



## Injectors testing & repair Magneti Marelli

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Marelli Aftermarket Poland Sp. z o.o.

Plac pod Lipami 5, 40-476 Katowice, Poland

Tel. +48 32 60 36 145 • Fax +48 32 60 36 145

[www.wyposzeniemm.pl](http://www.wyposzeniemm.pl)

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# COMMON RAIL INJECTORS

## DS1R CR INJECTOR TESTER

**DS1R-E/20 (MM: 007935101440)**

**DS1R-D/20 (MM: 007935101450)**

An innovative device for testing Common Rail injectors. It is characterized by a very compact construction, which will be appreciated by service workers with limited space, and thanks to the use of the latest technologies, it allows to check the technical condition of the injector quickly and precisely. In the DS1R-E/20 and DS1R-D/20, a detailed report with all measured parameters and their reference to the embedded database is received.

Common Rail revolutionary testing solution for BOSCH, DELPHI, DENSO and CONTI/VDO injectors. Heavy Duty and Light Duty applications for all types of Piezo, Solenoid & Dual-Solenoid actuators.

Max operating pressure 2200 bar

Exact diagnosis on PASS/FAIL at CFL test with an immediate result

Injector Volume measuring test – iVM full-load, part-load, emissions, low-load, pre/post-injection tests)

LKT - Static Back Leak Test

Optional RSP test (response time test) and aNOP (nozzle opening pressure) – additional RSP sensor required

Operation for 1 injector

Semi-automatic operation (manual pressure regulator) – in

**DS1R-E/20**

Full automatic operation (electronic pressure regulator) – in

**DS1R-D/20**

Static Electronic Mass Measurement

Testing time ~ 10-12 minutes

8" touchscreen, Android operation system

Free wi-fi database update



# DS2R CR INJECTOR TESTER

**DS2R-A/20 (MM: 007935100850)**  
**DS2R-A/20/F (MM: 007935100860)**

The cheapest device for testing and flushing Common Rail injectors on the market. It is characterized by a very compact design and intuitive operation. A simple measuring system, based on volumetric tubes, clearly shows the results of the measurements, which are then recalculated to the exact result in mm<sup>3</sup> / injection

- Test of all types of coil and piezo injectors: Bosch, Delphi, Denso, Siemens / VDO / Continental with reference of test results to the database
- Max working pressure 2200 bar
- eRLC (electric) test, injector condition assessment based on CFL leak test
- iVM dosing tests (dosage: maximum load, partial load, low load, pre-injection)
- LKT test (injector return leak test)
- Optional RSP (response speed) and aNOP (injector opening pressure) tests - with optional RSP sensor
- Operation in semi-automatic mode (manual pressure regulator)
- Injector internal flushing function - MACC - available on DS2R-A/20/F
- Measurement of doses using volumetric tubes, with a reference to the database expressed in mm<sup>3</sup>
- Possibility to test unit injectors after connecting the UIPR attachment unit
- Piezo stack regeneration function
- A set of CRI connection adapters included
- Test time about 12 minutes
- Tablet 8 "with Android
- Free database update via Wi-Fi



**iPSC –  
pressurised  
spray  
observation  
chamber**

## CR INJECTORS FLUSHING

**DSF4R/10 (MM: 007935100930)**

Device for internal cleaning of 4 CRDI injectors, max pressure 1200 bar. A set of adapters included.



# CRU2R CR INJECTOR TESTER

**CRU.2R/20 (MM: 007935100790)**

**CRU.2R/20/F (MM: 007935100800)**

**CRU.2R/30 (MM: 007935100810)**

**CRU.2R/30/CD (MM: 007935102320)**

**CRU.2R/30/F (MM: 007935100820)**

**CRU.2R/40 (MM: 007935103030)**

**CRU.4R/20 (MM: 007935100770)**

**CRU.4R/20/F (MM: 007935103010)**

**CRU.4R/30 (MM: 007935100780)**

**CRU.4R/40 (MM: 007935103020)**



The most advanced device for testing Common Rail injectors on the market. The proven, intuitive, user-friendly design, thanks to the use of the latest technologies, allows for quick and precise checking of the technical condition of the injector tested. The device's capabilities will be especially appreciated by professionals looking for advanced technologies and wide application possibilities. With CRU2R / CRU4R series devices, it is possible to generate new codes for Bosch (IMA, ISA), Delphi (C2i, C3i), Denso (QR Code), Siemens / VDO (IIC) injectors - only for VDO authorized services. In addition, it is possible to carry out the piezoelectric element regeneration procedure in Bosch, Denso and Siemens / VDO injectors. For Bosch injectors, a ball valve stroke generator is built in. An extensive database for all types of electromagnetic and piezoelectric injectors: Bosch, Delphi, Denso, Siemens / VDO / Continental. Free, automatic software updates via Wi-Fi



**RSPSENSOR –  
injector response  
time sensor**

## BK-iVM - electronic dynamic mass measurement of the injector

Accurate, repeatable and fast electronic measurement of injection doses and overflows. The only measuring system on the market that has no moving parts and does not require temperature compensation for the test fluid. It supports the measurement of partial doses injected one after the other as it is in the engine. Repeatability: 0.05%, accuracy: 0.2%.

- Test of all types of electromagnetic and piezo injectors: Bosch, Delphi, Denso, Siemens / VDO / Continental with reference test results to the database
- Max working pressure 2200 bar (version **\*/20**), 2500 bar (version **\*/30**), 2800 bar (version **\*/40**)
- Support for 1 (**CRU2R**) or 4 (**CRU4R**) injectors
- **CRU2R/30/CD** - RSP sensor included in standard configuration
- Full automatic operation mode
- Injector internal flushing function - MACC - available in **CRU2R/20/F, CRU2R/30/F, CRU4R/20/F**
- Electronic dynamic mass measurement of the injector discharge and backleak
- Possibility to test unit injectors after connecting the attachment unit UIPR
- Piezo stack regeneration function in Siemens / VDO, Denso and Bosch piezo injectors
- Coding of Delphi, Siemens / VDO, Denso and Bosch injectors
- Possibility of editing test plans
- A set of CRI connection adapters included
- Test time about 10-12 minutes
- Tablet 12 "with Android
- Free database update via Wi-Fi
- Compressed air demand (on the compressor discharge side) > 350 l / min at 8 bar pressure

## INJECTORS CODING

**Denso - DNC.04 (MM: 007935101660)**  
**Siemens - VC.05 (MM: 007935101740)\***  
**Bosch - BC.01 (MM: 007935101830)**  
**Delphi - DLC.03 (MM: 007935101850)**  
**Delphi+Denso+Bosch (MM: 007935103400)**  
**John Deere (MM: 007935103520)**



Bosch (IMA, ISA),

Nowy IMA BULEHA

Nowy ISA 7Y8R7NI

New F40A2422  
16QR 28242EDA

Denso (QR Code),

New C2I 4039C3DF41D5  
6C09

Nowy F70XWZ8161  
C3I YZFPPUXYYYY

New 86HD9G  
IIC

Delphi (C2i, C3i),

VDO (IIC)

In order to use the new code generation function available for the **CRU2R / CRU4R, DCD, TBCR, MTBR** series devices, one-time coding activation for a given injector brand must be purchased - Bosch, Delphi, Denso, Siemens / VDO / Continental, and the device should be equipped with a response time sensor RSP (**007935100670**). New codes are generated automatically (with the condition of successful completion of all dedicated tests) and printed on the final report.

