Архангельск (8182)63-90-72 Астана (7172)727-132 Астрахань (8512)99-46-04 Барнаул (3852)73-04-60 Белгород (4722)40-23-64 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Волгоград (844)278-03-48 Вологда (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4932)77-34-06 Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калининград (4012)72-03-81 Каров (3832)68-02-04-62 Киров (8332)68-02-04 Краснодар (861)203-40-90 Красноярск (391)204-63-61 Курск (4712)77-13-04 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Ореп (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (862)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (842)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Яроспавль (4852)69-52-93

Киргизия (996)312-96-26-47

Россия (495)268-04-70

Казахстан (772)734-952-31

#### https://leitenberger.nt-rt.ru/ || bge@nt-rt.ru

# **INJECTOR TEST STANDS**



- Unique, compact, economical and professional solutions for every workshop, development and quality department for testing and maintenance of diesel CR or petrol DI injectors.
- Functions for all DISU/GISU test benches
- Short setup and measurement times
- Automatic test run
- Ergonomic design
- Robust test bench with high quality
- Easy operation via touch screen
- Android-based software
- Simple and user-friendly menu navigation with language selection
- Test liquid is cleaned with a 2 µm filter
- Database with over 2000 test plans for almost all CR injectors
- Free unlimited updates for software and database
- Closed test system without spray filtering etc.
- Maximum occupational safety thanks to additional plexiglass test chamber cover.
- Almost maintenance-free standalone device
- Low operating costs, no licence fees, free support
- Up to 2800 bar test pressure, EU6 injectors, VDO authorized (depending on model)

# TEST BENCH FOR 4 CR DIESEL-INJECTORS - 2800 BAR HIGH-END VERSION



item number : DISU 4000\_2800bar (041320\_1)

- Professional, automated test bench for maintenance and testing of up to 4 common rail injectors
- Suitable for all common injectors of common rail diesel systems (Bosch, Delphi, Denso, Siemens / VDO / Continental, HTC, Piezo; CDI, TDI, HDI...)
- Future-proof, also suitable for NCC and VCC technology, e.g. for the EU6 injector generation; CRI3-25, CRI3-27, Denso I-Art (6-pin)
- VDO authorised test, repair and coding system
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi-enabled; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The special design of the illuminated pressure injection chamber ensures a clear view of the spray pattern even multiple injections can be checked and diagnosed with optical precision; an incorrect spray pattern or a leaking or clogged injector can be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration less than 25 minutes for 4 injectors
- Dynamic electronic mass measurement system
- Injector coding function VDO IIC, Delphi C2i and C3i, Bosch IMA and ISA and Denso QR (optional)
- Regeneration function for piezo injectors
- 10" touch screen
- Test pressure up to 2800 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
  - Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H

- The injector test and service test bench,
- without moving parts
- without filtration
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (2500 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Max. pressure (bar) (2x): 1850 / (3x): 2450
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 µm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg

### SCOPE OF DELIVERY

- 1 DISU 4000 test bench including connection and adapter set for all common injectors
- 1 DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles EQUIPMENT
- DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles
- DISU\_Z\_RSP (041284\_1) Nozzle response time sensor, for all brands, for 7–9 mm nozzles, pressure approx. 2 bar, measurement range 50 ... 4000 µs
- DISU\_Z\_PIRV.CB (041301\_1) Piezo injector return valve set, Continental / Bosch (2/10 bar)
- DISU\_Z01 (041285\_1) Test liquid, content 5 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin Injector adapter:
- CRS.01 > Iveco / Cummis / Dodge / Duramax (Bosch 120- 184/ 018/ 114/ 032/ 007/ 161)
- CRS.02 > lveco / Cummis (Bosch 120- 125/ 070)
- CRS.03 > KHD / Deutz (Bosch 120-067)
- CRS.04 > Renault (Bosch 120-003)
- CRS.05 > Fuso Trucks (Denso 6M60)
- CRS.06 > Fuso Trucks (Bosch 6M70)
- CRS.07 > Cummis (Cummins 4954927)
- CRS.08 > Duramax (Denso 5730)
- CRS.09 > John Deere (Denso 0540)
- CRS.10 > Ford 6.4 I Power Stroke (Siemens 8C3Z-9E527-A)
- CRS.11 > MAN (Bosch 120- 030/ 218/ 100/ 217/ 063)
- CRS.12 > KHD / Deutz (Bosch 120-065)
- CRS.13 > MTU (Bosch 920189903 [3894783, Y431K05210])
- CRS.14 > Denso (Denso 0800 05C0064)
- CRS.15 > MTU-L'Orange (L'ORANZ 934759 [VTO-G266W48B])
- CRS.16 > lveco (Bosch 120-054)

