	03.9302-0901.3/02	22+22/1		
Voyager SE 2,4	2001-	03.9302-0902.2/02	22	03.9302-0925.2/02	31
Voyager LX 2,5	2001-	03.9302-0902.2/02	22	03.9302-0925.2/02	31
<b>CITROEN</b>					
All passenger cars		03.9302-0927.2/02	50S		
2CV		03.9302-0702.2/02	20		
2CV4 drum brake (front)		03.9302-0787.2/02	54A		
Dyane drum brake (front)		03.9302-0787.2/02	54A		
Ami 6/8		03.9302-0787.2/02	54A		
AX		03.9302-0702.2/02	20		
Berlingo		03.9302-0702.2/02	20		
Berlingo	1998-	03.9302-0740.2/02	38A		
C1	2005-	03.9302-0927.2/02	50S		
C2	2003-	03.9302-0702.2/02	20		
C3 + Picasso	2003-	03.9302-0702.2/02	20		
C4	2004-	03.9302-0702.2/02	20		
C5	2001-	03.9302-0702.2/02	20		
C6	2005-	03.9302-0702.2/02	20		
C8	2002-	03.9302-0927.2/02	50S		
C-Crosser	2007-	03.9302-0914.2/02	77		
Evasion	1994-2002	03.9302-0702.2/02	20		
DS 3	2009-	03.9302-0702.2/02	20		
Jumpy	1998-	03.9302-0702.2/02	20		
Saxo	1996-2004	03.9302-0702.2/02	20		
Visa	1978-1988	03.9302-0702.2/02	20		
Xsara	1997-	03.9302-0740.2/02	38A		
ZX	1991-1998	03.9302-0702.2/02	20		
<b>DACIA</b>					
1210 /1310 /1410	-2004	03.9302-0702.2/02	20		
Duster	2009-	03.9302-0702.2/02	20		
Logan	2004-	03.9302-0702.2/02	20		
Sandero	2009-	03.9302-0702.2/02	20		
<b>DAEWOO</b>					
Aveo	2005-	03.9302-0702.2/02	20		
Espero		03.9302-0702.2/02	20	03.9302-0704.2/02	67
Evanda	2003-	03.9302-0923.2/02	61A		
Kalos	2003-	03.9302-0702.2/02	20		
Lacetti	2003-	03.9302-0702.2/02	20		
Lanos		03.9302-0702.2/02	20		
Leganza	1999-	03.9302-0916.2/02	35		
Matiz + ABS	1999-	03.9302-0916.2/02	35		
Nexia		03.9302-0702.2/02	20	03.9302-0704.2/02	67
Nubira	1999-2000	03.9302-0702.2/02	20		
Nubira	2001-	03.9302-0923.2/02	61A		
Nubria WTCC R+	2005-	03.9302-0702.2/02	20		
Rezzo CDX	2001-	03.9302-0703.2/02	27	03.9302-0703.2/02	27
<b>DAF</b>					
Passenger car type 45		03.9302-0702.2/02	20		





Truck series 45=  
150/160/180/210

1998-

03.9302-0740.2/02

38A

Truck series 65-85CF

1998-

03.9302-0740.2/02

38A

Truck series 95+F

1998-

03.9302-0740.2/02

38A

#### DAIHATSU

Applause	1989-2000	03.9302-0909.2/02	79
Applause (A101)	1995-2000	03.9302-0737.2/02	73
Charade	-1987	03.9302-0787.2/02	54A
Charade G100	1989-1994	03.9302-0909.2/02	79
Charade G 200	1994-2000	03.9302-0737.2/02	73
Charmant	1974-1984	03.9302-0787.2/02	54A
Copen	2002-2007	03.9302-0912.2/02	82
Cuore L 55 /60	1980-1986	03.9302-0787.2/02	54A
Copen	20007-		9
Cuore L 80	1986-1991	03.9302-0909.2/02	79
Cuore	1998-1999	03.9302-0945.2/02	85
Cuore L 201	19991-1995	03.9302-0909.2/02	79
Cuore L 501	1995-	03.9302-0737.2/02	73
Cuore L 7	1999-2003	03.9302-0929.2/02	82A
Cuore L 7 (Europa)	1999-2003	03.9302-0945.2/02	85
Cuore L 251	2003-2007	03.9302-0929.2/02	82A
Cuore L 275	2007-	03.9302-0935.2/02	31A
Feroza	1990-1997	03.9302-0737.2/02	73
Hijet 4WD /Sta.Wag.	1989-	03.9302-0737.2/02	73
Hijet S 86	1995-	03.9302-0737.2/02	73
Materia	2007-	03.9302-0912.2/02	82
Move L 600	1987-1999	03.9302-0737.2/02	73
Move	2001- 2003	03.9302-0945.2/02	85
Move L 901		03.9302-0787.2/02	54A
Gran Move G 303	1997-1999	03.9302-0737.2/02	73
Gran Move G 301	1999-2003	03.9302-0906.2/02	55A
Rocky EX 4WD	1984-1997	03.9302-0737.2/02	73
Rocky Mod. F75/78	1995-	03.9302-0737.2/02	73
Sirion	1998-	03.9302-0737.2/02	73
Sirion (M100, M101)		03.9302-0787.2/02	54A
Sirion (M101)	2001-2002	03.9302-0945.2/02	85
Sirion (M100, M101, M111)	2003-	03.9302-0929.2/02	82A
Terios	1997-2007	03.9302-0909.2/02	79
Terios (J102)		03.9302-0909.2/02	79
Terios	2007-	03.9302-0925.2/02	31
Trevis	2007-	03.9302-0929.2/02	82A
YRV (M201)		03.9302-0787.2/02	54A
YRV (M201)	2001-2006	03.9302-0945.2/02	85

#### FERRARI

All passenger cars 03.9302-0702.2/02 20

#### FIAT

All passenger cars		03.9302-0702.2/02	20	03.9302-0702.2/02	20
127	1971-1982	03.9302-0703.2/02	27		
126 + Argenta	1980-1984	03.9302-0734.2/02	76		
Barchetta Coupe	1995-2005	03.9302-0734.2/02	76		
Cinquecento		03.9302-0734.2/02	76		
Daily 45 mm diameter		03.9302-0703.2/02	27		





Daily 26.5 mm diameter		03.9302-0731.2/02	71		
Ducato II	1993-	03.9302-0927.2/02	50S		
Multipla	1998-	03.9302-0703.2/02	27		
Punto + ABS	1996-	03.9302-0734.2/02	76		
Scudo	1995-	03.9302-0702.2/02	20		
Seicento	1998-2006	03.9302-0734.2/02	76		
Ulysse	2002-	03.9302-0927.2/02	50S		
<b>FORD</b>					
All passenger cars		03.9302-0702.2/02	20 /50S		
Econovan		03.9302-0799.2/02	17		
Explorer	1993-2001	03.9302-0914.2/02	77		
Fiesta	2009-	03.9302-0923.2/02	61A		
Maverick + Ranger	1993-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Navigator (USA)	2001-	03.9302-0914.2/02	77		
Probe	1989-1992	03.9302-0910.2/02	72		
Probe	1992-1997	03.9302-0702.2/02	20		
Ranger	1999-	03.9302-0746.2/02	49	03.9302-0702.2/02	20
Transit Van	1971-1981	03.9302-0731.2/02	71		
Transit Van	1998-	03.9302-0702.2/02	20		
Tourneo Connect		03.9302-0702.2/02	20		
Truck Series N		03.9302-0717.2/02	68		
Windstar	1995-2003	03.9302-0938.2/02	77A		
<b>GENERAL MOTORS</b>					
Vehicles with ITT ABS MkIV		03.9302-0923.2/02	61A		
<b>HONDA</b>					
Civic+Accord+Prelude	1976-1983	03.9302-0767.2/02	47		
Accord	1985-2002	03.9302-0911.2/02	80		
Accord	2002-2003	03.9302-0946.2/02	86	03.9302-0703.2/02	27
Accord	2003-	03.9302-0946.2/02	86	03.9302-0799.2/02	17
Civi Shuttle		03.9302-0787.2/02	54A		
Civic	-1995	03.9302-0918.2/02	81		
Civic	1995-1999	03.9302-0918.2/02	81	03.9302-0925.2/02	31
Civic	1999-2001	03.9302-0918.2/02	81	03.9302-0767.2/02	47
Civic	2001-	03.9302-0946.2/02	86	03.9302-0799.2/02	17
Concerto	1989-1994	03.9302-0918.2/02	81		
CRV	1996-2001	03.9302-0918.2/02	81		
CRV	2001-	03.9302-0946.2/02	86		
CRX 1,6	1983-1992	03.9302-0787.2/02	54A		
CRX 1,6	1992-1998	03.9302-0918.2/02	81	03.9302-0767.2/02	47
CR-Z	2009-	03.9302-0946.2/02	86	03.9302-0703.2/02	17
FR-V	2005-	03.9302-0946.2/02	86		
HR-V	1999-	03.9302-0918.2/02	81	03.9302-0767.2/02	47
Insight	1999-	03.9302-0918.2/02	81		
Insight	2009-	03.9302-0946.2/02	86		
Jazz	2003-	03.9302-0946.2/02	86	03.9302-0799.2/02	17
Legend	1986-1988	03.9302-0918.2/02	81		
Legend	1989-1991	03.9302-0740.2/02	38A		
Logo	1999-	03.9302-0918.2/02	81		
NSX-T (1981- =DOT3)	1999-2005	03.9302-0911.2/02	80	03.9302-0767.2/02	47
Odyssey (US-Minivan)	1999-	03.9302-0918.2/02	81		
Prelude	-1991	03.9302-0911.2/02	80		
Prelude	1992-	03.9302-0918.2/02	81		



Prelude 2,0		03.9302-0906.2/02	55A		
S 2000	1999-	03.9302-0918.2/02	81	03.9302-0767.2/02	47
S 2000	2001-	03.9302-0946.2/02	86		
Shuttle	1997-	03.9302-0911.2/02	80		
Stream	2001-	03.9302-0946.2/02	86	03.9302-0799.2/02	17
<b>HYUNDAI</b>					
Accent	1995-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Atos	1999-	03.9302-0914.2/02	77		
Centenial	1999-	03.9302-0914.2/02	77		
Coupe	1999-	03.9302-0914.2/02	77		
Elantra	2001-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Getz	2003-	03.9302-0943.2/02	90		
Grandeur	2005-	03.9302-0914.2/02	77		
Galopper	1991-2003	03.9302-0914.2/02	77	03.9302-0774.2/02	43
H-1 Srarex	1998-	03.9302-0914.2/02	77		
H-1	2001-	03.9302-0914.2/02	77		
H100	1995	03.9302-0904.2/02	14A		
H100	1996-	03.9302-0934.2/02	63		
i 10	2009-	03.9302-0938.2/02	77A		
i 20	2009-	03.9302-0938.2/02	77A		
i 30	2009-	03.9302-0914.2/02	77		
Lantra	1991-1996	03.9302-0914.2/02	77		
ix 35					
Lantra II	1996-2000	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Matrix	2001	03.9302-0914.2/02	77		
Pony		03.9302-0914.2/02	77	03.9302-0774.2/02	43
Santa Fe	2001-	03.9302-0914.2/02	77		
Sonata	1989-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Terracan	2001-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Trajet	1999-	03.9302-0938.2/02	77A		
Tucson	2005-	03.9302-0914.2/02	77		
XG 30 /XG 350		03.9302-0914.2/02	77		
<b>INFINITI</b>					
EX 30d	2009-	03.9302-0914.2/02	77		
FX 30d	2009-	03.9302-0914.2/02	77		
G 37	2009-	03.9302-0914.2/02	77		
<b>ISUZU</b>					
Frontera	1989-	03.9302-0912.2/02	82	03.9302-0704.2/02	67
D-Max					
Gemini	1974-2000	03.9302-0737.2/02	73		
Midi		03.9302-0913.2/02	24		
Monterey	1989-	03.9302-0912.2/02	82	03.9302-0704.2/02	67
MU Wizard /Rodeo					
NPR 65+69	1998-	03.9302-0774.2/02	43		
NPR 69	1998-	03.9302-0774.2/02	43		
NQR 70	1998-	03.9302-0774.2/02	43		
Trooper	-1989	03.9302-0787.2/02	54A		
Trooper	1989-	03.9302-0912.2/02	82	03.9302-0704.2/02	67
<b>IVECO</b>					
Daily 30.8-35.8		03.9302-0702.2/02	20		
M series 155.14-175.24		03.9302-0702.2/02	20		
MK 75.9		03.9302-0702.2/02	20		