\*) Activation of coding for Siemens / VDO / Continental injectors, only possible for users with VDO authorization

# PUMPS AND INJECTORS TEST BENCH

## MTBR-D



**MTBR-D/P (MM: 007935101480)**  
**MTBR-D/CB (MM: 007935102930)**  
**MTBR-D/E (MM: 007935101490)**

The Magneti Marelli MTBR-D/E test bench is a modern and efficient tool for precise measurement and testing of technologically advanced injectors and pumps used in Common Rail power systems.

Due to the high market demand caused by the failure of Common Rail system elements and the need for modern engines to meet stringent exhaust emission standards, it is required to periodically check the operation of injectors and the efficiency of high-pressure fuel pumps, allowing them to assess their suitability for further operation.



Magneti Marelli is constantly developing its offer of devices for testing and repairing injection systems, and currently offered, the third generation of devices - the "R" series, belongs to the most innovative solutions of this type on the market. The MTBR-D/E device enables diagnostics of electromagnetic and piezoelectric injectors, as well as CRp pumps from Bosch, Delphi, Siemens-VDO and Denso, and after being equipped with a special Cambox adapter, all types of EUI / EUP injectors.

Never before has the work of testing injection systems been so easy. The unique design of the device allows excellent access to the workspace and tested components (240 degrees), which guarantees high safety and productivity. It enables quick retooling / adjusting of the device to test various components - mounting a Cambox, installing a CRp pump, or testing from 1 to 4 CRDi injectors takes very little time.



|                           |   |
|---------------------------|---|
| MTBR-D/P<br>007935101480  | Compact test bench for testing CRp pumps. Maximum pressure 2800 bar. Single measuring system, electronic mass measurement. Adapter set CP1 / CP3. Manual protective cover.  |
| MTBR-D/CB<br>007935102930 | Compact test bench for testing unit injectors. Built-in mass measurement system and database. For use with Cambox (007935101820)  |
| MTBR-D/E<br>007935101490  | Compact test table for testing CRp pumps, CRDi injectors, unit injectors and HEUI systems. Maximum pressure 2800 bar. Big flywheel. Double measuring system, electronic dynamic measuring system for injectors and pumps. Injector coding function (RSP sensor required and coding activation), Equipped with injector testing kit (007935101530), CP1 / CP3 adapter set. Manual protective cover. Optional: connection sets for all types of CRp pumps, RSP sensor, Cambox |

- Maximum working pressure up to 2800 bar
- Coding of Delphi (C2i / C3i), Bosch (IMA / ISA), Denso (QR code), and for authorized users VDO (IIC)
- Coding of John Deere injectors and unit injectors
- support for the latest generations of injectors (CRI3-25 and CRI3-27 with NCC and VCC, EU5 and EU6 - Denso I-Art (6-pin), CRIN 4.2)
- CGL function - EU6 Piezo Stack Air Gap Measurement for SVC evaluation
- Piezoelectric stack regeneration function VDO / Bosch / Denso
- A device authorized by the VDO manufacturer for testing Siemens / VDO injectors and pumps
- Testing all types of pumps, including: CP4, CAT, CB18, CB28
- Automatic updated database (via Wi-Fi), currently with over 2,000 records.
- Dynamic electronic fuel mass measurement for testing both injectors and pumps - high flow system for pumps, ensuring exceptional accuracy and unprecedented measurement speed (up to 4 minutes!)
- integrated, efficient cooling system, ensuring proper functioning in all conditions, without connecting to external sources
- Ergonomic and solid construction, user friendly.
- Perfect access to tested components from all sides - 240°
- 15-inch HMI touch screen



# PUMPS & INJECTORS CONTROL MODULE TBCR

**TBCR-D/p (MM: 007935101690)**

**TBCR-D/i (MM: 007935101700)**

**TBCR-D/e (MM: 007935101710)**

The most modern electronic control and measurement module on the market, enabling control and precise measurement of all injection systems used in modern diesel engines. Testing CRDi injectors, CRp pumps, and EUI / EUP and HEUI unit injectors, of all types and all manufacturers. **Can be mounted on any conventional test bench available on the market.** Very compact construction and modern design. Clear operating interface (10 inch touch screen), quick and convenient installation. Features and capabilities of the device, identical to those available in the corresponding version of the MTBR-D device



- Test of all types of CR injectors and pumps: Bosch, Delphi, Denso, Siemens/VDO with reference of test results to database.
- Dynamic electronic fuel mass measurement for both testing injectors and pumps - high flow system for pumps, ensuring exceptional accuracy and unprecedented measurement speed (up to 4 minutes!)
- Possibility of cooperation with Cambox (007935101820) and testing of HEUI injectors (option)
- Pressure control up to 2800 bar
- Coding of Delphi (C2i / C3i), Bosch (IMA / ISA), Denso (QR code),
- Fully automatic operation with clear information on a 10 "HMI screen, with AZO software
- Internal cooling system

|                          |  |
|--------------------------|--|
| TBCR-D/p<br>007935101690 | Testing all types of CRP pumps. Electronic mass measuring system. Full database. Standard cables and wires included.   |
| TBCR-D/i<br>007935101700 | Testing 4 CRDi injectors of all types. Possibility to test HEUI injectors (after being equipped with a special set). Electronic mass measuring system. Full database. Coding of injectors (after buying the RSP sensor and activation). Standard cables and wires included.  |
| TBCR-D/e<br>007935101710 | Electronic control and measurement module. Testing 4 CRDi injectors of all types. Possibility to test HEUI, EUI / EUP injectors (after being equipped with a special set). Testing all types of CRP pumps. Electronic mass measuring system. Full database. Coding of injectors (after buying the RSP sensor and activation). Standard cables and wires included |



**INJECTORS TESTING:** To the TBCR module, we connect the hydraulic hoses running from the injectors (discharge and overflow from 4 injections), and the fluid return line back to the power supply unit. To the injector, connect the electric wire from the TBCR module. We connect the control to the DRV valve and to the pressure sensor on the HP rail, thanks to which it is possible to automatically regulate the supply pressure (used mainly in the case of conventional test benches). After ensuring the required rotations of the CRP pump, injection signal, HP pressure, and injection measurement, are carried out automatically through the TBCR module

**PUMP TESTING:** To the TBCR module, connect the hydraulic hoses from the HP rail and from the pump overflow port, and the return fluid line back to the power unit. We connect the control wires to the DRV valve and to the pressure sensor on the HP rail, and to the ZME / DRV valve, temperature sensor (depending on the pump type), thanks to which the pressure of the test fluid can be automatically adjusted.