- CRS.17 > MAN (Bosch 120- 044/ 053/ 045/ 162/ 098)
- CRS.18 > Iveco (Bosch 120-157)
- additional adapters on request.

# TEST BENCH FOR 4 CR DIESEL-INJECTORS - 2500 BAR HIGH-END VERSION



item number : DISU 4000\_2500bar (041295\_1)

- Professional, automated test bench for maintenance and testing of up to 4 common rail injectors
- Suitable for all common injectors of common rail diesel systems (Bosch, Delphi, Denso, Siemens / VDO / Continental, HTC, Piezo; CDI, TDI, HDI...)
- Future-proof, also suitable for NCC and VCC technology, e.g. for the EU6 injector generation; CRI3-25, CRI3-27, Denso I-Art (6-pin)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi-enabled; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The special design of the illuminated pressure spray chamber ensures a clear view of the spray pattern even multiple injections can be checked and diagnosed with optical precision; an incorrect spray pattern or a leaking or clogged injector can be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration less than 25 minutes for 4 injectors
- Dynamic electronic mass measurement system
- Injector coding function VDO IIC, Delphi C2i and C3i, Bosch IMA and ISA and Denso QR (optional)
- Regeneration function for piezo injectors
- 10" touch screen
- Test pressure up to 2500 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test

- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtering
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\*two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (2500 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Max. pressure (bar) (2x): 1850 / (3x): 2450
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 μm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 DISU 6000 test bench including connection and adapter set for all common injectors
- 1 DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles EQUIPMENT
- DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles
- DISU\_Z\_RSP (041284\_1) Nozzle response time sensor, for all brands, for 7–9 mm nozzles, pressure approx. 2 bar, measurement range 50 … 4000 µs
- DISU\_Z\_PIRV.CB (041301\_1) Piezo injector return valve set, Continental / Bosch (2/10 bar)
- DISU\_Z01 (041285\_1) Test liquid, content 5 l; USB 01\_EU (130603\_2) Ultrasonic cleaning basin
- Adapters for injectors:
- CRS.01 > Iveco / Cummis / Dodge / Duramax (Bosch 120- 184/ 018/ 114/ 032/ 007/ 161)
- CRS.02 > Iveco / Cummis (Bosch 120- 125/ 070)
- CRS.03 > KHD / Deutz (Bosch 120-067)
- CRS.04 > Renault (Bosch 120-003)
- CRS.05 > Fuso Trucks (Denso 6M60)
- CRS.06 > Fuso Trucks (Bosch 6M70)
- CRS.07 > Cummis (Cummins 4954927)
- CRS.08 > Duramax (Denso 5730)
- CRS.09 > John Deere (Denso 0540)
- CRS.10 > Ford 6.4 | Power Stroke (Siemens 8C3Z-9E527-A)
- CRS.11 > MAN (Bosch 120- 030/ 218/ 100/ 217/ 063)
- CRS.12 > KHD / Deutz (Bosch 120-065)
- CRS.13 > MTU (Bosch 920189903 [3894783, Y431K05210])
- CRS.14 > Denso (Denso 0800 05C0064)

- CRS.15 > MTU-L'Orange (L'ORANZ 934759 [VTO-G266W48B])
- CRS.16 > Iveco (Bosch 120-054)
- CRS.17 > MAN (Bosch 120- 044/ 053/ 045/ 162/ 098)
- CRS.18 > Iveco (Bosch 120-157)
- further adapters on request.