Type 30.8-49.10		03.9302-0702.2/02	20		
Type 80.13-130.13		03.9302-0702.2/02	20		
Zeta 50.9 109.14		03.9302-0736.2/02	37		
Turbo-Daily 59-12, 35-10, 49-12, 35-12, 30-8		03.9302-0702.2/02	20		
All Euro-Cargo models		03.9302-0919.2/02	32	03.9302-0702.2/02	20
<b>JAGUAR</b>					
Jaguar XJ 40 + XJ6	1987-1994	03.9302-0740.2/02	38A		
XF	2009-	03.9302-0702.2/02	20		
Jaguar XJ 12 Serielll		03.9302-0790.2/02	57		
Jaguar XJ 6 Serielll		03.9302-0790.2/02	57		
Jaguar XJS	2005-	03.9302-0790.2/02	57		
Jaguar XJ Twin TD	2005-	03.9302-0702.2/02	20		
XJI	2009-	03.9302-0702.2/02	20		
Jaguar XKR	1999-	03.9302-0702.2/02	20		
XK	2009-	03.9302-0702.2/02	20		
Jaguar XJR	1999-	03.9302-0702.2/02	20		
Jaguar Sovereign 4.0		03.9302-0702.2/02	20		
Jaguar S-Type V8	1999-	03.9302-0914.2/02	77		
Jaguar S-Type R	2003-	03.9302-0702.2/02	20		
Jaguar X-Type	2001-	03.9302-0702.2/02	20		
Jaguar Daimler Super V8		03.9302-0702.2/02	20		
<b>JEEP</b>					
Jeep	Urtyp	03.9302-0922.2/02	15		
Jeep Cherokee	-1995	03.9302-0914.2/02	77		
Jeep Cherokee	1996-	03.9302-0902.2/02	22		
Jeep Wrangler	1996-	03.9302-0901.3/02	22+22/1		
Jeep Wrangler Sport	1999-	03.9302-0902.2/02	22		
Jeep Wrangler	2003-	03.9302-0902.2/02	22	03.9302-0702.2/02	20
Jeep Grand Cherokee	1996-	03.9302-0902.2/02	22		
Jeep Commander	2006-	03.9302-0902.2/02	22		
Jeep Compass	2007-	03.9302-0902.2/02	22		
Jeep Patriot	2007-	03.9302-0902.2/02	22		
<b>KIA</b>					
Besta	1997-	03.9302-0799.2/02	17		
Carens	-1999	03.9302-0914.2/02	77		
Carens	1999-2007	03.9302-0702.2/02	20		
Carens	2007-	03.9302-0938.2/02	77A		
Carnival	1999-	03.9302-0914.2/02	77		
Cee'd	2007-	03.9302-0914.2/02	77		
Cerato	2004-	03.9302-0914.2/02	77		
Clarus	1997-2001	03.9302-0702.2/02	20		
Joice		03.9302-0914.2/02	77		
Magentis	2001-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Opirius	2003-	03.9302-0702.2/02	20		
Picanto	2005-	03.9302-0914.2/02	77		
Pride	1995-	03.9302-0906.2/02	55A		
Rio	2000-2002	03.9302-0906.2/02	55A		
Rio	2003-	03.9302-0914.2/02	77		
Sephia	1995-	03.9302-0702.2/02	20		
Shuma	2000-	03.9302-0702.2/02	20		
Sorento	2003-	03.9302-0702.2/02	20		



Soul	2009-	03.9302-0914.2/02	77		
Sportage	1994-2002	03.9302-0702.2/02	20		
<b>LADA</b>					
Sportage	2005-	03.9302-0914.2/02	77		
Venga	2009-	03.9302-0943.2/02	90		
All passenger cars	1985-	03.9302-0703.2/02	27	03.9302-0734.2/02	76
Typ 2110, 2111, 2112		03.9302-0740.2/02	38A		
Typ 11128	2005-	03.9302-0740.2/02	38A		
<b>LAMBORGHINI</b>					
All passenger cars		03.9302-0702.2/02	20		
<b>LANCIA</b>					
All passenger cars	-1991	03.9302-0702.2/02	20		
A 112		03.9302-0734.2/02	76		
Thema		03.9302-0703.2/02	27		
Phetra	2005-	03.9302-0927.2/02	50S		
<b>LAND ROVER</b>					
Land-Rover Discovery	1995-	03.9302-0702.2/02	20	03.9302-0702.2/02	20
Land-Rover Discovery XS	2001-	03.9302-0926.2/02	28		
Land-Rover Defender	1999-	03.9302-0702.2/02	20		
Land-Rover Discovery XS	2007-	03.9302-0702.2/02	20		
Land-Rover Freelander	1999-	03.9302-0926.2/02	28		
Land-Rover Freelander+Sport	2001-	03.9302-0702.2/02	20		
Range-Rover		03.9302-0702.2/02	20		
Range-Rover Vogue /EFI		03.9302-0702.2/02	20	03.9302-0731.2/02	71
Range-Rover 4.6 HSE	1999-	03.9302-0702.2/02	20		
<b>LEXUS</b>					
All passenger cars	1990-	03.9302-0925.2/02	31	03.9302-0925.2/02	31
<b>MASERATI</b>					
3200 GT	1999-	03.9302-0702.2/02	20		
Quattroporte	1999-	03.9302-0702.2/02	20		
Spyder Cambiocorsa	2001-	03.9302-0927.2/02	50S		
Gran Turismo	2007-	03.9302-0927.2/02	50S		
<b>MAZDA</b>					
121	1995-	03.9302-0914.2/02	77		
121 LX		03.9302-0787.2/02	54A		
2	2003-2006	03.9302-0702.2/02	20		
2	2007-	03.9302-0728.2/02	61A		
3	2003-	03.9302-0702.2/02	20		
323	1977-2003	03.9302-0746.2/02	49		
5	2005-	03.9302-0702.2/02	20		
626	1979-2002	03.9302-0746.2/02	49		
626 GD	1991-	03.9302-0910.2/02	72		
626 GE	1992-	03.9302-0746.2/02	49		
626 station wagon	1998-	03.9302-0746.2/02	49		
626 LX /GLX		03.9302-0787.2/02	54A		
6	2003-	03.9302-0923.2/02	61A		
B2500 PickUp 4WD	1998-	03.9302-0702.2/02	20	03.9302-0702.2/02	20
B series 2.5L TD	1994-1999	03.9302-0702.2/02	20		
B series 2.5L TD	2000-2006	03.9302-0746.2/02	49		
929	1986-	03.9302-0746.2/02	49		
B2500		03.9302-0746.2/02	49		
Demio	1998-	03.9302-0906.2/02	55A		



BT 50	2009-	03.9302-0702.2/02	20		
E2000 + E2200 mini van		03.9302-0799.2/02	17		
E2200 Transporter	1998-	03.9302-0799.2/02	17		
MPV	1989-1998	03.9302-0746.2/02	49		
MPV	1999-2000	03.9302-0914.2/02	77		
MPV	2001-	03.9302-0923.2/02	61A		
MX-3	1991-1998	03.9302-0746.2/02	49		
MX-5	1989-1994	03.9302-0746.2/02	49		
MX-5	1995-1998	03.9302-0910.2/02	72	03.9302-0702.2/02	20
MX-5	1999-2001	03.9302-0914.2/02	77		
MX-5	2001-2005	03.9302-0906.2/02	55A	03.9302-0746.2/02	49
MX-5	-2005	03.9302-0702.2/02	20		
MX-6	1987-1997	03.9302-0746.2/02	49		
Premacy	1999-2005	03.9302-0923.2/02	61A		
RX 7-Turbo		03.9302-0746.2/02	49		
RX 8	2003-	03.9302-0923.2/02	61A		
Tribute	2001-2006	03.9302-0914.2/02	77		
Xedos		03.9302-0746.2/02	49		
Xedos-6	1992-1999	03.9302-0746.2/02	49		
Xedos-9	1993-2002	03.9302-0746.2/02	49		
<b>MERCEDES BENZ</b>					
All passenger cars	1970-	03.9302-0702.2/02	20		
Vaneo		03.9302-0702.2/02	20		
G-Modell		03.9302-0703.2/02	27	03.9302-0703.2/02	27
207 /209 /310 /609 Van		03.9302-0702.2/02	20		
Type 1814 truck				03.9302-0740.2/02	38A
Unimog (with twin hose)		03.9302-0740.2/02	2x38A		
Sprinter		03.9302-0740.2/02	38A		
<b>MINI</b>					
All passenger cars	2001-	03.9302-0702.2/02	20		
<b>MITSUBISHI</b>					
Canter	1996-	03.9302-0936.2/02	69		
ASX	2009-	03.9302-0914.2/02	77		
Carisma	1995-2004	03.9302-0928.2/02	34		
Carisma fastback	1999-2004	03.9302-0736.2/02	37	03.9302-0774.2/02	43
Carisma notchback	1999-2004	03.9302-0736.2/02	37		
Colt 1300 CI		03.9302-0736.2/02	37		
Eclipse	1990-1995	03.9302-0736.2/02	37	03.9302-0774.2/02	43
Colt	2004-	03.9302-0740.2/02	38A		
Colt	2009-	03.9302-0927.2/02	50S		
Galant	1984-1988	03.9302-0786.2/02	41		
Galant D	-1987	03.9302-0786.2/02	41		
Galant 1800 GLS Kat.		03.9302-0736.2/02	37		
Galant GTI/GLSI+station wagon		03.9302-0736.2/02	37	03.9302-0774.2/02	43
Galant	1997-2003	03.9302-0786.2/02	41	03.9302-0944.2/02	84
Galopper	1991-2003	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Grandis	2004-	03.9302-0947.2/02	89		
L200	1993-	03.9302-0736.2/02	37		
L200	1996-2001	03.9302-0786.2/02	41	03.9302-0774.2/02	43
L300 Kleinbus	1980-1999	03.9302-0904.2/02	14A		
L400 Space Gear	1996-2003	03.9302-0933.2/02	62A		
Lancer (all types)		03.9302-0736.2/02	37	03.9302-0774.2/02	43



Lancer	1985-	03.9302-0786.2/02	41		
Lancer Turbo	1977-1980	03.9302-0786.2/02	41		
Lancer	2003-	03.9302-0914.2/02	77		
Outlander	2003-	03.9302-0914.2/02	77		
Pajero	1982-1990	03.9302-0786.2/02	41		
Pajero	1990-	03.9302-0736.2/02	37	03.9302-0774.2/02	43
Pajero Sport (Montero)	1997-	03.9302-0786.2/02	41	03.9302-0774.2/02	43
Pajero 3,2	2001-	03.9302-0914.2/02	77	03.9302-0944.2/02	84
Pajero Pinin	1999-2005	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Santamo		03.9302-0914.2/02	77	03.9302-0774.2/02	43
Sapporo	1987-1990	03.9302-0786.2/02	41		
Sapporo 2400		03.9302-0736.2/02	37		
Sigma	1991-1996	03.9302-0786.2/02	41		
Space Gear	1996-2003	03.9302-0933.2/02	62A		
Space Runner	1991-2000	03.9302-0914.2/02	77		
Space Star	1999-2000	03.9302-0928.2/02	34		
Space Star	2000-2005	03.9302-0736.2/02	37		
Space Wagon	1983-1992	03.9302-0786.2/02	41		
Space Wagon	1990-1998	03.9302-0736.2/02	37	03.9302-0774.2/02	43
Space Wagon (GDI)	1998-2004	03.9302-0914.2/02	77		
Station Wagon	2003-	03.9302-0914.2/02	77		
Cordia, Tredia, Starion, Colt	1978-1984	03.9302-0736.2/02	37		
<b>MORGAN</b>					
Roadster Aero	2009-	03.9302-0927.2/02	50S		
<b>MOSKVICH</b>					
2140 /2141		03.9302-0702.2/02	20		
<b>NISSAN</b>					
100 NX	1990-1995	03.9302-0914.2/02	77		
200 NX	1993-	03.9302-0906.2/02	55A		
200 SX	1995-	03.9302-0914.2/02	77		
200 SX - Turbo Maxima 3,0		03.9302-0906.2/02	55A		
350 Z /Fairlady	2003-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Almera	1995-2007	03.9302-0914.2/02	77		
Bluebird 2,0 SLX/Hatchback		03.9302-0906.2/02	55A		
Cab Star		03.9302-0921.2	11A		
Inter Star X 70	-2005	03.9302-0702.2/02	20		
Kubi Star X 76	2006-	03.9302-0702.2/02	20		
Micra GL + LX		03.9302-0787.2/02	54A		
Micra	1993-2002	03.9302-0914.2/02	77		
Micra GL /LX		03.9302-0787.2/02	54A		
Micra	2003-	03.9302-0702.2/02	20		
Maxima QX	1995-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Murano Z 50	2006-	03.9302-0914.2/02	77		
Navara D 40	2006-	03.9302-0702.2/02	20		
Noblesse	2005-	03.9302-0914.2/02	77		
Note E 11	2006-	03.9302-0702.2/02	20		
Pathfinder + RS1	2006-	03.9302-0914.2/02	77		
Patrol GR TD6	1999-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Patrol Turbo D		03.9302-0787.2/02	54A	03.9302-0766.2/02	45
Pick Up		03.9302-0906.2/02	55A	03.9302-0774.2/02	43
Pick Up	2001-	03.9302-0914.2/02	77		
Pixo	2009-	03.9302-0939.2/02	83		