## RAIL KIT AND INJECTOR HOLDER

**BCR1-BH (MM: 007935102970)**

**BCR1-BH KIT (MM: 007935102980)**

**BCR-KIT (MM: 007935101780)**

Mounting bracket for testing the injector, for use on a conventional test table. Equipped with a pressure chamber for observation of atomization (in **BCR-KIT** 4 pcs.), HP rail with DRV valve and pressure sensor (in **BCR1-BH-KIT** and **BCR-KIT**) and a set of HP connecting cables, overflow and expense (4 pcs. in **BCR-KIT**)

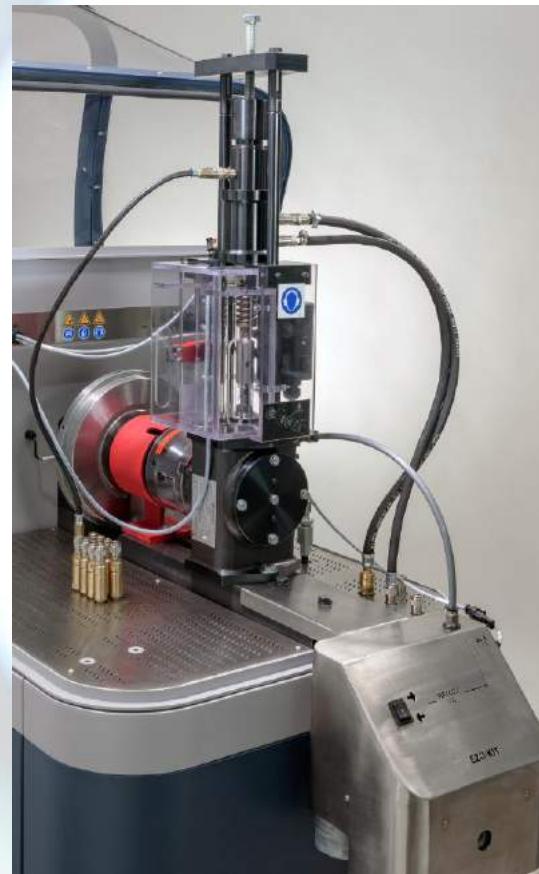


# EUI PUMP INJECTORS TESTING

## CAMBOX (MM:007935101820)

CAMBOX attachment for testing unit injectors. Can be used on any test table (in this case we recommend the Magneti Marelli DCDS-BK control module (MM: 007935103410), or on the MTBR-D/CB or MTBR-D/E tester. A wide range of easy-to-mount adapters available for all brands and types of pump injectors. To select the required configuration, use our **Cambox configurator**.

The recommended accessory is EZO-KIT (MM:007935101790), a Cambox attachment to provide lubrication and allow the drive shaft settings to be changed without spilling oil



|   | MAGNETI MARELLI | Cambox | E3 | E1 | A SERIES | TDS | E1 | A SERIES | A SERIES | C15 | C12 | C360 | 11,12 & 16 | CURSOR 8 | CURSOR 10 / 13 | CURSOR E1<br>(841x9094) | IVECO | DETROIT DIESEL | VW | CUMMINS | GE13 | DAF | MACK | MB TRROS | MB ATEGO |  |
|---|-----------------|--------|----|----|----------|-----|----|----------|----------|-----|-----|------|------------|----------|----------------|-------------------------|-------|----------------|----|---------|------|-----|------|----------|----------|--|
| Zastosowanie                                    |                 |        |    |    |          |     |    |          |          |     |     |      |            |          |                |                         |       |                |    |         |      |     |      |          |          |  |
| Wprowadź "1" dla systemów które chcesz testować | 1               | 0      | 0  | 0  | 0        | 0   | 0  | 0        | 0        | 0   | 0   | 0    | 0          | 0        | 0              | 0                       | 0     | 0              | 1  | 0       | 0    | 0   | 0    | 0        | 0        |  |
| Wprowadź "1" jeśli posiadasz już jakiś system   | 0               | 0      | 0  | 0  | 0        | 0   | 0  | 0        | 0        | 0   | 0   | 0    | 0          | 0        | 0              | 0                       | 0     | 0              | 0  | 0       | 0    | 0   | 0    | 0        | 0        |  |

# ACCESSORIES FOR MTBR-D / TBCR-D

| CRP          |         |   |
|--------------|---------|---|
| 007935102000 | CRp-B   | Adapters for BOSCH CP1 / CP3 pumps      |
|              |         |   |
| 007935102010 | CRp-VDD | Adapters for DELPHI / DENSO / VDO pumps |
|              |         |   |

|              |                   |  |
|--------------|-------------------|--|
| 007935103660 | CPL-KIT           | Pump control and lubrication set for CP3.3 / 3.4 (required for CRp CP3.3/3.4)                  |
| 007935103430 | CRp CP3.3/3.4     | Set of adapters for all types of CRP HD, MAN CP3.3 and CP3.4 pumps (requires set 007935103660) |
| 007935103440 | CRp CP3.3/3.4 KIT | Set of adapters for all types of CRP HD, MAN CP3.3 and CP3.4 pumps (includes set 007935103660) |
| 007935102040 | CRp-CP4           | Adapters for BOSCH CP4 pumps   |

|              |                 |  |
|--------------|-----------------|--|
| 007935103340 | AZO.CP4         | Activation of software for BOSCH CP4 pumps<br>  |
| 007935103620 | CRp - CAT       | Caterpillar CRP adapter set (requires set 007935103660)<br>  |
| 007935103630 | CRp-CB18        | Adapter set for all BOSCH CB18 CRP pumps (requires set 007935103660 and 007935103420)<br>           |
| 007935103640 | CRp-CB28        | Adapter set for all BOSCH CB28 CRP pumps (requires set 007935103660 and 007935103420)<br>          |
| 007935103650 | CRp-CB18/28 KIT | Adapter set for all BOSCH CB18 and CB28 CRP pumps (includes set 007935103660 and 007935103420)<br> |

|              |               |  |
|--------------|---------------|--|
| 007935103450 | CRp -IP.3 KIT | A set of adapters for measuring internal pressure in pumps of all manufacturers with a set of gauges (Bosch, Delphi, Denso, VDO)<br> |
| 007935103040 | CRp-IP3/AO    | A set of adapters for measuring internal pressure in pumps of all manufacturers (Bosch, Delphi, Denso, VDO)<br>                      |
| 007935102070 | HP-H.M2       | 3010bar high pressure hose<br>  |
| 007935103420 | CRP_HPOUT2    | Test kit for pumps with two HP outlets (hose, HD filter, pressure accumulator)<br>   |
| 007935103700 | VCV.S         | Software for VCV MTBR<br>  |
| 007935103710 | VCVA.01       | Adapter VCV for Bosch CP4 on MTBR<br>  |
| 007935103720 | VCVA.02       | Adapter VCV for Bosch CP3 on MTBR  |

|                |               |  |  |
|----------------|---------------|--|--|
|                |               |  |  |
| <b>EUI/EUP</b> |               |  |  |
| 007935101820   | CAMBOX        | Cambox attachment for testing unit injectors.<br>Adapters and accessories available separately - requires cooperation with MTBR/E or DCDS-BK |  |
| 007935101540   | MTBR -ihCB    | Connection cable for CAMBOX, for MTBR  |  |
| 007935103060   | TBCR/CB -ihCB | Connection cable for CAMBOX, for TBCR  |  |
| 007935101790   | EZO-KIT       | Cambox attachment to provide lubrication and allow drive shaft settings to be changed without spilling oil                                   |  |
| <b>HEUI</b>    |               |  |  |
| 007935103080   | HEUI.KIT.M2   | HEUI injector test kit   |  |
| 007935103090   | HUS.01        | HEUI adapter for CAT 7.3L / 3126   |  |
| 007935103100   | HUS.02        | HEUI adapter for CAT C7/C9   |  |
| 007935103110   | HUS.03        | HEUI adapter for ISUZU TROOPER   |  |
| 007935103120   | HUS.04        | HEUI adapter for FORD POWER STROKE 6.0L (requires ihM.4PC or ihM.4PD)  |  |
| 007935103130   | HUS.06        | HEUI adapter for CAT3408/3412  |  |