TEST BENCH FOR 4 CR DIESEL-INJECTORS - 2200 BAR HIGH-END VERSION (TESTING & CLEANING)



#### item number : DISU 4000\_2200bar\_C (041350\_1) DESCRIPTION

- Professional, automated test bench for maintenance, testing and cleaning of up to 4 common rail injectors
- Suitable for all common injectors of common rail diesel systems (Bosch, Delphi, Denso, Siemens / VDO / Continental, HTC, Piezo; CDI, TDI, HDI...)
- Future-proof, also suitable for NCC and VCC technology, e.g. for the EU6 injector generation; CRI3-25, CRI3-27, Denso I-Art (6-pin)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi-enabled; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The special design of the illuminated pressure spray chamber ensures a clear view of the spray pattern even multiple injections can be checked and diagnosed with optical precision; an incorrect spray pattern or a leaking or clogged injector can be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors
- Test duration less than 25 minutes for 4 injectors
- Dynamic electronic mass measurement system
- Injector coding function VDO IIC, Delphi C2i and C3i, Bosch IMA and ISA and Denso QR (optional)
- Regeneration function for piezo injectors
- 10" touch screen
- Test pressure up to 2200 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection

- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free support\* via TeamViewer (\*two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (2200 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Max. pressure (bar) (2x): 1850 / (3x): 2450
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 µm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg

SCOPE OF DELIVERY

• 1 DISU 6000 test bench including connection and adapter set for all common injectors

• 1 DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles EQUIPMENT

- DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles
- DISU\_Z\_RSP (041284\_1) Nozzle response time sensor, for all brands, for 7–9 mm nozzles, pressure approx. 2 bar, measurement range 50 ... 4000 µs
- DISU\_Z\_PIRV.CB (041301\_1) Piezo injector return valve set, Continental / Bosch (2/10 bar)
- DISU\_Z01 (041285\_1) Test liquid, content 5 l
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

#### Injector adapter:

- CRS.01 > Iveco / Cummis / Dodge / Duramax (Bosch 120- 184/ 018/ 114/ 032/ 007/ 161)
- CRS.02 > Iveco / Cummis (Bosch 120- 125/ 070)
- CRS.03 > KHD / Deutz (Bosch 120-067)
- CRS.04 > Renault (Bosch 120-003)
- CRS.05 > Fuso Trucks (Denso 6M60)
- CRS.06 > Fuso Trucks (Bosch 6M70)
- CRS.07 > Cummis (Cummins 4954927)
- CRS.08 > Duramax (Denso 5730)
- CRS.09 > John Deere (Denso 0540)
- CRS.10 > Ford 6.4 | Power Stroke (Siemens 8C3Z-9E527-A)
- CRS.11 > MAN (Bosch 120- 030/ 218/ 100/ 217/ 063)

- CRS.12 > KHD / Deutz (Bosch 120-065)
- CRS.13 > MTU (Bosch 920189903 [3894783, Y431K05210])
- CRS.14 > Denso (Denso 0800 05C0064)
- CRS.15 > MTU-L'Orange (L'ORANZ 934759 [VTO-G266W48B])
- CRS.16 > lveco (Bosch 120-054)
- CRS.17 > MAN (Bosch 120- 044/ 053/ 045/ 162/ 098)
- CRS.18 > lveco (Bosch 120-157)
- additional adapters on request.

# TEST BENCH FOR 4 CR DIESEL-INJECTORS - 2200 BAR HIGH-END VERSION



#### item number :

DISU 4000\_2200bar\_T (041349\_1)

- Professional, automated test bench for maintenance and testing of up to 4 common rail injectors
- Suitable for all common injectors of common rail diesel systems (Bosch, Delphi, Denso, Siemens / VDO / Continental, HTC, Piezo; CDI, TDI, HDI...)
- Future-proof, also suitable for NCC and VCC technology, e.g. for the EU6 injector generation; CRI3-25, CRI3-27, Denso I-Art (6-pin)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi-enabled; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The special design of the illuminated pressure spray chamber ensures a clear view of the spray pattern even multiple injections can be checked and diagnosed with optical precision; an incorrect spray pattern or a leaking or clogged injector can be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors
- Test duration less than 25 minutes for 4 injectors
- Dynamic electronic mass measurement system
- Injector coding function VDO IIC, Delphi C2i and C3i, Bosch IMA and ISA and Denso QR (optional)
- Regeneration function for piezo injectors
- 10" touch screen
- Test pressure up to 2200 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load

- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\*two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (2200 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Max. pressure (bar) (2x): 1850 / (3x): 2450
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 μm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg

### SCOPE OF DELIVERY

- 1 DISU 6000 test bench including connection and adapter set for all common injectors
- 1 DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles EQUIPMENT
- DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles
- DISU\_Z\_RSP (041284\_1) Nozzle response time sensor, for all brands, for 7–9 mm nozzles, pressure approx. 2 bar, measurement range 50 ... 4000 μs
- DISU\_Z\_PIRV.CB (041301\_1) Piezo injector return valve set, Continental / Bosch (2/10 bar)
- DISU\_Z01 (041285\_1) Test liquid, content 5 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin Injector adapter:
- CRS.01 > Iveco / Cummis / Dodge / Duramax (Bosch 120- 184/ 018/ 114/ 032/ 007/ 161)
- CRS.02 > Iveco / Cummis (Bosch 120- 125/ 070)
- CRS.03 > KHD / Deutz (Bosch 120-067)
- CRS.04 > Renault (Bosch 120-003)
- CRS.05 > Fuso Trucks (Denso 6M60)
- CRS.06 > Fuso Trucks (Bosch 6M70)
- CRS.07 > Cummis (Cummins 4954927)
- CRS.08 > Duramax (Denso 5730)

- CRS.09 > John Deere (Denso 0540)
- CRS.10 > Ford 6.4 | Power Stroke (Siemens 8C3Z-9E527-A)
- CRS.11 > MAN (Bosch 120- 030/ 218/ 100/ 217/ 063)
- CRS.12 > KHD / Deutz (Bosch 120-065)
- CRS.13 > MTU (Bosch 920189903 [3894783, Y431K05210])
- CRS.14 > Denso (Denso 0800 05C0064)
- CRS.15 > MTU-L'Orange (L'ORANZ 934759 [VTO-G266W48B])
- CRS.16 > lveco (Bosch 120-054)
- CRS.17 > MAN (Bosch 120- 044/ 053/ 045/ 162/ 098)
- CRS.18 > Iveco (Bosch 120-157)
- additional adapters on request.

# TEST BENCH FOR 1 CR DIESEL-INJECTOR - 2200 BAR BASIC VERSION



#### item number : DISU 1200\_2200bar (041324\_2) DESCRIPTION

- Professional, automated test bench for maintenance and testing of injectors
- Suitable for all common injectors of common rail diesel systems (Bosch, Delphi, Denso, Siemens / VDO / Continental, HTC, Piezo; CDI, TDI, HDI...)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi-enabled e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration approx. 12 minutes
- Static, electronic mass measurement system
- Regeneration function for piezo injectors
- 8" touch screen
- Test pressure up to 2200 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission

- Low load
  - Pre- and post-injection
- ٠ Injection quantity measurement with rising test curve •
- Test of the nozzle opening pressure •
- Test for leakage / tightness test •
- Static leakage quantity test •
- Electrical test of  $\Omega$ , F, H •
- The injector test and service test bench •
- without moving parts ٠
- without filtration •
- without temperature calibration •
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\*two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit •
- Maintenance-free •
- with connection to workshop's compressed air supply for test pressure generation (2500 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available
- Professional, automated test bench for maintenance and testing of injectors. •
- Suitable for all common injectors and systems (Bosch, Delphi, Denso, Conti, HTC, Piezo, G-DI, FSI...)
- Fully automatic operation •
- High performance quality product made in Germany SCOPE OF DELIVERY
- 1 DISU 1200 test bench including connection and adapter set for all common injectors •
- 1 DISU\_Z\_PIST (041293\_1) Illuminated pressure injection chamber, for 7–9 mm nozzles EQUIPMENT
- DISU\_Z\_RSP (041284\_1) Nozzle response time sensor, for all brands, for 7–9 mm nozzles, pressure approx. 2 bar, measurement range 50 ... 4000 µs
- DISU\_Z\_PIRV.CB (041301\_1) Piezo injector return valve set, Continental / Bosch (2/10 bar)
- DISU Z01 (041285 1) Test liquid, content 5 l •
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin Injector adapter:
- CRS.01 > Iveco / Cummis / Dodge / Duramax (Bosch 120- 184/ 018/ 114/ 032/ 007/ 161) •
- CRS.02 > Iveco / Cummis (Bosch 120- 125/ 070) •
- CRS.03 > KHD / Deutz (Bosch 120-067) •
- CRS.04 > Renault (Bosch 120-003) •
- CRS.05 > Fuso Trucks (Denso 6M60) •
- CRS.06 > Fuso Trucks (Bosch 6M70) •
- CRS.07 > Cummis (Cummins 4954927) •
- CRS.08 > Duramax (Denso 5730) •
- CRS.09 > John Deere (Denso 0540) •
- CRS.10 > Ford 6.4 | Power Stroke (Siemens 8C3Z-9E527-A) •
- CRS.11 > MAN (Bosch 120- 030/ 218/ 100/ 217/ 063) •
- CRS.12 > KHD / Deutz (Bosch 120-065) •
- CRS.13 > MTU (Bosch 920189903 [3894783, Y431K05210]) •
- CRS.14 > Denso (Denso 0800 05C0064) •
- CRS.15 > MTU-L'Orange (L'ORANZ 934759 [VTO-G266W48B]) •
- CRS.16 > Iveco (Bosch 120-054) •
- CRS.17 > MAN (Bosch 120- 044/ 053/ 045/ 162/ 098) •
- CRS.18 > Iveco (Bosch 120-157) •
- additional adapters on request.

# TEST BENCH FOR 1 GASOLINE DIRECT INJECTOR - 850 BAR HIGH END VERSION



item number : GISU 6000\_850bar\_C (041299\_1)

- Professional, automated test bench for maintenance, testing and cleaning of injectors
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration only about 5 minutes
- Dynamic electronic mass measurement system
- Regeneration function for piezo injectors
- Automatic chemical cleaning and rinsing
- 10" touch screen
- Test pressure up to 850 bar
- Inspection/test scope:
- dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtering
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"

- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (850 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 6000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

## TEST AND SERVICE TEST BENCH 850 BAR "HIGH END" FOR 1 INJECTOR PETROL DIRECT INJECTION



item number : GISU 6000\_850bar\_T (041323\_1) DESCRIPTION

- Professional, automated test bench for maintenance and testing of injectors
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support

- Archiving of test reports in Dropbox or via USB
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration only about 5 minutes
- Dynamic electronic mass measurement system
- Regeneration function for piezo injectors
- 10" touch screen
- Test pressure up to 850 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
  - Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtering
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (850 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A; Rated power 300 W
- Storage temperature -25°C ... +60°C; Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 µm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 6000 test bench including connection and adapter set for all common petrol direct injection injectors

- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Düsenreaktionszeitsensor für alle Marken für 8-mm-Düsen
- GISU\_Z01 (041286\_1) Testflüssigkeit, Inhalt 4 I
- GISU\_Z02 (041296\_1) Reinigungsflüssigkeit (aMACC), Inhalt 2 I
- USB 01\_EU (130603\_2) Ultraschallreinigungsbecken

## TEST BENCH FOR 1 GASOLINE DIRECT INJECTOR - 450 BAR HIGH END VERSION (TESTING & CLEANING)



#### item number :

GISU 6000\_450bar\_C (041357\_1)

- Professional, automated test bench for maintenance, testing and cleaning of injectors.
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...).
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database.
- Over 2000 injector reference/test values, including free update function.
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors.
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support.
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily.
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors.
- Test duration only about 5 minutes.
- Dynamic electronic mass measurement system.
- Regeneration function for piezo injectors.
- Automatic chemical cleaning and rinsing.
- 10" touch screen
- Test pressure up to 450 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test

- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration,
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free support via TeamViewer
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (450 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 μm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 6000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- DGISU\_Z02.1 (041296\_2) Cleaning liquid (aMACC), content 2,5 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

## TEST BENCH FOR 1 GASOLINE DIRECT INJECTOR - 450 BAR HIGH END VERSION



item number : GISU 6000\_450bar\_T (041358\_1) DESCRIPTION

• Professional, automated test bench for maintenance and testing of injectors.

- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...).
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database.
- Over 2000 injector reference/test values, including free update function.
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors.
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support.
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily.
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors.
- Test duration only about 5 minutes.
- Dynamic electronic mass measurement system.
- Regeneration function for piezo injectors.
- 10" touch screen
- Test pressure up to 450 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration,
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free support via TeamViewer
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (450 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm

- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)</li>
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 6000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

## TEST BENCH FOR 4 GASOLINE DIRECT INJECTORS - 850 BAR HIGH END VERSION (TESTING & CLEANING)



#### item number :

GISU 4000\_850bar\_C (041355\_1) DESCRIPTION

- Professional, automated test bench for maintenance, testing and cleaning of up to 4 injectors.
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...).
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database.
- Over 2000 injector reference/test values, including free update function.
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors.
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support.
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily.
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors.
- Test duration only about 15 minutes.
- Dynamic electronic mass measurement system.
- Regeneration function for piezo injectors.
- Automatic chemical cleaning and rinsing.
- 10" touch screen

- Test pressure up to 850 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load

•

- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration,
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (850 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 μm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 μm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 4000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

# TEST BENCH FOR 4 GASOLINE DIRECT INJECTORS - 850 BAR HIGH END VERSION



item number : GISU 4000\_850bar\_T (041356\_1)

### TEST BENCH FOR 4 GASOLINE DIRECT INJECTORS - 450 BAR HIGH END VERSION



item number : GISU 4000\_450bar\_T (041354\_1) DESCRIPTION

- Professional, automated test bench for maintenance and testing of up to 4 injectors.
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...).
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database.
- Over 2000 injector reference/test values, including free update function.
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors.
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support.
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily.
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors.
- Test duration only about 15 minutes.
- Dynamic electronic mass measurement system.
- Regeneration function for piezo injectors.
- 10" touch screen
- Test pressure up to 450 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time

- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration,
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (450 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 µm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 4000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 l
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

# TEST BENCH FOR 4 GASOLINE DIRECT INJECTORS - 450 BAR HIGH END VERSION (TESTING & CLEANING)



item number : GISU 4000\_450bar\_C (041353\_1) DESCRIPTION

- Professional, automated test bench for maintenance, testing and cleaning of up to 4 injectors.
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...).
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database.
- Over 2000 injector reference/test values, including free update function.
- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors.
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support.
- Archiving of test reports in Dropbox or via USB.
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily.
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test.
- Uniquely fast and simple clamping system for injectors.
- Test duration only about 15 minutes.
- Dynamic electronic mass measurement system.
- Regeneration function for piezo injectors.
- Automatic chemical cleaning and rinsing.
- 12" touch screen
- Test pressure up to 450 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtration,
- without temperature calibration

- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (850 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
- Technical data:
- Mains connection 100–240 V~ / 1 Ph / 50 60 Hz (+/-10%)
- Compressed air 6.5–10.0 bar / 400 l/min
- Compressed air hose length < 10 m / inner diameter > 10 mm
- Rated current / fuse 5 A
- Rated power 300 W
- Storage temperature -25°C ... +60°C
- Operating temperature +5 °C +45 °C
- Standard operating temperature +10 °C +40 °C
- Tightening torque for high pressure connections 25–30 Nm
- Clamping diameter 17–32 mm
- Test oil type / filling quantity ISO 4113 / 3.5 I
- Test oil filter 2 µm
- Filling quantity MACC liquid 6.5 I
- Filter MACC liquid 8 µm
- Noise emissions < 71.5 dB(A)
- Dimensions (L x W x H) / weight: 66 x 77 x 79 mm / 70 kg
- SCOPE OF DELIVERY
- 1 GISU 4000 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 I
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