Prima Star X86	2006-	03.9302-0702.2/02	20		
Primera	1993-	03.9302-0914.2/02	77		
Qashqai	2007-	03.9302-0938.2	77A		
Rodius	2005-	03.9302-0914.2/02	77		
Serena	1993-	03.9302-0914.2/02	77		
Sherry		03.9302-0766.2/02	45		
Sunny	1993-	03.9302-0914.2/02	77		
Sunny GTI	1989-	03.9302-0787.2/02	54A	03.9302-0774.2/02	43
Sunny SLX /Coupe SLX + 1,3 LX		03.9302-0787.2/02	54A		
Terrano	1989-1992	03.9302-0766.2/02	45		
Terrano	1993-	03.9302-0906.2/02	55A		
Terrano II	1999-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Urvan		03.9302-0921.2/02	11A		
Vanette Cargo	1995-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
X-Trail	2001-	03.9302-0914.2/02	77		
<b>OPEL</b>					
All passenger cars	1980-	03.9302-0702.2/02	20		
Ascona A + B	1971-1981	03.9302-0703.2/02	27		
Agila A	2001-2007	03.9302-0740.2/02	38A	03.9302-0704.2/02	67
Antara	2007-	03.9302.0923.2/02	61A		
Arena	1998-2000	03.9302-0740.2/02	38A		
Campo	1987-2001	03.9302-0912.2/02	82	03.9302-0907.2/02	26
Frontera	1992-2005	03.9302-0912.2/02	82	03.9302-0907.2/02	26
GT	1968-1973	03.9302-0703.2/02	27		
Kadett A + B + C	-1979	03.9302-0703.2/02	27		
Manta	1971-1988	03.9302-0703.2/02	27		
Monterey	1993-1999	03.9302-0912.2/02	82	03.9302-0907.2/02	26
Movano	1998-	03.9302-0702.2/02	20		
OPC Turbo	2003-	03.9302-0927.2/02	50S		
Sintra	1997-2000	03.9302-0923.2/02	61A	03.9302-0702.2/02	20
Zafira	2000-	03.9302-0740.2/02	38A		
<b>PEUGEOT</b>					
All passenger cars	1980-	03.9302-0702.2/02	20		
204 + 504	1965-1979	03.9302-0737.2/02	73		
304 S		03.9302-0744.2/02	73A		
107	2005-	03.9302-0927.2/02	50S		
807	2002-	03.9302-0927.2/02	50S		
4007	2006-	03.9302-0914.2/02	77		
Boxer	1993-	03.9302-0740.2/02	38A		
Expert	1995-	03.9302-0702.2/02	20		
Partner	1996-	03.9302-0702.2/02	20		
<b>PONTIAC</b>					
Firebird + Cabrio		03.9302-0923.2/02	61A		
Trans Sport		03.9302-0923.2/02	61A		
<b>PORSCHE</b>					
All passenger cars	-1976	03.9302-0703.2/02	27		
All passenger cars	1977-	03.9302-0702.2/02	20		
Carrera 2**	1989-				
<b>PROTON</b>					
315 GLSI	1999-	03.9302-0786.2/02	41		
316 GLSI	1999-	03.9302-0928.2/02	34	03.9302-0774.2/02	43
318 GLSI	1999-	03.9302-0736.2/02	37	03.9302-0774.2/02	43



413 GLSI	1999-	03.9302-0736.2/02	37		
415 GLI	1995-	03.9302-0736.2/02	37		
415 GLSI	1999-	03.9302-0786.2/02	41		
415 GLI	1996-	03.9302-0736.2/02	37		
416 GLSI	1999-	03.9302-0736.2/02	37	03.9302-0774.2/02	43
Carmony Plus	1997-	03.9302-0736.2/02	37		
<b>RENAULT</b>					
All passenger cars	1980-	03.9302-0702.2/02	20	03.9302-0703.2/02	27
Espace		03.9302-0740.2/02	38A		
Modus	2003-	03.9302-0927.2/02	50S		
Koleos	2009-	03.9302-0914.2/02	77		
Scenic	2002-	03.9302-0740.2/02	38A		
Master	1998-	03.9302-0702.2/02	20		
Tracer		03.9302-0702.2/02	20	03.9302-0702.2/02	20
Traffic	1981-	03.9302-0740.2/02	38A		
Wind	2009-	03.9302-0948.2/02	20S		
<b>ROVER</b>					
Mini + 1300 Special	-1988	03.9302-0729.2/02	65	03.9302-0731.2/02	71
Mini Special	1988-	03.9302-0702.2/02	20	03.9302-0731.2/02	71
Mini Cooper	1999-	03.9302-0702.2/02	20	03.9302-0731.2/02	71
Maestro		03.9302-0702.2/02	20		
Montego		03.9302-0702.2/02	20		
Metro MG /HL /HLE		03.9302-0702.2/02	20	03.9302-0702.2/02	20
MG F-Steptronic	1999-	03.9302-0926.2/02	28		
MG ZR 160		03.9302-0926.2/02	28		
MG ZS 180		03.9302-0911.2/02	80		
MG IVVC	1999-	03.9302-0926.2/02	28		
25	1999-2005	03.9302-0926.2/02	28		
45	1999-2005	03.9302-0911.2/02	80		
75 + Tourer	1998-	03.9302-0702.2/02	20		
800 /820 /825 /827		03.9302-0740.2/02	38A		
420 /600		03.9302-0911.2/02	80	03.9302-0925.2/02	31
200 /214 /800	1995-	03.9302-0926.2/02	28		
200	1995-	03.9302-0926.2/02	28		
400		03.9302-0911.2/02	80		
<b>SAAB</b>					
All passenger cars	1980-	03.9302-0702.2/02	20		
<b>SCANIA</b>					
Modell P, R, T				03.9302-0702.2/02	20
Modell 93 /13 /143				03.9302-0702.2/02	20
Other clutches can only be bled with special connection fittings from bottom to top. Special connection fittings can only be obtained via Scania. The bleeding can be done using a normal pressure-release brake bleeder.					
<b>SEAT</b>					
All passenger cars	1993-	03.9302-0702.2/02	20		
Alhambra	2003-	03.9302-0948.2/02	20S		
<b>SKODA</b>					
All passenger cars	1991-	03.9302-0702.2/02	20		
120 L		03.9302-0764.2/02	39		
135 L Favorit		03.9302-0764.2/02	39		
<b>SMART MCC</b>					
Smart		03.9302-0702.2/02	20		
Smart ForFour		03.9302-0740.2/02	38A		



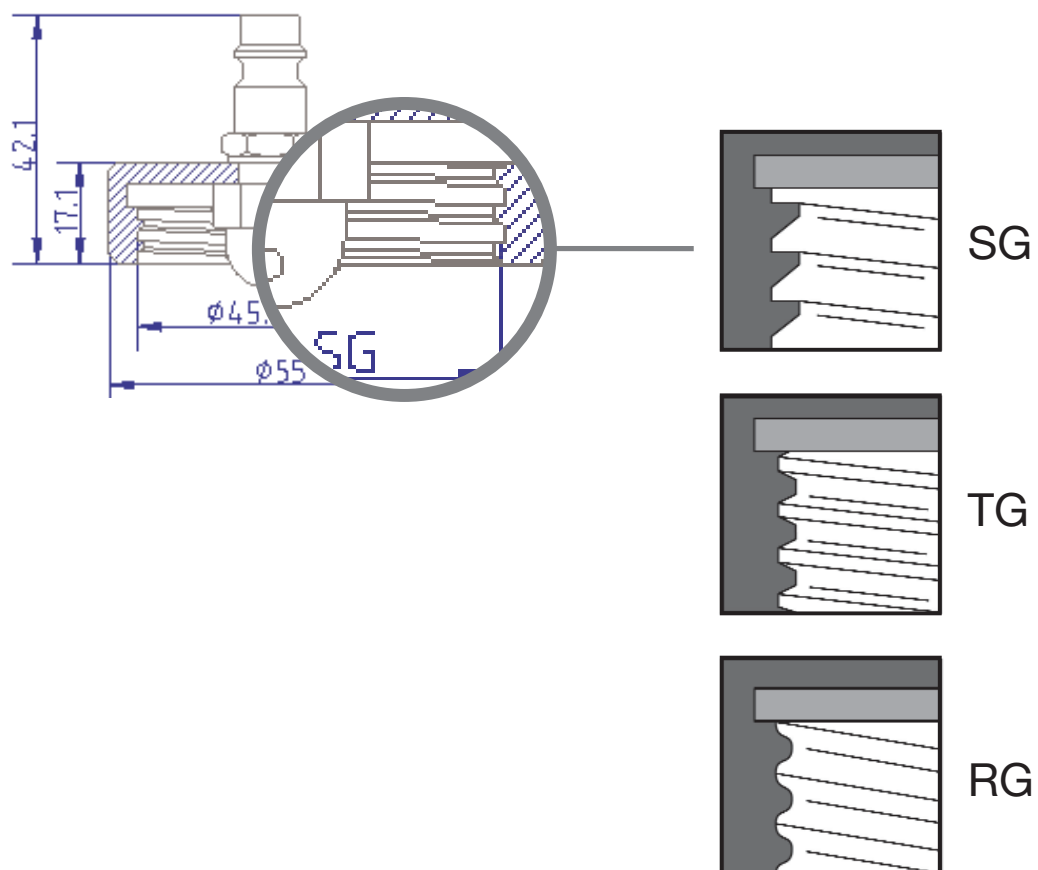
<b>SSANG YOUNG</b>					
All passenger cars	2001-	03.9302-0914.2/02	77		
Korando		03.9302-0923.2/02	61A	03.9302-0766.2/02	45
Musso		03.9302-0923.2/02	61A	03.9302-0766.2/02	45
<b>STEYR</b>					
Tractors		03.9302-0728.2/02	64A		
<b>SUBARU</b>					
Coupe 1800	1988-	03.9302-0786.2/02	41		
Forester	1997-2002	03.9302-0914.2/02	77		
Forester II	2002--	03.9302-0914.2/02	77	03.9302-0916.2/02	35
Forester	2009-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Impreza 1,8GL		03.9302-0786.2/02	41		
Impreza 4WD	1998-	03.9302-0914.2/02	77		
Impreza WRX	2001-	03.9302-0914.2/02	77	03.9302-0916.2/02	35
Justy	1995-	03.9302-0736.2/02	37		
Justy III	2003-	03.9302-0702.2/02	20		
Legacy	1995-	03.9302-0915.2/02	78		
Legacy + station wagon	1999-	03.9302-0914.2/02	77	03.9302-0916.2/02	35
Legacy Sedan 1800		03.9302-0915.2/02	78		
Legacy Sedan 2200		03.9302-0915.2/02	78		
Legacy	2005-	03.9302-0914.2/02	77		
Libero	1993-	03.9302-0914.2/02	77		
Libero E10 + E12 mini van	1988-	03.9302-0916.2/02	35		
Outback	1989-	03.9302-0914.2/02	77	03.9302-0916.2/02	35
Sedan 1800 4WD		03.9302-0786.2/02	41		
Station Wagon 1800	1988-	03.9302-0786.2/02	41		
Super Justy	1988-	03.9302-0786.2/02	41		
Turismo	1983-	03.9302-0766.2/02	45		
<b>SUZUKI</b>					
Alto	1996-	03.9302-0939.2/02	83		
Alto GA/GL	-1989	03.9302-0766.2/02	45		
Alto	2009-	03.9302-0939.2/02	83		
Baleno	1995-	03.9302-0932.2/02 03.9302-0746.2/02	42/49		
Baleno ABS + 1.3GS + GL	1996-	03.9302-0914.2/02	77		
Baleno Holiday	1999-	03.9302-0914.2/02	77		
Ignis + Sport	2001-	03.9302-0916.2/02	35		
Ignis	2003-	03.9302-0702.2/02	20		
Jimny	1998-	03.9302-0917.2/02	60	03.9302-0774.2/02	43
JLX	1996-	03.9302-0917.2/02	60		
Liana	2001-	03.9302-0932.2/02	42	03.9302-0774.2/02	43
Kizashi	2009-	03.9302-0939.2/02	83		
Maruti		03.9302-0916.2/02	35		
SA 310 + SA 413	1988-	03.9302-0765.2/02	46		
Samurei	1993-	03.9302-0702.2/02	20		
Samurei Van	1989-	03.9302-0906.2/02	55A		
Samurei Van + Pick Up	1999-	03.9302-0702.2/02	20		
SJ Samurei + SJ 413	1985-	03.9302-0906.2/02	55A		
Splash	2007-	03.9302-0702.2/02	20		
Swift	1996-2004	03.9302-0786.2/02	41		
Swift 1,0GA + 1,3GL	1986-1989	03.9302-0702.2/02	20		
Swift EA	1991-1995	03.9302-0917.2/02	60		