# INJECTOR CONTROL MODULE DCD

**DCD (MM: 007935101800)**  
**DCDS (MM: 007935101810)**  
**DCDS/BK (MM: 007935103410)**

The DCD control module can be used on any injector tester, any manufacturer, on which it is possible to manually set the desired fluid pressure. Therefore, it is an ideal proposition for users of older generations of injector testers, that by using their device, they can be able to carry out tests of the latest injectors, using the most advanced database on the market.



|                         |   |
|-------------------------|---|
| DCD<br>007935101800     | Control module for 1 CRDi injector. Electronic, static mass measurement, full test database, injector coding option, after purchasing activation for individual injector manufacturers and RSP sensor   |
| DCDS<br>007935101810    | Control module for 1 CRDi injector. Control of pressure on the HP rail (wiring for the DRV valve and RDS sensor), electronic static mass measurement, full test database, the option of coding injectors after purchasing the activation and RSP sensor   |
| DCDS/BK<br>007935103410 | Control module for 1 CRDi, HEUI and EUI / P injector (on Cambox). control of pressure on the HP rail (wiring for the DRV valve and RDS sensor), electronic dynamic fuel mass measurement, full test database, the option of coding injectors after buying activation for individual injector manufacturers and the RSP sensor |



# ACCESSORIES FOR COMMON RAIL INJECTOR TESTERS

|                            |                |  |
|----------------------------|----------------|--|
| 007935100670               | RSP            | Response time RSP sensor 7-9mm (for coding function)                 |
| 007935103000               | SPAR           | Piezo stack air remover kit for piezoelectric injectors              |
| <b>BACKLEAK ADAPTERS</b>   |                |  |
| 007935103570               | PIRV.6-01      | Backleak adapter for Delphi EU6 6 bar                                |
| 007935103580               | PIRV.10-02     | Backleak adapter for Denso EU6                                       |
| 007935103590               | PIRV.1_3-01    | Backleak adapter for VDO EU6 1,3 bar                                 |
| 007935095460               | PIRV.2         | Backleak adapter for piezoelectric Conti/VDO                         |
| 007935095470               | PIRV.10        | Backleak adapter for piezoelectric Bosch                             |
| 007935095480               | PIRV.2 PIRV.10 | Backleak adapter kit for piezoelectric Conti/VDO/Bosch               |
| 007935103290               | D6             | Backleak adapter for Denso EURO 6                                    |
| 007935103310               |                | Backleak adapter for VDO EURO 6                                      |
| 007935103610               |                | Backleak adapter for VDO EURO6 / DAF                                 |
| <b>ELECTRICAL HARNESES</b> |                |  |
| 007935103170               | DG3P-A         | Injector harness connector DG3P-A for third generation Denso piezo   |
| 007935103190               | BCN.03         | Injector harness connector CRIN BCN.03                               |
| 007935103200               | DEU.01         | Injector harness connector Delphi E1                                 |
| 007935103210               | iART-B         | Injector harness connector Denso 6 pin iArt-B                        |
| 007935103220               | iART-C         | Injector harness connector Denso 6 pin iArt-C                        |
| 007935103250               | ihM.4PC        | Injector harness connector DelphiE3 for CRU                          |
| 007935103260               | ihM.02M-HIQ    | Injector harness connector Scania HPI for MTBR                       |
| 007935103270               | 3P-VCC         | Injector harness connector 3 PIN for Bosch 3-25 with VCC technology  |
| 007935103460               | 3P-VCC-KIT     | Set of 4 injector harnesses 3 PIN for Bosch 3-25 with VCC technology |
| 007935103280               | 4P-NCC         | Injector harness connector 4 PIN for Bosch 3-27 with NCC technology  |
| 007935103470               | 4P-VCC-KIT     | Set of 4 injector harnesses 4 PIN for Bosch 3-27 with NCC technology |



| ADDITIONAL ELEMENTS |   |
|---------------------|---|
| 007935103140        | Small portable stand for DCD                    |
| 007935095390        | Large portable stand for DS2R / CRU2R           |
| 007935095210        | Ultrasonic bath 42kHz/1.5 L                     |
| 007935102030        | RSP sensor oring 7 mm                           |
| 007935102060        | RSP sensor oring 9 mm                           |
| 007935101250        | Small filter for hose                           |
| 007935101940        | HD filter for CRU4R, CRU2R, GDU2R, GDU4R (1pc.) |
| 007935103670        | High pressure filter for MTBR                   |
| 007935101720        | Spool valve service kit                         |

# CODE GENERATOR Z-CODER

## Z-CODER (MM: 007935102990)

Tablet with software for generating reports based on injector tests performed on conventional test tables. After activating the coding function (as for other injector testers), it is possible to generate new codes for injectors



**Dane serwisu:**

|   |       |      |            |
|---|-------|------|------------|
| Czas  | 11:29 | Czas | 2017-06-01 |
| Wynik: <span style="color: green;">✓</span> |       |      |            |

**Dane klienta:**

|            |     |       |
|------------|-----|-------|
| BOSCH      | NS* | 8kHz  |
| 0445110369 | DP  | Stary |
| CRI 2-18   | -   | Nowy  |
| -          |     |       |

**R2LC**

|  |
|--|
| W/MIN: 1000, Cisnienie: 100.0 bar, Pulscja: 1000 usec              |
| [D] m3/h 150.00-243.00 227.34 <span style="color: green;">✓</span> |
| [D] m3/min 0.14-0.87 0.39 <span style="color: green;">✓</span>     |

**NLT**

|  |
|--|
| W/MIN: 1000, Cisnienie: 1800.0 bar                               |
| [D] mm3/STRK 0.00-0.18 0.00 <span style="color: green;">✓</span> |

**IVM (VL)**

|  |
|--|
| W/MIN: 400, Cisnienie: 1800.0 bar, Pulscja: 690 usec                 |
| [D] mm3/STRK 18.00-149.00 51.81 <span style="color: green;">✓</span> |
| [D] mm3/min 48.00-38.60 51.55 <span style="color: green;">✓</span>   |

**IVM (EM)**

|   |
|---|
| W/MIN: 400, Cisnienie: 800.0 bar, Pulscja: 380 usec                 |
| [D] mm3/STRK 18.20-25.00 21.51 <span style="color: green;">✓</span> |

**IVM (LL)**

|  |
|--|
| W/MIN: 2000, Cisnienie: 300.0 bar, Pulscja: 560 usec             |
| [D] mm3/STRK 2.50-4.90 5.13 <span style="color: green;">✓</span> |

**IVM (VE1)**

|  |
|--|
| W/MIN: 2500, Cisnienie: 800.0 bar, Pulscja: 273 usec             |
| [D] mm3/STRK 0.80-3.80 2.82 <span style="color: green;">✓</span> |

**IVM (VE2)**

|  |
|--|
| W/MIN: 2500, Cisnienie: 1200.0 bar, Pulscja: 235 usec            |
| [D] mm3/STRK 0.10-3.30 3.03 <span style="color: green;">✓</span> |

**LKT**

|  |
|--|
| W/MIN: 1000, Cisnienie: 1800.0 bar                                 |
| [D] mm3/STRK 0.00-80.00 15.15 <span style="color: green;">✓</span> |