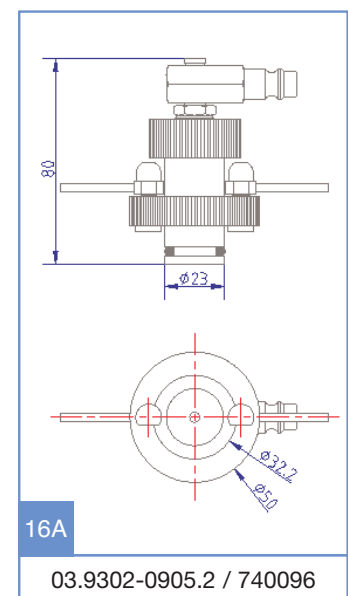
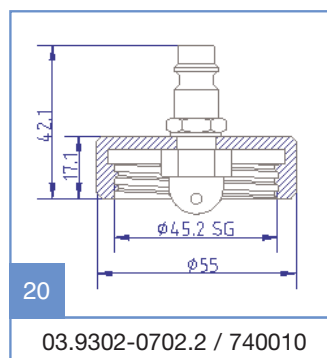
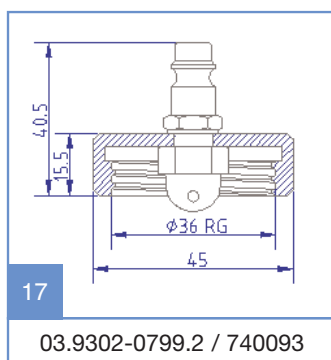
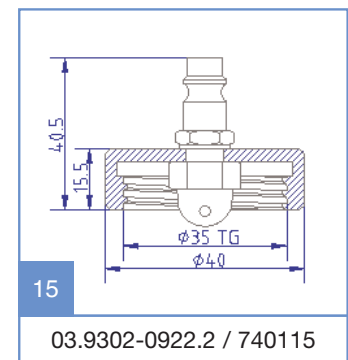
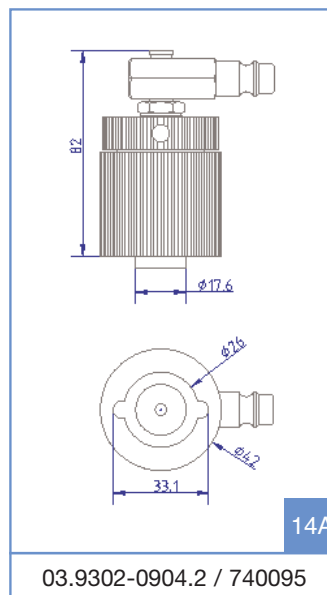
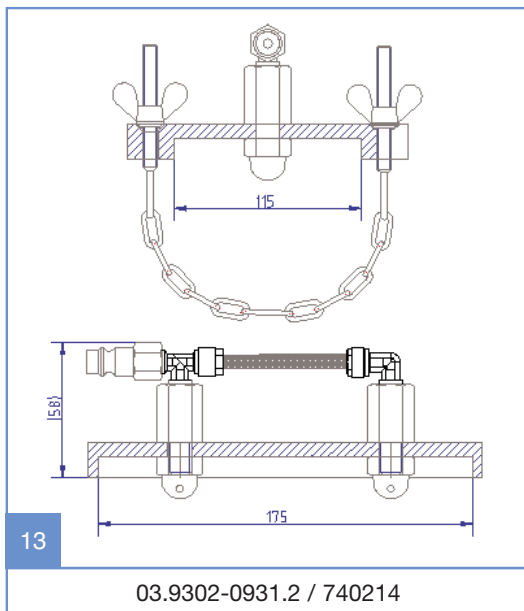
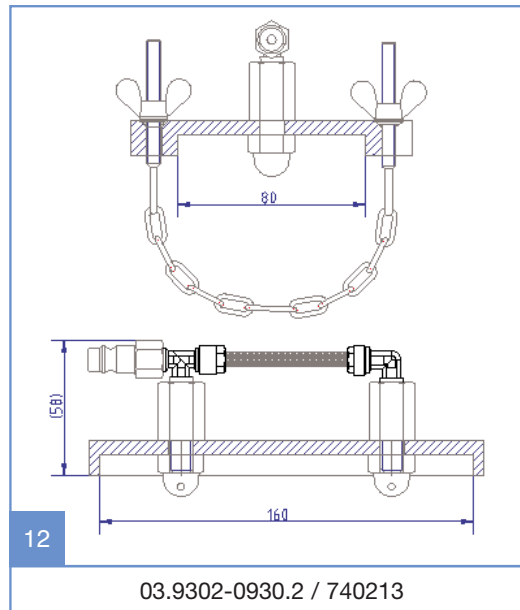
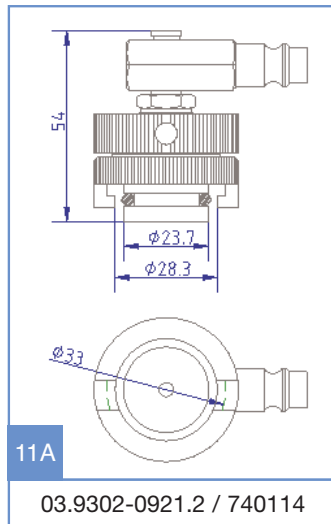
Swift MA	1996-2004	03.9302-0702.2/02	20		
Swift MZ + EZ	2005-	03.9302-0702.2/02	20		
SX 4	2006-2009	03.9302-0702.2/02	20		
Vitara	1989-	03.9302-0787.2/02	54A		
SX 4	2009-	03.9302-0939.2/02	83		
Vitara	1991-	03.9302-0917.2/02	60		
Vitara + Grand + 2.0	1999-2004	03.9302-0917.2/02	60	03.9302-0774.2/02	43
Vitara + Grand + XL7	2001-	03.9302-0914.2/02	77	03.9302-0774.2/02	43
Wagon R+	1999-	03.9302-0939.2/02	83		
Wagon R+	2003-	03.9302-0702.2/02	20		
<b>TOYOTA</b>					
Indica Vista	2009-	03.9302-xx	9		
Indica Manza	2009-		9		
<b>Xenon XT</b>					
Avensis	1997-2003	03.9302-0702.2/02	20	03.9302-0767.2/02	47
Avensis Verso	2001-2005	03.9302-0935.2/02	31A		
Aygo	2005-	03.9302-0740.2/02	38A		
<b>Auris</b>					
4-Runner	1996-	03.9302-0925.2/02	31		
Camry	1993-	03.9302-0925.2/02	31		
Camry		03.9302-0937.2/02	70	03.9302-0767.2/02	47
Carina	1993-	03.9302-0925.2/02	31		
Carina II /2,0 GLI /16V		03.9302-0937.2/02	70	03.9302-0767.2/02	47
Celica 4WD		03.9302-0767.2/02	47	03.9302-0767.2/02	47
Celica GT 2,0 /GT 1600		03.9302-0767.2/02	47	03.9302-0767.2/02	47
Celica GT 2,0 /GT 1600	2001-	03.9302-0925.2/02	31		
Celica CS	2003-	03.9302-0925.2/02	31		
Corolla		03.9302-0937.2/02	70	03.9302-0767.2/02	47
Corolla E11		03.9302-0925.2/02	31	03.9302-0925.2/02	31
Corolla	1993-	03.9302-0925.2/02	31		
Corolla	1996-	03.9302-0767.2/02	47		
Corolla	2003-	03.9302-0702.2/02	20		
Cressida	1977-1981	03.9302-0765.2/02	46		
Crown	1985-	03.9302-0906.2/02	55A		
Hiace	1996-	03.9302-0767.2/02	47		
Hiace mini van		03.9302-0905.2/02	16A		
Hilux		03.9302-0767.2/02	47	03.9302-0767.2/02	47
Hilax	2005-	03.9302-0925.2/02	31		
Landcruiser		03.9302-0765.2/02	46	03.9302-0767.2/02	47
HSD	2009-	03.9302-0925.2/02	31		
iQ	2009-	03.9302-0935.2/02	31A		
Landcruiser	2003-	03.9302-0925.2/02	31		
Landcruiser HJ100		03.9302-0925.2/02	31		
Liteace		03.9302-0905.2/02	16A		
MR 2	2003-	03.9302-0925.2/02	31		
Picnic	1999-	03.9302-0935.2/02	31A		
Previa		03.9302-0905.2/02	16A		
Prius	2001-	03.9302-0925.2/02	31		
RAV 4	1996-2009	03.9302-0767.2/02	47	03.9302-0767.2/02	47
RAV 4	2009-	03.9302-0925.2/02	31		
Starlet		03.9302-0937.2/02	70	03.9302-0767.2/02	47
Tercel		03.9302-0937.2/02	70	03.9302-0767.2/02	47

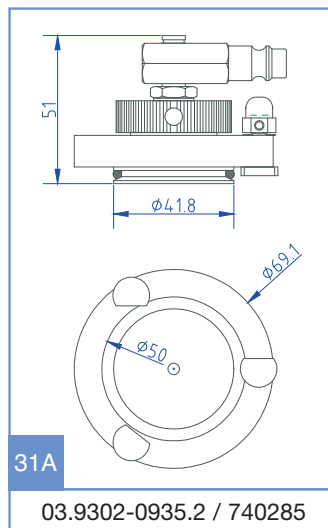
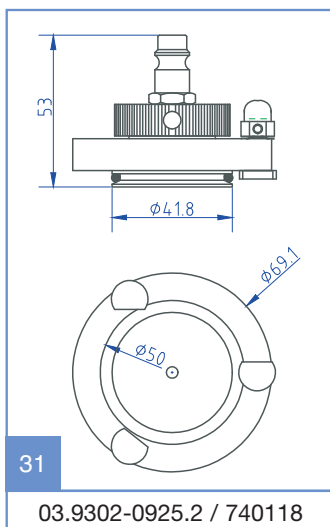
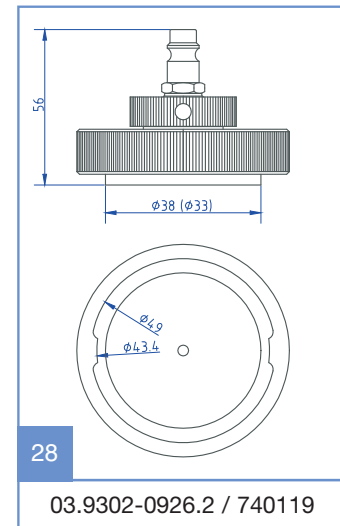
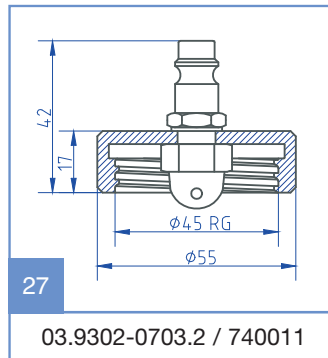
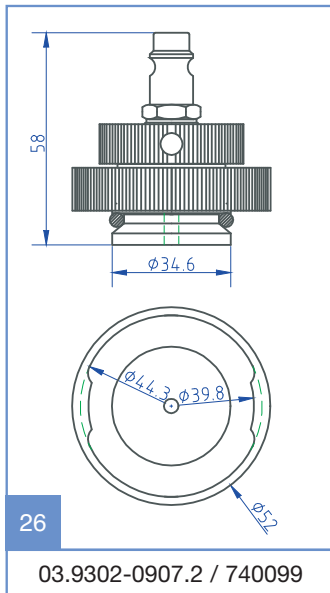
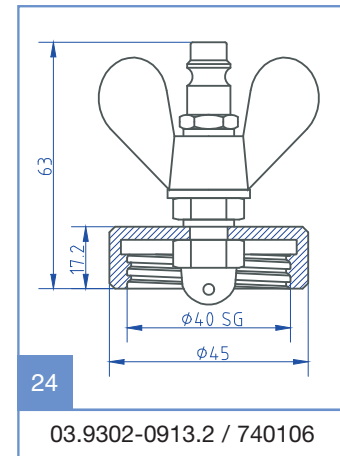
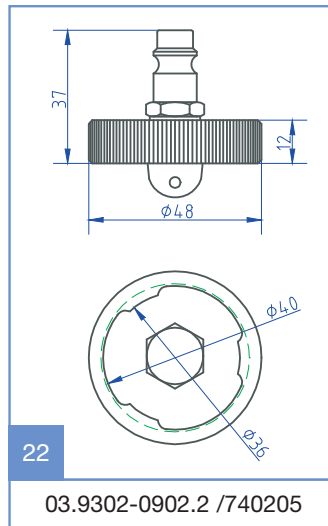
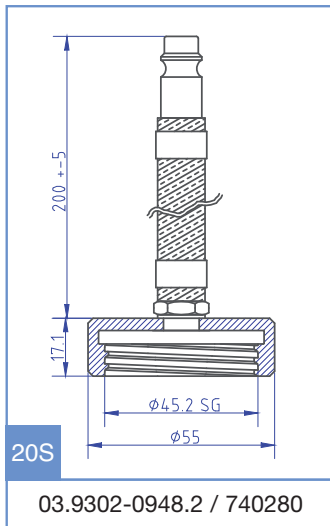


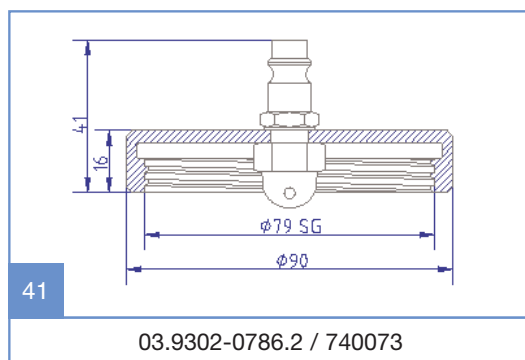
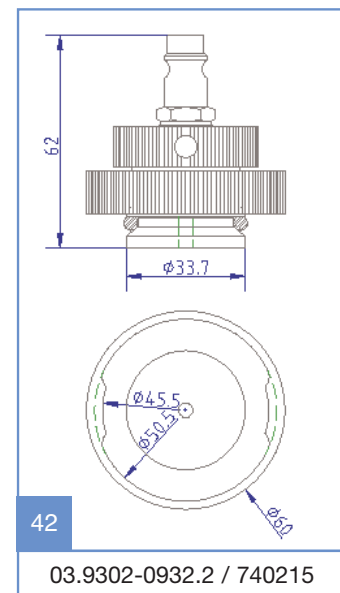
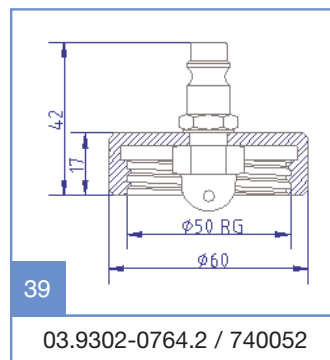
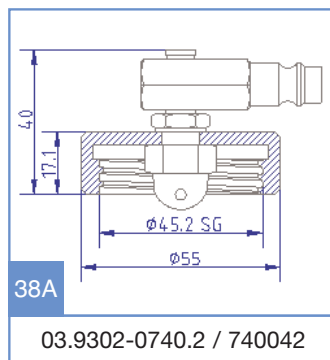
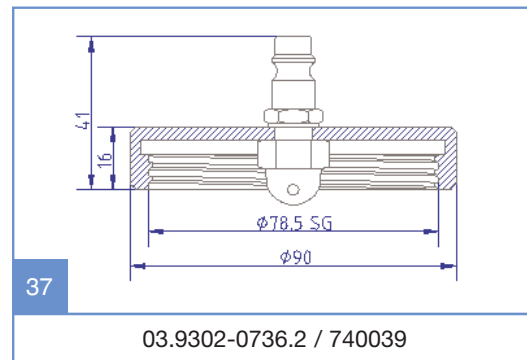
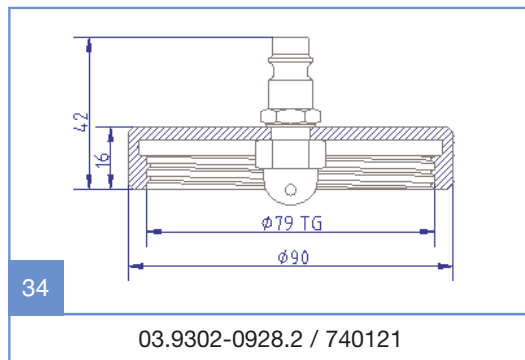
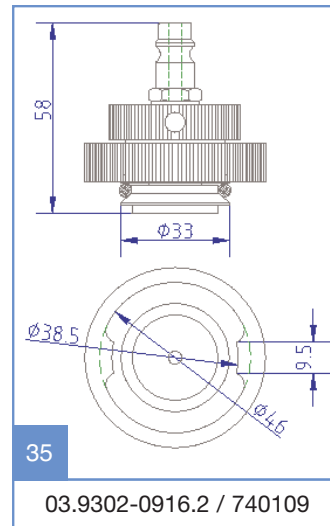
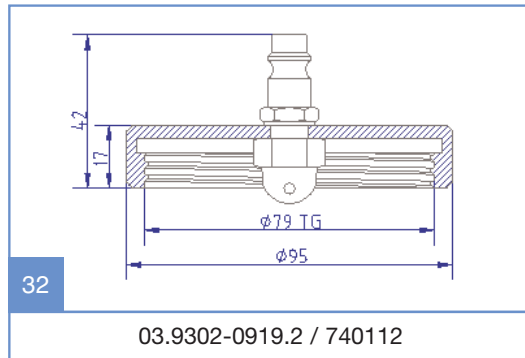
Verso	1999-2002	03.9302-0925.2/02	31	
Urban Cruiser	2009-	03.9302-0925.2/02	31A	
Verso	2009-	03.9302-0702.2/02	20	Verso
Yaris		03.9302-0925.2/02	31	
Yaris (special model)		03.9302-0702.2/02	20	
Yaris	2006-	03.9302-0740.2/02	38A	
<b>VOLVO</b>				
All passenger cars		03.9302-0702.2/02	20	
S 40 /V 40	1995-2003	03.9302-0928.2/02	34	
<b>VOLKSWAGEN</b>				
All passenger cars	-1973	03.9302-0728.2/02	64A	
All passenger cars	1973-	03.9302-0702.2/02	20	
EOS	2005-	03.9302-0948.2/02	20S	
Lupo		03.9302-0927.2/02	50S	
Caddy + Maxi	2005-	03.9302-0948.2/02	220S	
Multivan	2003-	03.9302-0702.2/02	20	
New Beetle	1998-2002	03.9302-0740.2/02	38A	
New Beetle	2003-	03.9302-0948.2/02	20S	
Sharan		03.9302-0948.2/02	20S	
Taro		03.9302-0767.2/02	47	03.9302-0767.2/02 47
Touran	2005-	03.9302-0948.2/02	20S	
Transporter (Type 2) (diameter 28mm)		03.9302-0728.2/02	64A	
Transporter (Type 2) (diameter 45mm)		03.9302-0702.2/02	20	
Transporter (Type 2) Model T4	1994-	03.9302-0702.2/02	20	
LT 28		03.9302-0728.2/02	64A	
LT 31		03.9302-0728.2/02	64A	
LT 35		03.9302-0728.2/02	64A	
<b>WARTBURG</b>				
All passenger cars		03.9302-0702.2/02	20	

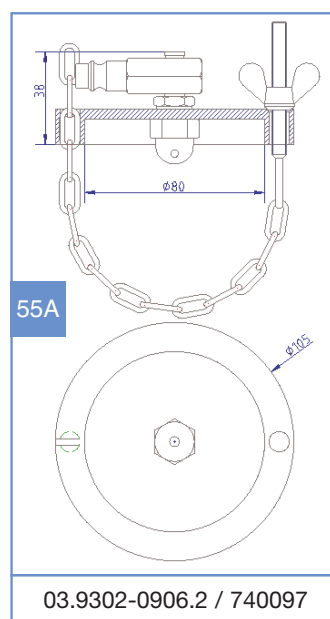
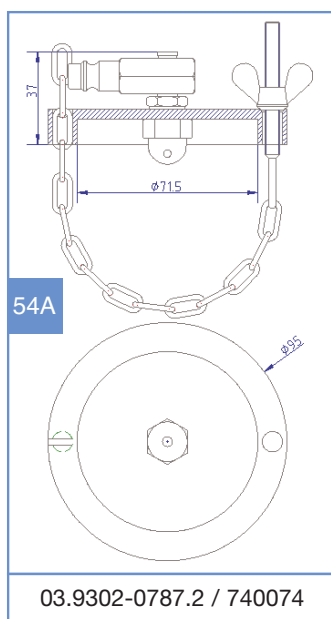
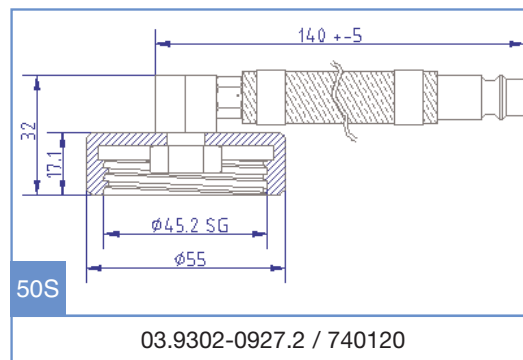
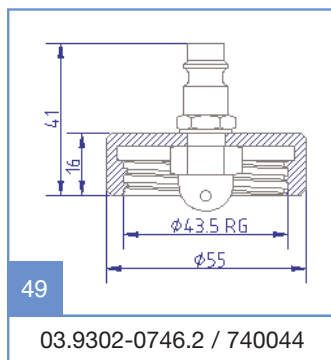
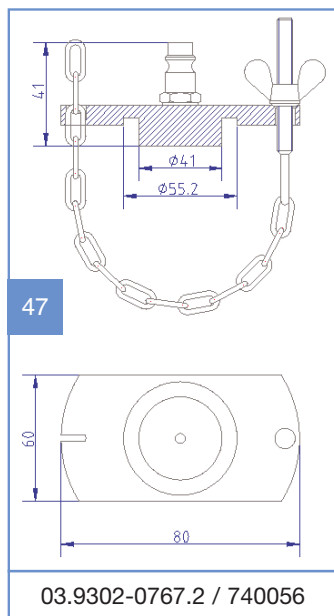
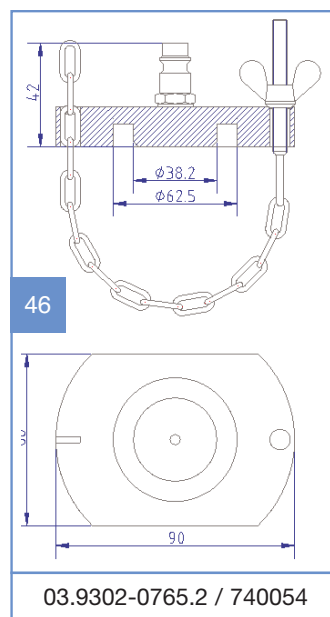
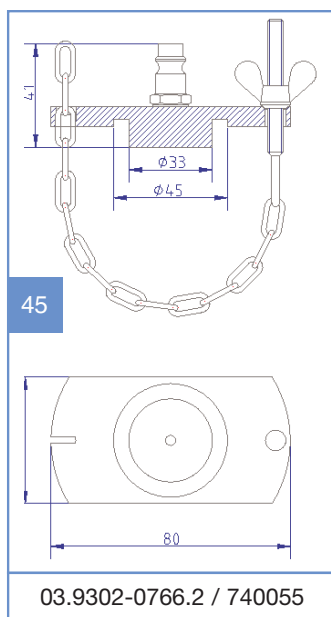
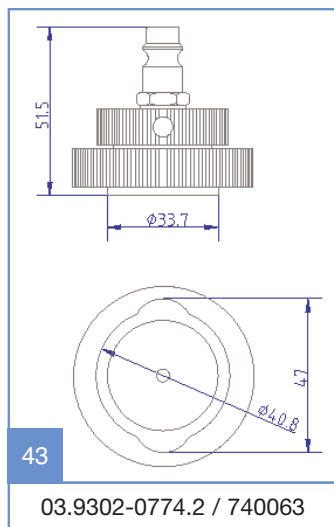