**CRU 2-R (30)**

|                |            |      |       |      |            |
|----------------|------------|------|-------|------|------------|
| diesel         | SW: 1.62.2 | Czas | 11:29 | Czas | 2017-06-01 |
| S/N: 020792028 |            |      |       |      |            |

**RSP**

|  |
|--|
| W/MIN: 1000, Cisnienie: 950.0 bar, Pulscja: 750 usec               |
| [R] usec 250.00-430.00 335.77 <span style="color: green;">✓</span> |

**aNOP**

|  |
|--|
| W/MIN: 400, Cisnienie: 900.0 bar, Pulscja: 900 usec                  |
| [aNOP] usec 80.00-225.00 127.80 <span style="color: green;">✓</span> |

**Z-CODER**

Wpisz dane wtryskiwacza

**IVM (VL)** W/MIN: 300, Cisnienie: 1800 bar, Czas otwarcia: 690 usec  
[P] mm3/STRK 51.81

**IVM (VE2)** W/MIN: 750, Cisnienie: 1200 bar, Czas otwarcia: 255 usec  
[P] mm3/STRK 2.82

**LKT** W/MIN: 1000, Cisnienie: 1800 bar  
LKT mm3/STRK 15.15

**RSP** W/MIN: 1000, Cisnienie: 950 bar, Czas otwarcia: 750 usec  
[RSP] usec 335.77

**Create report**

**Z-CODER**

Zalogowano jako: user

**IVM (VL)** W/MIN: 300, Cisnienie: 1800 bar, Czas otwarcia: 690 usec  
[P] mm3/STRK 51.81

**IVM (VE2)** W/MIN: 750, Cisnienie: 1200 bar, Czas otwarcia: 255 usec  
[P] mm3/STRK 2.82

**LKT** W/MIN: 1000, Cisnienie: 1800 bar  
LKT mm3/STRK 15.15

**RSP** W/MIN: 1000, Cisnienie: 950 bar, Czas otwarcia: 750 usec  
[RSP] usec 335.77

**Create report**

**Dane podzespołu:**

|            |      |         |
|------------|------|---------|
| BOSCH      | NS*  | qwerty  |
| 0445110369 | DP   |         |
| CRI 2-18   | Nowy | 68BRV52 |
| IMA        |      |         |

**Dokładność wyników zależy od urządzenia, na którym wykonano test. Zakres przedstawiono -100..+100 jako procentowy**

**iVM (VL)**

**MAGNETI MARELLI**

Magneti Marelli Aftermarket Sp. z o.o. Plac pod Lipami 5 40-476 Katowice NIP: 644-30-35-609  
Tel. + 48 32 603 61 07 Fax. +48 32 603 61 08 e-mail: [wypozasenie@marelli.com](mailto:wypozasenie@marelli.com) [www.magnetimarelli-checkstar.pl](http://www.magnetimarelli-checkstar.pl)

**PARTS & SERVICES**

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**MAGNETI MARELLI**

PARTS & SERVICES

# CRIN ADAPTERS

|              |        |   |   |
|--------------|--------|---|---|
| 007935095020 | CRS.01 |    | "Adapter For Injectors Crin - Iveco/Cummins 1 /Dodge/Duramax (Bosch 120 – 184/ 018/ 114/ 032/007/ 161)" |
| 007935095030 | CRS.02 |    | Adapter For Injectors Crin - Iveco/Cummins 2 (Bosch 120 – 125/070)                                      |
| 007935095980 | CRS.03 |    | Adapter For Injectors Khd/Deutz(Bosch)(Bosch 120-067)   |
| 007935095050 | CRS.04 |    | Adapter For Injectors Crin Renault(Bosch 120 – 003)   |
| 007935102180 | CRS.05 |   | Adapter For Injectors Crin FUSO TRUCKS (DENSO-6M60)   |
| 007935102190 | CRS.06 |  | Adapter For Injectors Crin FUSO TRUCKS (BOSCH-6M70)   |
| 007935095400 | CRS.07 |  | Adapter For Injectors Crin -Cummins(Bosch 120 – 003)  |
| 007935095410 | CRS.08 |  | Adapter For Injectors Crin -Duramax(Denso 5730)   |
| 007935095420 | CRS.09 |  | Adapter For Injectors Crin -John Deere(Denso 0540)  |
| 007935095520 | CRS.10 |  | Adapter For Injectors Crin Ford 6.4 Powerstroke(Siemens 8C3Z-9E527-A)                                   |
| 007935095045 | CRS.11 |  | Adapter For Injectors Crin- Man 2 Nr Wtryskiwaczy 0445120030, 0445120218, 0445120100)                   |

|              |           |  |   |
|--------------|-----------|--|---|
| 007935095035 | CRS.12    |  | Adapter For Injectors Crin Khd/Deutz(Bosch 120 - 065)                                 |
| 007935095430 | CRS.13    |  | "Adapter For Injectors Crin -Bosch Mtu (Bosch 920189903(3894783, Y431K05210))"        |
| 007935095530 | CRS.14    |  | Adapter For Injectors Crin- Denso (0800 05C0064)                                      |
| 007935095040 | CRS.17    |  | Adapter For Injectors Crin - Man Nr Wtryskiwaczy (0445120044, 0445120053, 0445120045) |
| 007935095560 | CRS.18    |  | Adapter For Injectors Crin-Iveco(Bosch 120 - 157)                                     |
| 007935100100 | CRS.19    |  | Adapter For Injectors Crin Uip.01/02/03   |
| 007935100120 | CRS.21    |  | Adapter For Injectors Delphi Daf Dla '007935100130'                                   |
| 007935102200 | CRS.22    |  | Adapter For Injectors BOSCH KBEL162S93300BAR-790                                      |
| 007935100510 | CRS.23    |  | Adapter for CAT938H CAT S2L106362752 CAT 938H PERKINS 2645A734                        |
| 007935102210 | CRS.24    |  | Adapter For Injectors ACTROS / BOSCH CRIN 4,2   |
| 007935101980 | do CRS.24 |  | ADAPTER M16 x 1,5   |
| 007935103230 | do CRS.24 |  | INJECTOR HARNESS BOSCH - CRIN 4.2 FOR MTB-R   |
| 007935102220 | CRS.25    |  | Adapter For Injectors BOSCH MAN 044512024, 0445120044                                 |

|              |        |  |  |
|--------------|--------|--|--|
| 007935102230 | CRS.26 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors DENSO CRIN 548#, 650#, DURAMAX (DENSO 5730)    |
| 007935102240 | CRS.27 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors DENSO CRIN 516#                                |
| 007935102250 | CRS.28 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors SCANIA XPI                                     |
| 007935102260 | CRS.29 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors BOSCH  |
| 007935102270 | CRS.30 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors BOSCH CRIN 0445120063, 0445120051 , 0445120059 |
| 007935102280 | CRS.31 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter For Injectors DENSO JOHN DEERE (3707282 / 0401 / 11P 02228)  |
| 007935103330 | CRS.32 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter CRIN Delphi Euro6 Smart                                      |
| 007935103350 | CRS.33 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter CRIN Euro 5/6  |
| 007935103360 | CRS.34 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter Crin DELPHI CRIN EURO 6 A0030179112/0708500669               |
| 007935103370 | CRS.35 | A cylindrical metal adapter with a black plastic cap and a small O-ring. | Adapter Crin L'ORANGE (VTO - G266W488 CAL 934759) - kit              |

# FUEL SYSTEM TREATMENT ES.3 / DI.2

**ES.3 (MM: 007935095380)**  
**ES.3/DPF (MM: 007935102300)**  
**DI.2 (MM: 007935101870)**  
**DI.2/DPF (MM: 007935102310)**

The ES.3 device guides you step by step through the fuel system flushing cycle. The information is displayed on the LCD screen, Automatic operation mode that does not require the intervention of a mechanic during the cleaning procedure. The fuel pressure generated by the device is automatically adjusted to the pressure in the vehicle's fuel system. Power is supplied from a supported vehicle - 12 V.



## Supported Systems:

Common Rail Diesel, Conventional Diesel, Direct petrol injection (G-DI, FSI, HPI), Multi-point and single-point gasoline injection (MPFI, TBI, CIS, other), Carburetor, LPG

## Features:

- Double tank system (for gasoline and diesel)
- Automatic pressure regulation
- Adaptable to all car brands and models
- Possibility to clean the intake manifold (requires an additional IMC.01 adapter)
- Possibility to clean the DPF filter (requires an additional DPF.01 adapter)
- Automatic / manual functions
- User-friendly operating interface
- Portable, lightweight and durable construction



For users who want to focus on cleaning the DPF filter and cleaning the intake manifold, without major investment, there is a device for cleaning the intake manifold and cleaning the diesel particulate filter DI.2



# ACCESSORIES FOR ES.3/DI.2

|              |         |  |
|--------------|---------|--|
| 007935095490 |         | Treatment fluid for ES.3 (285 ml x 24 containers)            |
| 007935095500 |         | Treatment fluid for ES.3 25l                                 |
| 007935101770 | IMCD-2L | Intake manifold cleaning fluid for ES.3/DI2 - 2l             |
| 007935101670 | DPF.2L  | DPF filter cleaning fluid for ES.3 - 2l                      |
| 007935100530 | DPF.01  | Set of 3 different adapters for DPF filters for ES.3 and DI2 |
| 007935101460 | AEAK.01 | Exclusive Fuel System Adapters Kit (Quick Connectors)        |
| 007935101470 | IMC.01  | Intake manifold cleaning adapter for ES.3 and DI2            |



**007935100530**



**007935101470**



# GASOLINE INJECTORS

## GASOLINE INJECTOR TESTER GS2/GS4

**GS2.10 (MM: 007935095360)**

**GS2.20 (MM: 007935095370)**

**GS4.10 (MM: 007935101640)**

**GS4.20 (MM: 007935101650)**

### Device characteristics:

Automatic device for testing and cleaning of gasoline injectors, including:

MPI multi-point injection

TBI single point injection

LPG, CNG

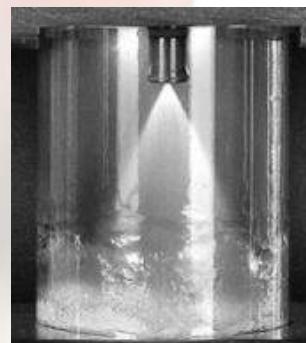


Thanks to GS series devices, it is possible to detect the causes of incorrect engine operation:

- Increased exhaust emissions / increased fuel consumption
- Reduced engine performance (power, torque)
- "Hard" engine idling, stalling, problems with engine starting

Thanks to the use of illuminated (LEDs) measuring cups, it is possible to observe and evaluate:

- uniformity of the injected fuel stream, its shape
- fuel flow rate - IVM test. (with an accuracy of  $\pm 1\text{ml} / 130\text{ml}$ )



### Features:

- Working pressure 0-10 bar
- Fully configurable test plans (GS4)
- Automatic (GS4) or semi-automatic (GS2) operating mode
- Engine load simulation tests
- Ergonomic and user-friendly design
- Short test time / Automatic function
- Ergonomic, durable, quick and easy to use injector mounting adapters
- Spray and expense test
- Injector circuit protection
- Back flushing of the injector after cleaning in an ultrasonic cleaner (automatic in GS4, manual in GS2)

**STANDARD EQUIPMENT:**

adapter set for injectors supplied from the top (Top Feed) -  
versions GS2/4.10

set of top and side fed injector adapters (Top Feed and Side Feed)  
- GS2/4.20 versions

1.5l ultrasonic cleaner

Test fluid and ultrasonic cleaner



## GASOLINE INJECTOR TESTER GD1R

**GD1R-E/45 (MM: 007935101500)**

**GD1R-D/45 (MM: 007935101510)**

Modern direct petrol injection systems (G-DI, FSI, HPI, JTS) require high pressure equipment for proper testing of the injectors used in these systems. Magneti Marelli offers devices that enable testing and cleaning of such injectors.

The GD1R series devices are characterized by small dimensions, compact construction and very intuitive operation. Thanks to the maximum working pressure of 450 bar, they allow you to test virtually all injectors on the market.

### Device characteristics

- Test of all types of electromagnetic and piezo injectors
- Working pressure up to 450 bar
- Electronic measuring system - static mass measurement
- Unique PIEZO stack regeneration function
- Free database update
- Operation in automatic mode (in GD1R-E/45 manual pressure regulator)
- about 7-8 min
- Built-in 8 "tablet with Android
- Clearly presented test results with the possibility of printing
- A set of adapters is available to power all types of injectors



# GASOLINE INJECTOR TESTER GDU2R

**GDU.2R/45 (MM: 007935101600)**

**GDU.2R/45/F (MM: 007935101610)**

**GDU.2R/85 (MM: 007935101620)**

**GDU.2R/85/F (MM: 007935101630)**

**GDU.4R/45 (MM: 007935101160)**

**GDU.4R/45/F (MM: 007935101590)**

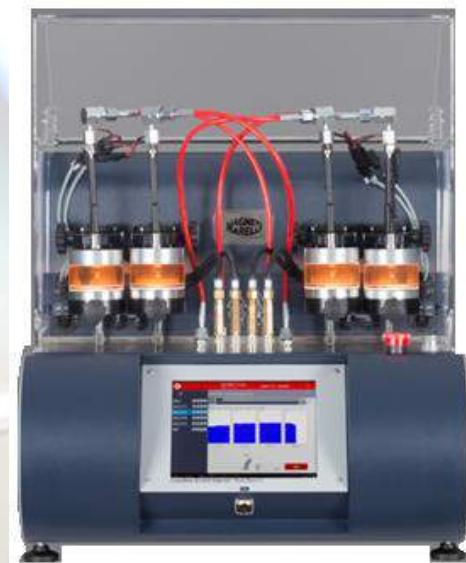
**GDU.4R/85 (MM: 007935101170)**

The GDU2R / GDU4R series devices are the most advanced devices on the market for testing all direct petrol injection systems. Thanks to the maximum working pressure of 850 bar, they allow you to test all injectors on the market. The function of assigning new injector codes will also be available (future updates)



## Characteristics of devices

- Test of all types of electromagnetic and piezo injectors (0-300 V / 0-35A)
- Support for 1 or 4 injectors (GDU4R)
- Working pressure up to 850 bar
- Electronic measuring system - dynamic mass measurement (accuracy: 0.2%, repeatability: 0.05%)
- Protection of the control board against damage
- Unique PIEZO stack regeneration function
- Injector internal cleaning - MACC (versions \* / F)
- Free database update
- Work in automatic mode
- Test time: 5-15 min (GDU2R / GDU4R)
- Built-in 10 "tablet with Android
- Clearly presented test results with the possibility of printing
- A set of adapters is available to power all types of injectors



## GCC.06 (MM 007935103520) - SIEMENS BMW injector coding function - one-time software activation

To use the coding function, the GDU series device must be modified with the UPL.PCB set, and the low pressure measuring set (0-10bar) for the specific device model: UPL.11 (for GDU.2R), UPL.12 (for GDU.4R), UPL.11 / F (for GDU.2R / F), UPL.12 / F (for GDU.4R / F), and must be equipped with RSP sensor (MM 007935103160).