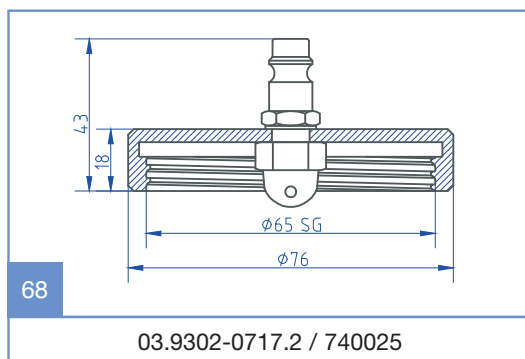
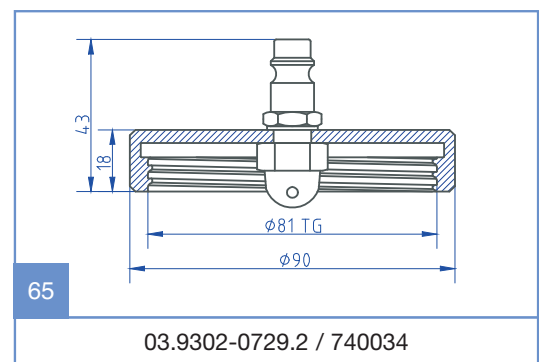
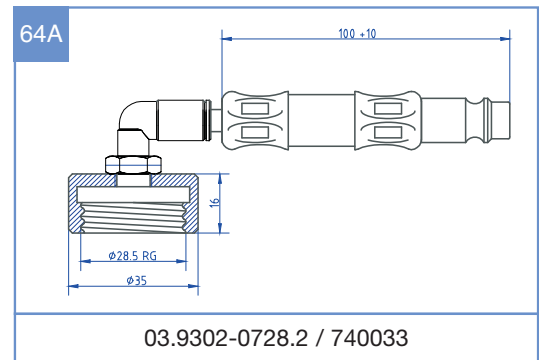
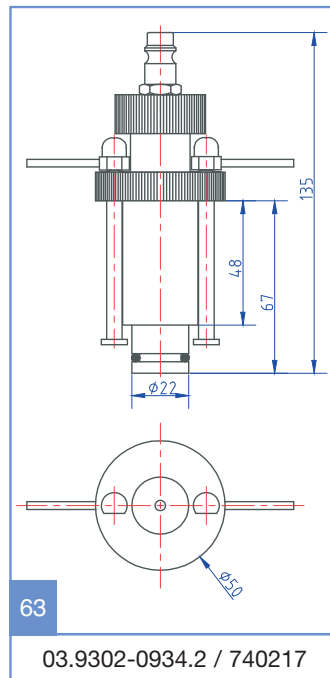
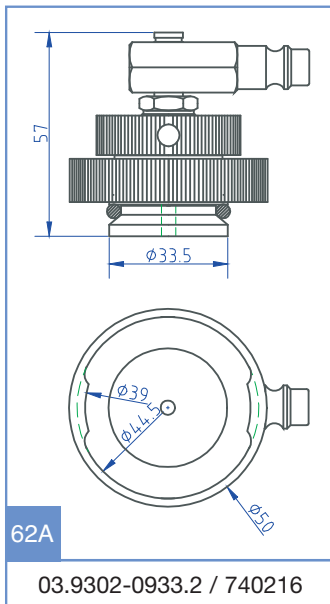
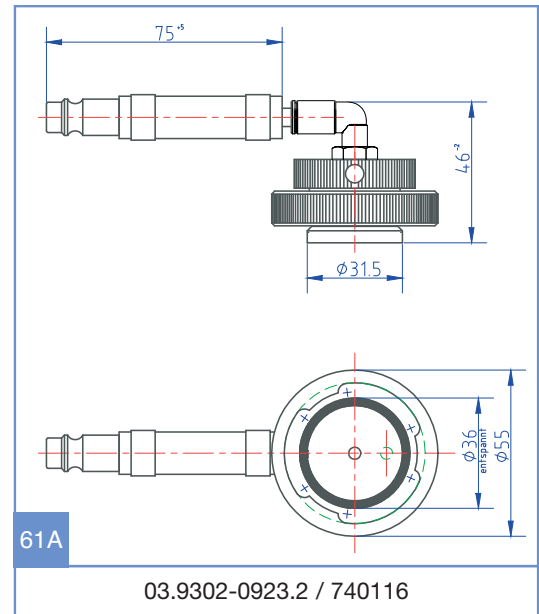
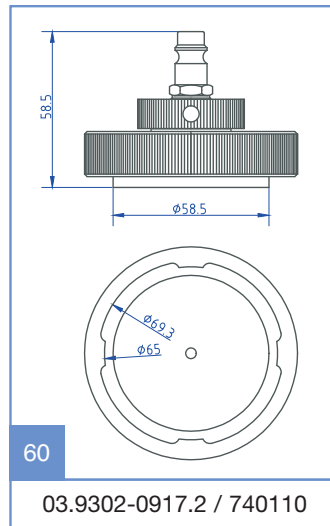
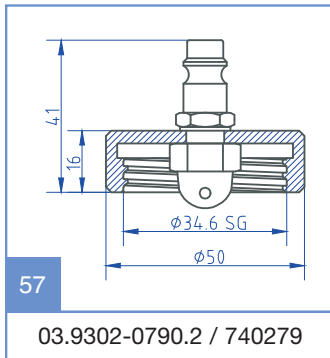


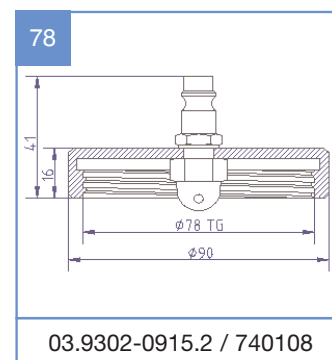
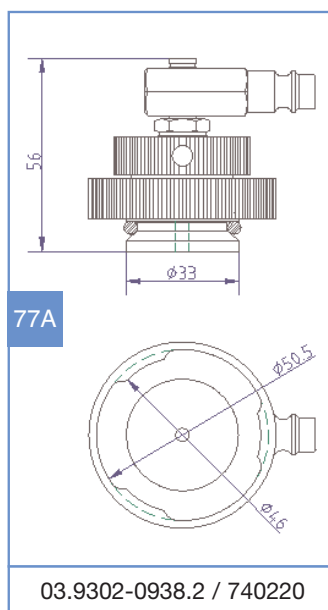
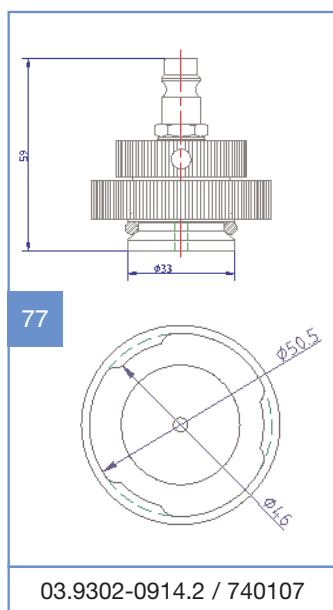
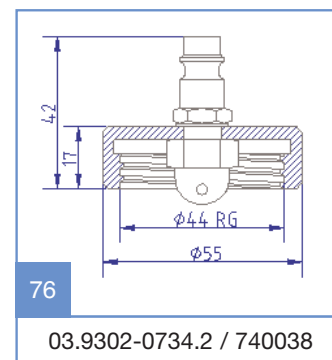
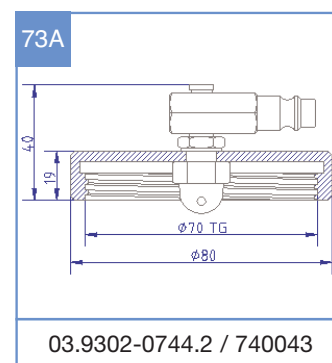
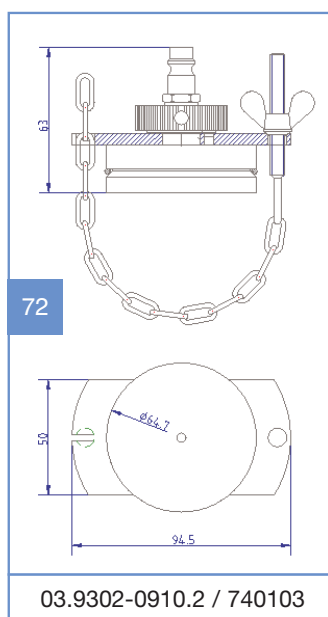
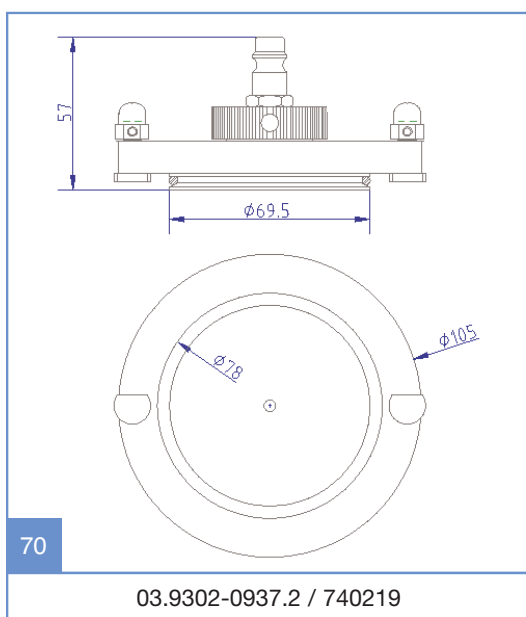
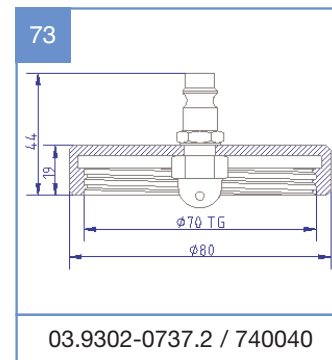
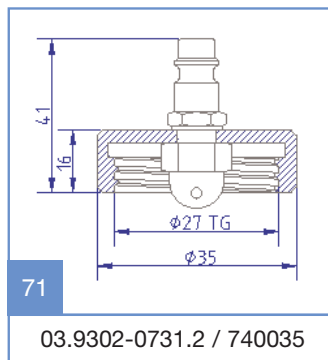
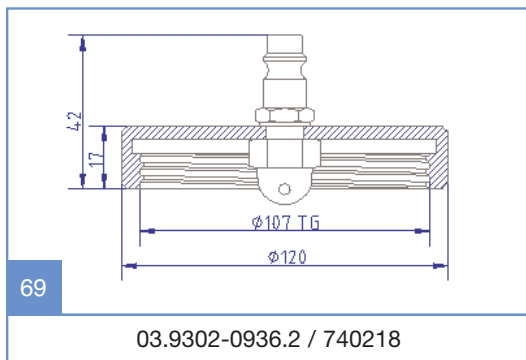




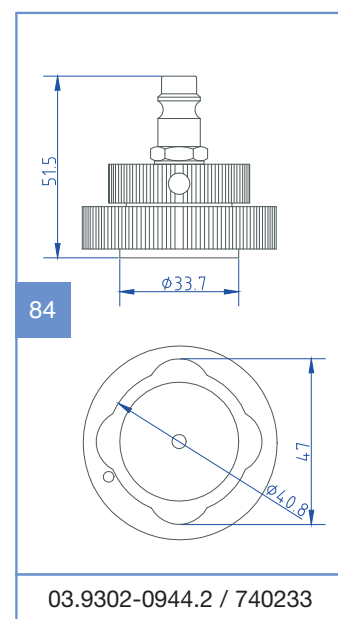
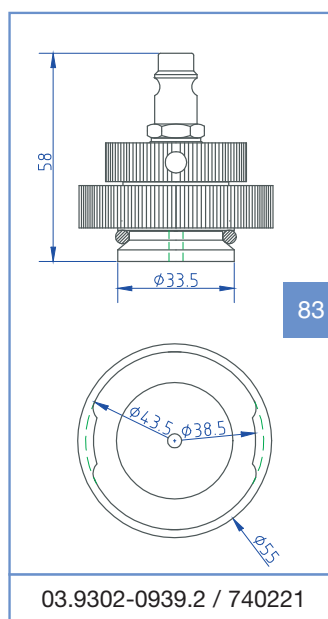
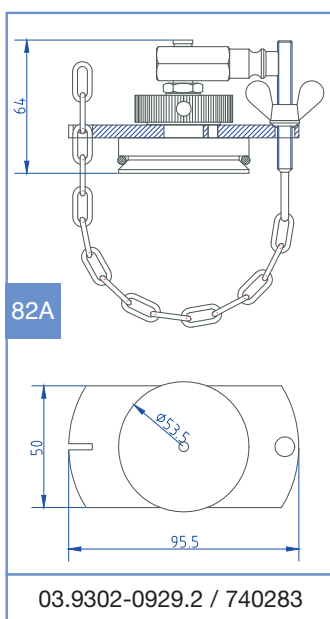
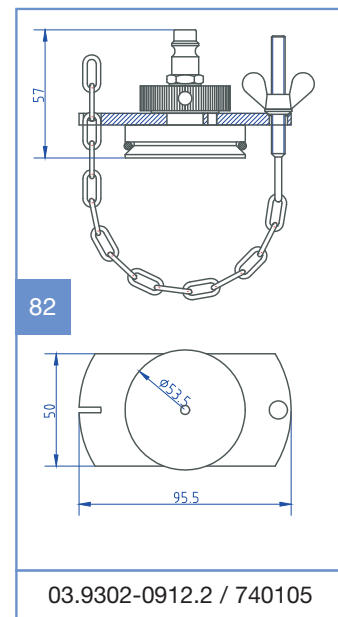
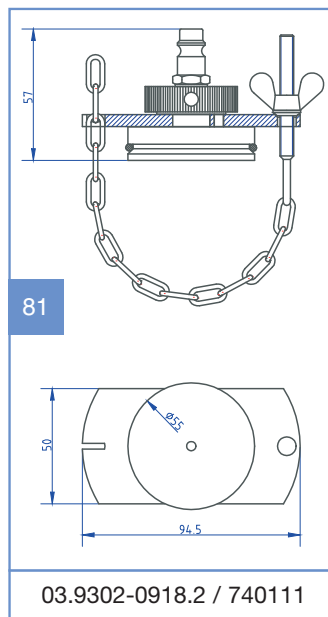
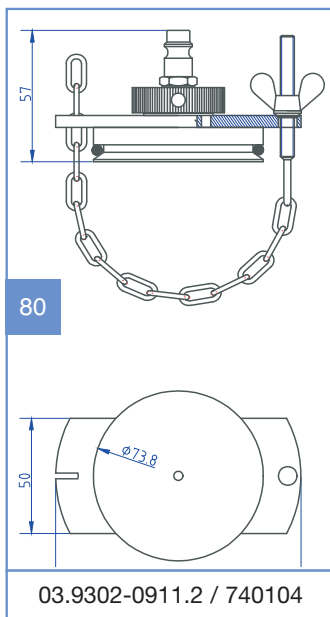
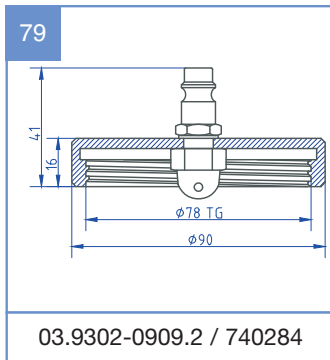