### BMW Part Numbers:

|             |
|-------------|
| 10181010    |
| 13537589048 |
| 13537565137 |
| 13534548853 |
| 13537584681 |
| 13538616079 |
| 13538648937 |
| 13537537317 |
| 13537565138 |
| 13537625714 |
| 13537585261 |

| actuator info | SLOT 1 |        |
|---------------|--------|--------|
| VDO           | SN*    | 100512 |
| 13537589048   | FD     |        |
|               | Old    | 599215 |
| GDI-Piezo     | GCC    |        |
|               | New    | 571232 |
|               | GCC    |        |



# ACCESSORIES FOR GASOLINE INJECTOR TESTERS

|              |                |   |
|--------------|----------------|---|
| 007935103160 | RSP.02G        | RSP sensor for GD1R i GDU2R   |
| 007935102150 |                | Back flush kit (For GD1R & GDU2R units)   |
| 007935103960 | UPL.10         | Extension of possibilities with low pressure testing 0-10 bar for GD1R (suggested GDI LP-KIT.XX)    |
| 007935103970 | UPL.11         | Extension of possibilities with low pressure testing 0-10 bar for GDU2/4R (suggested GDI LP-KIT.XX) |
| 007935103180 | CZI.02         | GDUR/GD1R and GENERIC harnesses   |
| 007935102830 | GDi-1A         | GDi adapter for BOSCH 0261500-029   |
| 007935102840 | GDi-2A         | GDi adapter for DENSO 0120-13E 23250-31020 DENSO 0220-15G 23250-31030                               |
| 007935102850 | GDi-3A         | GDi adapter for MAGNETI MARELLI 189-06 (7mm) BOSCH 261500114 (4mm) [w zestawie: GDU/GD1]            |
| 007935102860 | GDi-4A         | GDi adapter for SIEMENS DEKA 3775-502   |
| 007935102870 | GDi-6A         | GDi adapter for BOSCH 0262500155  |
| 007935102880 | GDi-7A         | GDi adapter for BOSCH 0261B09599-78   |
| 007935102890 | GDi-8A         | Gdi adapter for new DENSO DEVELOPER   |
| 007935102900 | GDi-10A        | GDi adapter for MAGNETI MARELLI VW. 3H906A IT MY2   |
| 007935102910 | GDi-11A        | GDi adapter for BOSCH, MARELLI, FOMOCO [in set: GDU/GD1]  |
| 007935102920 | GDi-13A        | GDI adapter for FOMOCO E7T20171 (MAZDA)   |
| 007935103380 | GDi-123        | GDi adapter for new BMW long injector   |
| 007935103070 | ADAPT-GDi_4Kit | Adapter-gdi for GS series (set of 4)  |

# CR INJECTORS REPAIR

## 3<sup>RD</sup> PHASE INJECTOR REPAIR SOLUTION

**BOSCH+SIEMENS/VDO+DENSO (MM: 007950030985)**

**BOSCH (MM: 007950030995)**

**SIEMENS/VDO+DENSO WITHOUT PC (MM: 007950031005)**

**SIEMENS/VDO+DENSO UPGRADE (MM: 007950031000)**



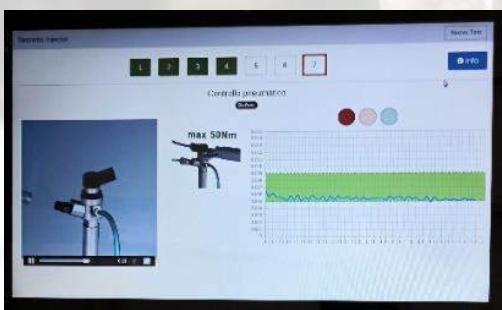
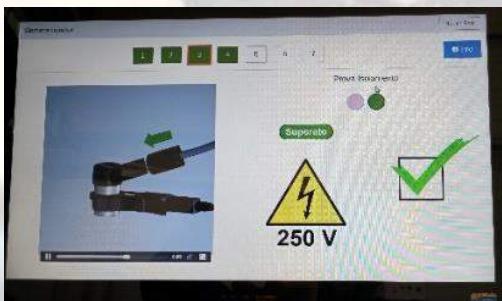
Technology to repair Bosch, Siemens / VDO, Denso injectors, the so-called "Third phase". It is an indispensable element of the equipment of the injector regeneration workshop, thanks to which it is possible to select all setting dimensions and comprehensive regeneration of the injector.

Our equipment is based on a computer with a touch screen and allows micrometric control of the calibration size with an accuracy of 0.001 mm. All measurements made using sensors during the repair procedure are automatically sent to the computer, which, by analyzing the measurements made, corrects the thickness of the adjusting elements (washers). Performing such a procedure guarantees that the injector will work properly.



### Przykładowe pomiary możliwe do wykonania na wtryskiwaczach BOSCH:

- Kontrola wysterowania elektrycznego cewki
- Pomiar skoku kulki/twornika
- Pomiar szczeliny powietrznej
- Pomiar skoku iglicy wtryskiwacza
- Regulacja siły nacisku sprężyny rozpylacza
- Kontrola izolacji cewki wtryskiwacza



### Przykładowe pomiary możliwe do wykonania na wtryskiwaczach VDO:

- Test rezystancji
- Test pojemności
- Test wydajności elementu piezoelektrycznego
- Test izolacji
- Pomiary szczeliny Piezo
- Sterowanie pneumatyczne momentem dokręcania cewki piezo

### Components of the Bosch, Siemens, Denso set (007950030985)



PC with software



JTD tester



Electronic torque wrench



Measuring vice, comparator base, vice to unscrew the injector nozzle, press for CRI2.1



Comparators, measuring tools, necessary mounting sleeves, adapters and harnesses

# SPECIAL TOOLS

Kompletny zestaw narzędzi specjalistycznych do demontażu i montażu wtryskiwaczy Bosch CRI+CRIN

**007950010210**



Zestaw 2 pęset antymagnetycznych

**007950010150**



Kompletny zestaw narzędzi specjalistycznych do demontażu i montażu wtryskiwaczy Bosch CRIN

**007950010220**



Zestaw nasadek heksagonalnych do odkręcania końcówek wtryskiwaczy, rozmiary: 14/15/17/19 mm

**007950010770**



Kompletny zestaw narzędzi specjalistycznych do demontażu i montażu wtryskiwaczy Bosch CRI

**007950010230**



Uniwersalny zacisk do mocowania wtryskiwaczy w imadle, z regulowanym rozstawem szczelek