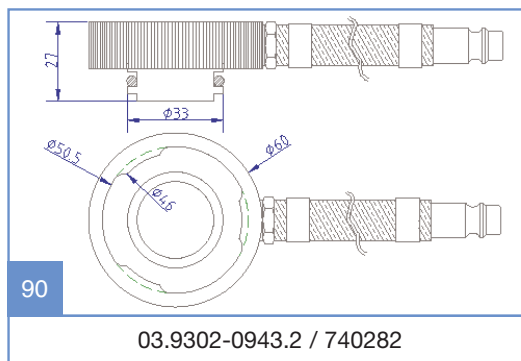
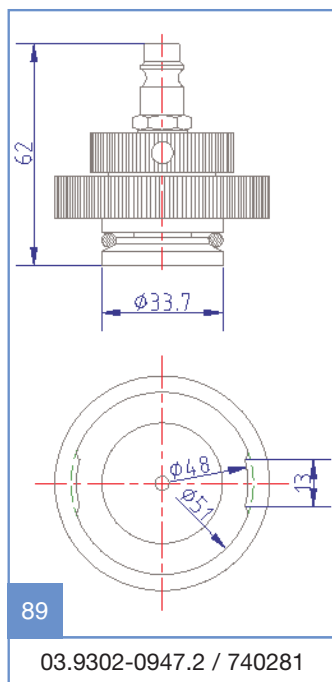
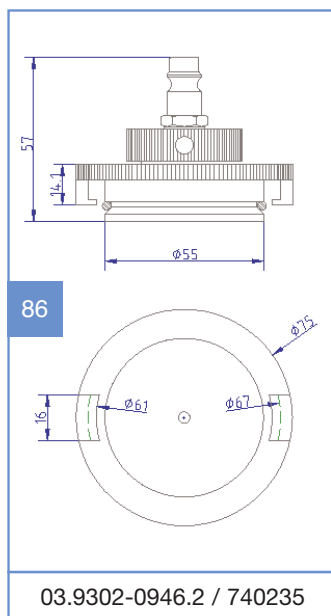
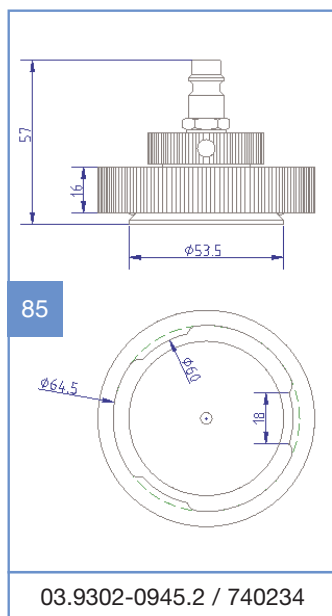






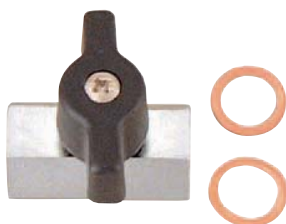




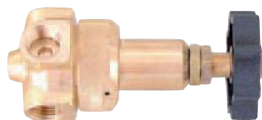


# Spare part lists





03.9302-9010.3 / 740251



03.9302-9050.3 / 740252



03.9302-9021.3 / 740243



03.9302-9041.2 / 740249



03.9302-9001.3 / 740236



03.9302-9020.3 / 740242



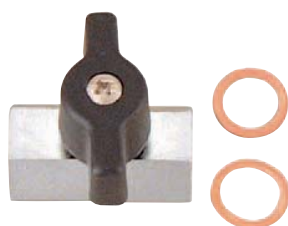
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03.9302-9079.3 / 740259



03.9302-9402.3 / 740269



03.9302-9010.3 / 740251



03.9302-9020.3 / 740242



03.9302-9021.3 / 740243



03.9302-9041.2 / 740249



03.9302-9001.3 / 740236



03.9302-9050.3 / 740252



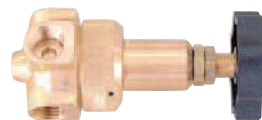
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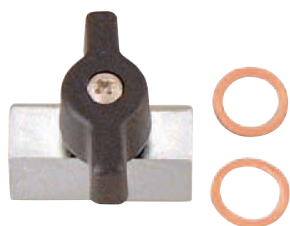
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03.9302-9020.3 / 740242



03.9302-9050.3 / 740252



03.9302-9010.3 / 740251



03.9302-9042.2 / 740250



03.9302-9001.3 / 740236



03.9302-1300.4 / 740134



03.9302-9079.3 / 740259



03.9302-9032.1 / 740247

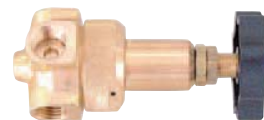




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03.9302-9020.3 / 740242



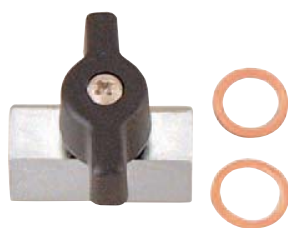
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03.9302-9032.1 / 740247



03.9302-9010.3 / 740251



03.9302-1350.4 / 740230



03.9302-9001.3 / 740236



03.9302-9210.2 / 740265



03.9302-9051.3 / 740253



03.9302-9022.2 / 740244



03.9302-9070.3 / 740257



03.9302-1600.4 / 740171



03.9302-9003.3 / 740238



03.9302-9200.2 / 740264



03.9302-9015.3 / 740240



03.9302-9402.3 / 740269



03.9302-9211.3 / 740266



5x20 mm M 2A 250V



03.9302-9022.2 / 740244



03.9302-9250.1 / 740267



03.9302-9200.2 / 740264



03.9302-9052.3 / 740254



03.9302-9070.3 / 740257



03.9302-9402.3 / 740269



03.9302-1650.4 / 740229



03.9302-9003.3 / 740238



03.9302-9211.3 / 740266



5x20 mm M 2A 250V



03.9302-9022.2 / 740244



03.9302-9250.1 / 740267



03.9302-9200.2 / 740264



03.9302-9053.3 / 740255



03.9302-9070.3 / 740257



03.9302-9004.2 / 740239



03.9302-9402.3 / 740269



03.9302-1660.4 / 740231



03.9302-9079.3 / 740259



03.9302-9041.2 / 740249



03.9302-9002.3 / 740237



03.9302-1800.4 / 740197



03.9302-9401.3 / 740268



03.9302-9020.3 / 740242



03.9302-9021.3 / 740243



03.9302-9050.3 / 740252



03.9302-9200.2 / 740264



5x20 mm M 6,3 A 250V



03.9302-9250.1 / 740267



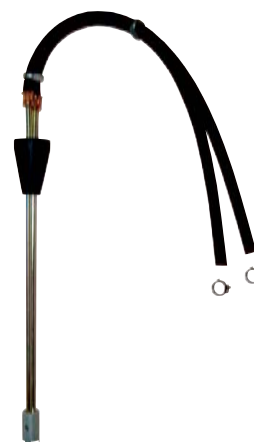
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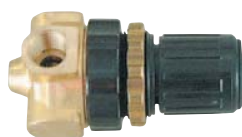
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03.9302-9060.2 / 740256



03.9302-9101.3 / 740260



03.9302-9052.3 / 740254



03.9302-9102.3 / 740261



03.9302-9019.2 / 740241



03.9302-1900.4 / 740203



03.9302-9003.3 / 740238



03.9302-9401.3 / 740268





03.9302-9200.2 / 740264



5x20 mm M 2/2A 250V



03.9302-9022.2 / 740244



03.9302-9250.1 / 740267



03.9302-9211.3 / 740266



03.9302-9060.2 / 740256



03.9302-9003.3 / 740238



03.9302-9052.3 / 740254



03.9302-9104.3 / 740263



03.9302-9019.2 / 740241



03.9302-2000.4 / 740204



03.9302-9103.3 / 740262



03.9302-9403.3 / 740270



03.9302-9212.3 / 740275



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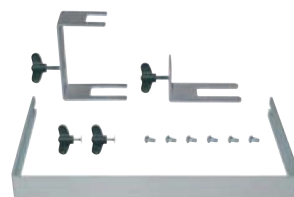
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03.9302-9003.3 / 740238



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03.9302-9402.3 / 740269



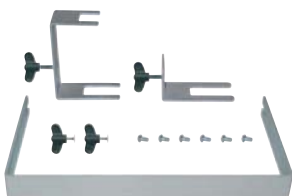
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03.9302-9106.1 / 740289