**007950010750**



Nasadka heksagonalna do odkręcania końcówki we wtryskiwaczach IVECO DAILY 17,5MM

**007950010730**



Podstawa z elektronicznym komparatorem do ustawiania i pomiaru podkładek wtryskiwaczy, z dwoma uchwytymi wtryskiwaczy 17mm i 19mm

**007950010310**



Pojemnik do bezpiecznego przechowywania i transportowania wtryskiwaczy

**007950010240**



Specjalne imadło do montażu i pomiaru wtryskiwaczy COMMON RAIL

Specjalne imadło umożliwiające odkręcenie, zgodnie z zaleceniami producentów wtryskiwaczy, nakrętki rozpylacza. W komplecie zestaw tarcz kątowych i tulejek potrzebnych przy montażu wtryskiwacza, oraz komparator elektroniczny wykorzystywany do pomiaru elementów wtryskiwacza

**007950010630**



Klucz do demontażu cewki wtryskiwacza, (6-kątny, 30 mm)

**007950010720**



Nasadka z tuleją prowadzącą do odkręcania zespołu zaworu we wtryskiwaczu Siemens

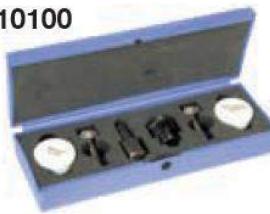
**007950010820**



Nasadka 3-pinowa do demontażu wewnętrznej nakrętki pierścieniowej wtryskiwacza Denso

**007950010840**



|  |  |
|--|--|
| <p>Myjka ultradźwiękowa<br/>42kHz/1.5 L<br/><b>007935095210</b></p>    | <p>Pin do nasadki do demontażu grupy zaworu<br/>Denso 007950010840<br/><b>007950030005</b></p>     |
| <p>Zestaw 6 heksagonalnych kluczy POD KLUCZ 1/2" 15, 17, 19, 27, 29, 30cMM<br/><b>007950010320</b></p>     | <p>Nasadka 3-pinowa do demontażu wewnętrznej nakrętki pierścieniowej wtryskiwacza Delphi<br/><b>007950010790</b></p>     |
| <p>Nasadka do demontażu wewnętrznej nakrętki pierścieniowej wtryskiwacza Bosch, heksagonalna 10 mm, otwór 6,5 mm i 7,5 m<br/><b>007950010800</b></p>     | <p>Nasadka do demontażu wewnętrznej nakrętki pierścieniowej wtryskiwacza Denso<br/><b>007950030025</b></p>     |
| <p>Pozycjoner uszczelnienia teflonowego Bosch CRI (0.986.613.640)<br/><b>007950011450</b></p>    | <p>Gniazdo testowe do testowania szczelności powierzchni gniazd kulowych<br/><b>007950010340</b></p>     |
| <p>Pozycjoner uszczelniający teflonowy we wtryskiwaczach Bosch CRIN (0.986.613.646)<br/><b>007950010670</b></p>    | <p>Zestaw do docierania gniazd kulek we wtryskiwaczach.<br/>W skład zestawu wchodzi tuleja prowadząca, dwa trzepienie polerujące i dwa pudelka pasty do polerowania o różnej gradacji<br/><b>007950010100</b></p>   |
| <p>Pozycjoner uszczelniający teflonowy we wtryskiwaczach Bosch CRIN (0.986.613.648)<br/><b>007950010680</b></p>    |  |
| <p>Klucz do demontażu cewki wtryskiwacza, (6-kątny, 29 mm)<br/><b>007950010710</b></p>     | <p>Pasta do polerowania gniazda kulki<br/><b>007950010380</b></p>    |
| <p>Imadło do montażu końcówek wtryskiwaczy i pompowtryskiwaczy z kompletom szczęk (0.986.613.400 + 0.986.613.500)<br/>Przyrząd do demontażu i ponownego montażu pompowtryskiwaczy, wyposażony w płytki do wszystkich obsad wtryskiwaczy Common Rail.<br/><b>007950010250</b></p>   | <p>Stanowisko do profesjonalnej naprawy wtryskiwaczy z oświetleniem i odpylaniem<br/><b>007950011550</b></p>     |
| <p>Docisk do imadła do VW (do użytku z 007950010250)<br/><b>007950011595</b></p>     |  |

Zestaw do manualnego pomiaru ciśnienia paliwa do 2500 BAR

**007935095600**



Elektroniczny miernik do pomiaru siły nacisku. Ognisko obciążające z cyfrowym wskaźnikiem obciążenia.

**007950010260**



Chwytki do pompowtryskiwaczy  
**007950010270**



Adapter testowy do sprawdzania końcówki pompowtryskiwacza VW 04147203xx (1.683.355.057)

**007950011560**



Adapter testowy do sprawdzania końcówki pompowtryskiwacza VW 04147200xx, 04147201xx, 04147202xx (1.683.355.056)

**007950011570**



Adapter testowy kontroli wyważenia pompowtryskiwacza EUI Audi, gwint 25x0,75 mm (1.681.398.033)

**007950011580**



Narzędzie do frezowania brzegu wtryskiwacza

**007935063350**



Narzędzie do oczyszczania gniazda wtryskiwaczy Denso 17-19 mm

**007935063360**



Miernik oporności i pojemności - tester LCR

**007950030870**



Miernik pozwala na dokładny pomiar oporności i ciągłości pomiędzy pinami wtyczki wtryskiwacza i jego korpusu.

Dzięki niemu możliwa jest dokładna ocena pojemności stosu piezoelektrycznego we wtryskiwaczach piezoelektrycznych.

Miernik izolacji wysokonapięciowy

**007950030875**



Miernik pozwala zdiagnozować na obecność zwarć wtryskiwacze cewkowe i piezoelektryczne. Umożliwia pomiar przy napięciu 250V (i większym) i prądzie testowym 1mA.

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DO POBRANIA

Wypożyczenie warsztatu - katalog Magneti Marelli

Nasz serwis od dawna zapewnia najwyższą jakość specjalistyczny sortet, który szybko i skutecznie uzupełni wyposażenie warsztatu – zarówno prywatnych, jak i firmowych. Oferujemy przez nas narzędzia oraz urządzenia zgodne z standardem torowym Magneti Marelli to investycja, która będzie szybko się zwróciła. Magneti Marelli to jakość serca w sobie ceniiona przez wieloletnie rzesze odbiorców na całym świecie. W naszej ofercie klienti poszukujący najlepszych rozwiązań na wyposażenie warsztatu z pewnością szybko znajdą tu, czego najbardziej potrzebują. Katalog Magneti Marelli to szeroki zakres opcji, który jest w stanie dopasować rozwiązań do unikalnych potrzeb oraz specyfiki pracy każdego klienta. Dzięki specjalnej secejce oraz ciągle aktualizowanej bazy produktów nasz odbiorcy mają pewność, że nabywają rozwiązania prawidłowe najwyższej jakości.

Zapraszamy Państwa gorąco do zapoznania się z naszą ofertą.

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**Marelli Aftermarket Poland Sp. z o.o.**

Plac pod Lipami 5, 40-476 Katowice, Poland

Tel. + 48 32 60 36 142

Tel. + 48 32 60 36 143

Tel. + 48 32 60 36 144

Fax. +48 32 60 36 145

e-mail: [wypozasenie@marelli.com](mailto:wypozasenie@marelli.com)

[www.magnetimarelli-checkstar.pl](http://www.magnetimarelli-checkstar.pl)

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