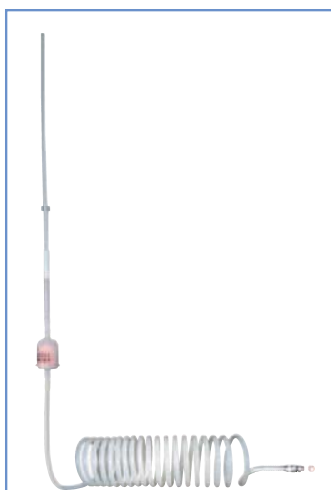
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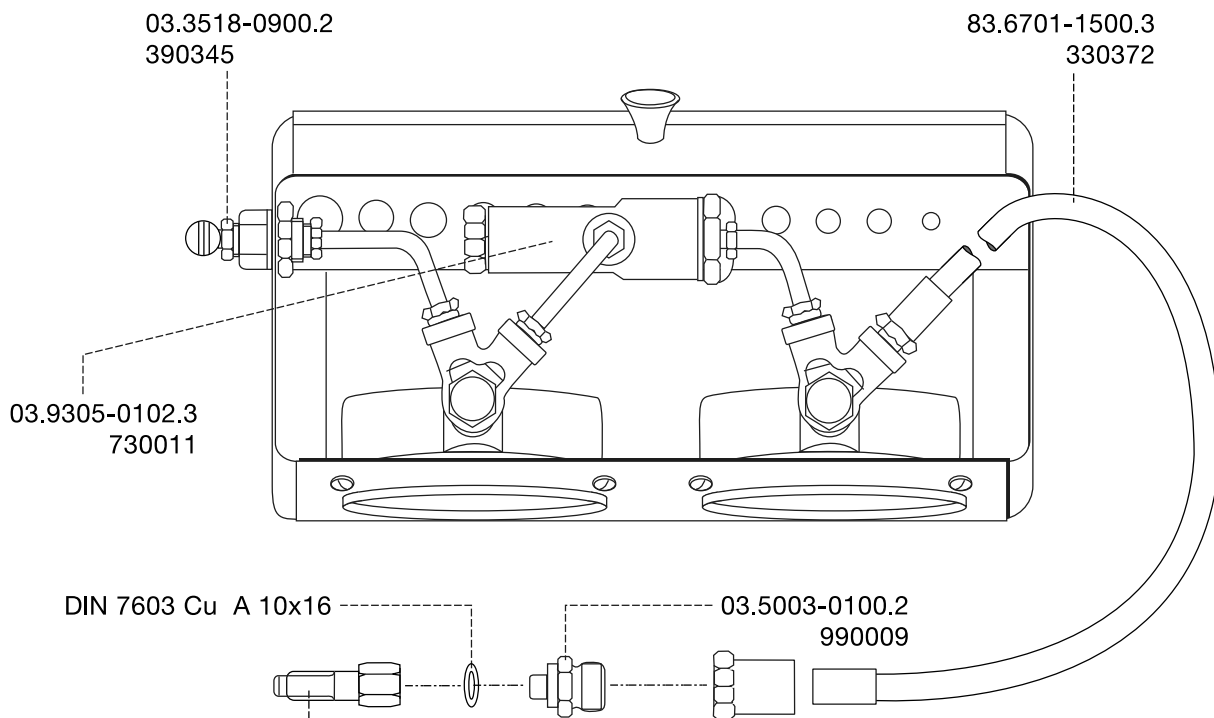
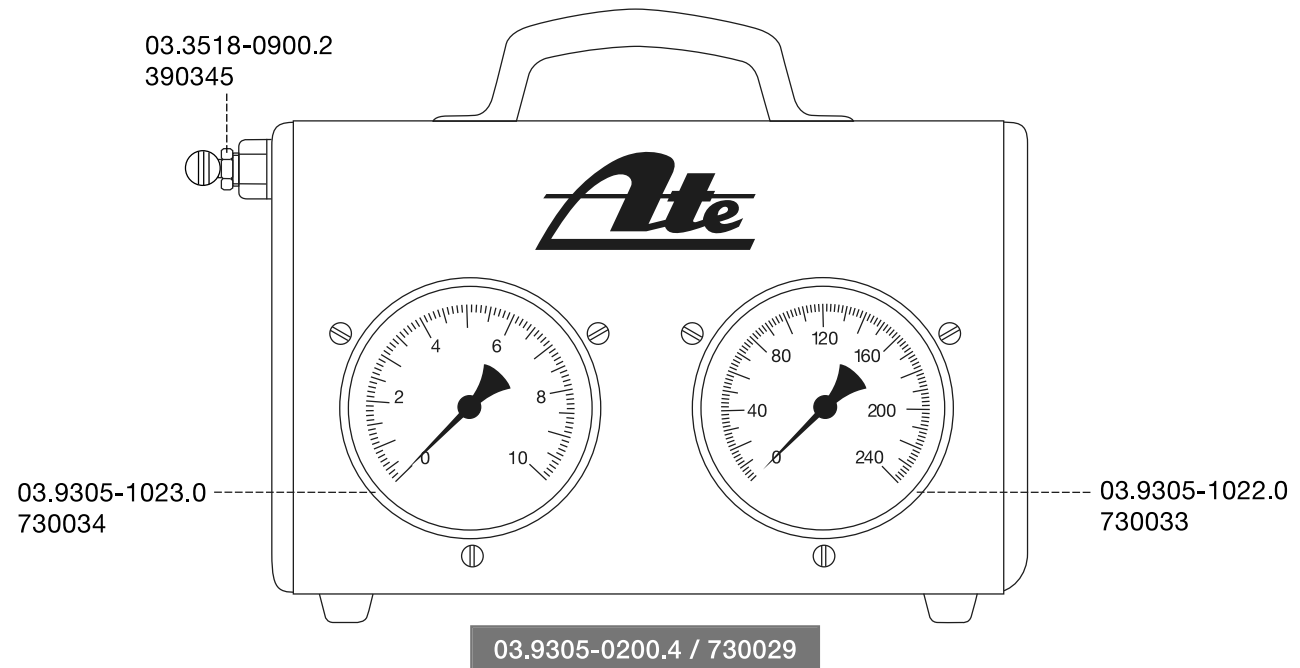
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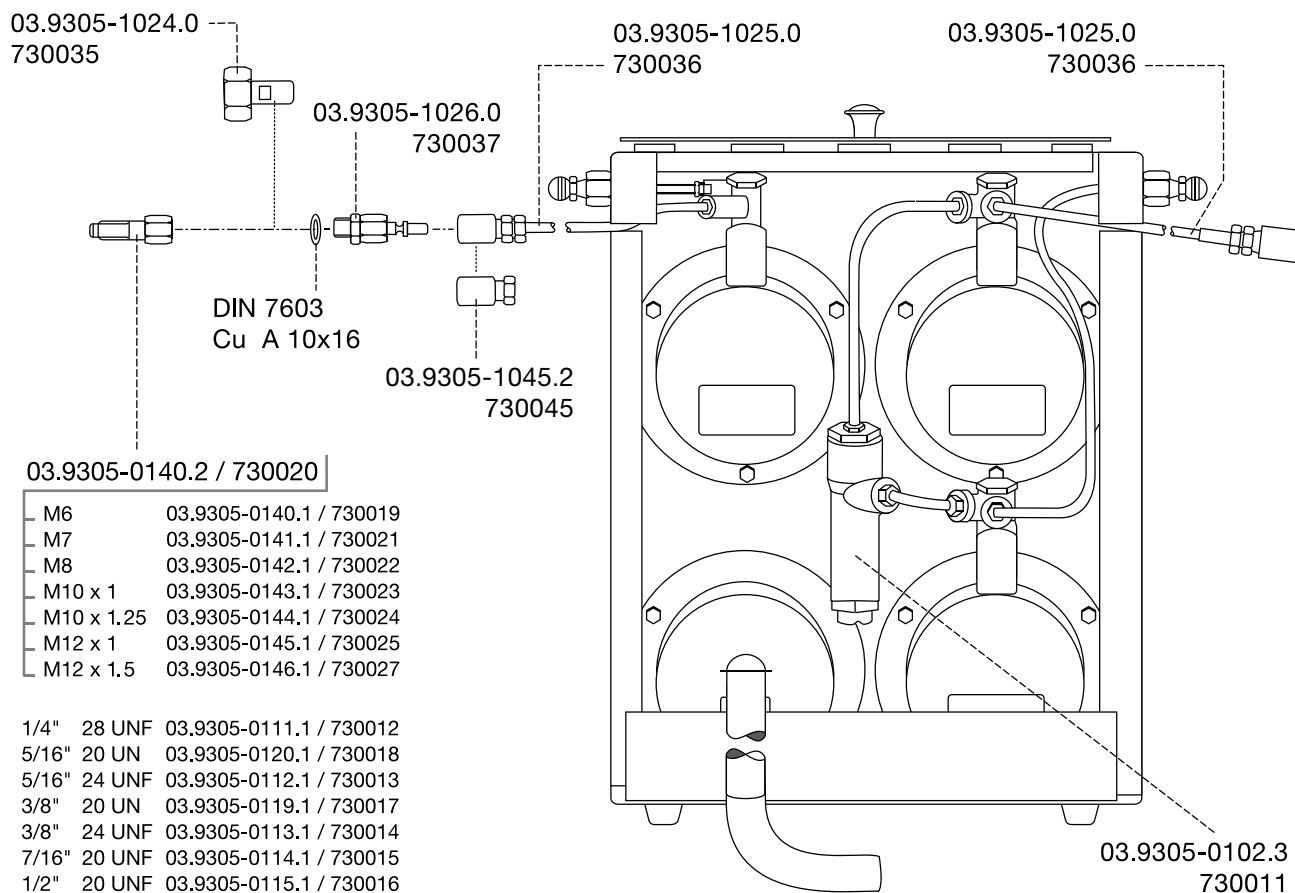
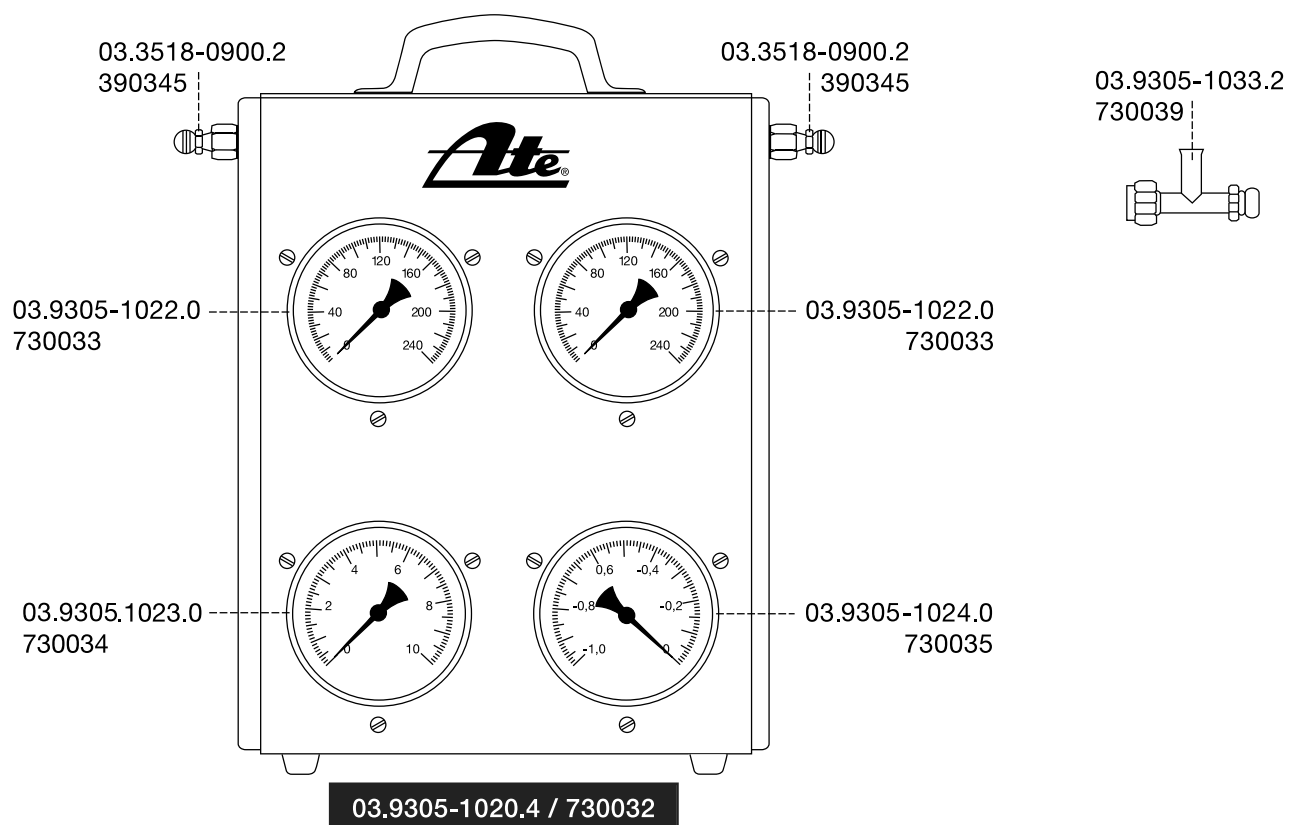


03.9302-9402.3 / 740269


**03.9305-0140.2 / 730020**

M6	03.9305-0140.1 / 730019
M7	03.9305-0141.1 / 730021
M8	03.9305-0142.1 / 730022
M10 x 1	03.9305-0143.1 / 730023
M10 x 1.25	03.9305-0144.1 / 730024
M12 x 1	03.9305-0145.1 / 730025
M12 x 1.5	03.9305-0146.1 / 730027

1/4"	28 UNF	03.9305-0111.1 / 730012
5/16"	20 UN	03.9305-0120.1 / 730018
5/16"	24 UNF	03.9305-0112.1 / 730013
3/8"	20 UN	03.9305-0119.1 / 730017
3/8"	24 UNF	03.9305-0113.1 / 730014
7/16"	20 UNF	03.9305-0114.1 / 730015
1/2"	20 UNF	03.9305-0115.1 / 730016







03.9314-4982.1 / 760113



03.9314-4999.4 / 760133



↻ 03.9314-4981.2 / 760112

↻ 03.9314-4994.2 / 760135



03.9314-4983.1 / 760114

SW 13 Ø 30,6 mm



03.9314-4984.1 / 760115

Ø 47,7 mm



03.9314-4985.1 / 760116

Ø 54 mm



03.9314-4986.1 / 760117

Ø 63,5 mm



03.9314-4987.1 / 760118

Ø 32 mm



03.9314-4988.1 / 760119

Ø 32 mm



03.9314-4989.1 / 760120

Ø 42 mm



03.9314-4990.1 / 760121

Ø 55,5 mm



03.9314-4991.1 / 760122

Ø 50,8 mm



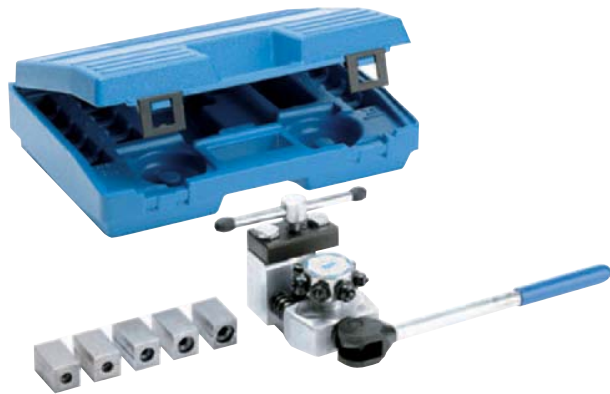
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Ø 30 mm

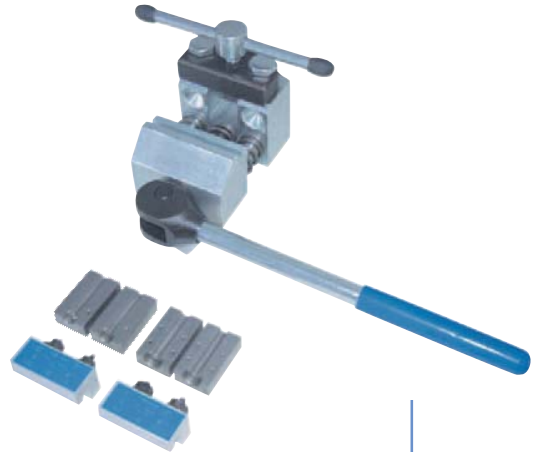


03.9314-4993.1 / 760124

Ø 32 mm



03.9310-0001.4 / 760012

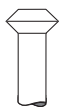


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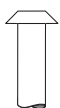
DIN E

Ø			
4,75 mm	03.9310-0010.2 / 760077	03.9310-0005.1 / 760019	03.9310-0006.1 / 760021
6,00 mm	03.9310-0011.2 / 760078	03.9310-0002.1 / 760013	03.9310-0006.1 / 760021
8,00 mm	03.9310-0012.2 / 760079	03.9310-0003.1 / 760015	03.9310-0007.1 / 760022
10,00 mm	03.9310-0013.2 / 760080	03.9310-0004.1 / 760017	03.9310-0007.1 / 760022
3/16" mm	03.9310-0010.2 / 760077	03.9310-0001.1 / 760010	03.9310-0006.1 / 760021



DIN F

Ø		
4,75 mm	03.9310-0010.2 / 760077	03.9310-0005.1 / 760019
6,00 mm	03.9310-0011.2 / 760078	03.9310-0002.1 / 760013
8,00 mm	03.9310-0012.2 / 760079	03.9310-0003.1 / 760015
10,00 mm	03.9310-0013.2 / 760080	03.9310-0004.1 / 760017
3/16" mm	03.9310-0010.2 / 760077	03.9310-0001.1 / 760010



DIN F

Ø		
4,75 mm	03.9310-0014.2 / 760081	03.9310-0005.1 / 760019