## TEST AND SERVICE TEST BENCH 450 BAR "BASIC" FOR 1 INJECTOR PETROL DIRECT INJECTION



item number : GISU 1200\_450bar (041327\_2) DESCRIPTION

- Professional, automated test bench for maintenance and testing of injectors
- Suitable for all common injectors of gasoline direct injection systems (electromagnetic / piezo injectors; CGI, G-DI, FSI, TSI...)
- High efficiency due to fast and fully automatic operation and test run as well as lifetime updates for software and database
- Over 2000 injector reference/test values, including free update function

- Simple operation through Android operating system with intuitive user interface and touch screen operation as well as one clamping for all injectors
- Wi-Fi/WLAN; e.g. for updates, printing and sending of test reports and support
- Archiving of test reports in Dropbox or via USB
- The unique design of the illuminated pressure spray chamber ensures a clear view of the spray pattern. Even multiple injections can be checked and diagnosed with optical precision. An incorrect spray pattern or a leaking or clogged injector can thus be detected quickly and easily
- Environmentally friendly and safe, as no spray mist is produced during the entire injector test
- Uniquely fast and simple clamping system for injectors
- Test duration only about 8 minutes
- Static, electronic mass measurement system
- Regeneration function for piezo injectors
- 8" touch screen
- Test pressure up to 450 bar
- Inspection/test scope:
- Dynamic spray pattern test
- Check of the injector reaction time
- Injection quantity measurement
- Full load
- Half load
- Emission
- Low load
- Pre- and post-injection
- Injection quantity measurement with rising test curve
- Test of the nozzle opening pressure
- Test for leakage / tightness test
- Static leakage quantity test
- Electrical test of Ω, F, H
- The injector test and service test bench,
- without moving parts
- without filtering
- without temperature calibration
- with software and database updates via Wi-Fi free of charge and "for life"
- with free\* support via TeamViewer (\* two years from purchase)
- with user-friendly operation (touch screen, Android, injector clamping)
- compact stand-alone unit
- Maintenance-free
- with connection to workshop's compressed air supply for test pressure generation (850 bar test pressure with only 6.5 bar compressed air)
- Complete sets of adapters, fittings and plugs for cars, commercial vehicles, buses and industrial engines available.
  - SCOPE OF DELIVERY
- 1 GISU 1200 test bench including connection and adapter set for all common petrol direct injection injectors
- 1 GISU\_Z\_PIST (041314\_1) Illuminated pressure injection chamber, for 8 mm nozzles EQUIPMENT
- GISU\_Z\_RSP (041297\_1) Nozzle response time sensor, for all brands, for 8 mm nozzles
- GISU\_Z01 (041286\_1) Test liquid, content 4 l
- GISU\_Z02 (041296\_1) Cleaning liquid (aMACC), content 2 I
- USB 01\_EU (130603\_2) Ultrasonic cleaning basin

# ACCESSORIES FOR TEST BENCHES

item number : Accessories DISU/GISU

DECONT HON		
Model	Descrioption	Ref-No
DISU_Z01	Test fluid, 4I	041285_1
GISU_Z01	Test fluid, 4I	041286_1
DGISU_Z02.1	Cleaner, 2l	041296_2
Adapter Sets	A wide range of adapters for commercial vehicles, trucks, busses and industrial engines is available	on request
DGISU_Z_RSP	Nozzle response time sensor, for all makes, for 7 - 9 mm nozzles, pressure ca. 2 bar, measurement range 504000 µs	041284_1
DISU_Z_PIST	LED lighted, pressurized injection chamber	041293_1

041314\_1

# ULTRASONIC BATH

DESCRIPTION

GISU\_Z\_PIST



item number : USB 01\_EU (130603\_1)

#### DESCRIPTION

- Top-class stainless steel ultrasound device with heating, timer and drain tap
- Ultrasound frequency of 44 kHz; Timer (1–30 min.), continuous operation and auto start when cleaning with heating and set temperature of 30 °C – 80 °C
- Sweep function for optimum sound field distribution in the cleaning liquid, e.g. for largevolume cleaning parts
- Degas function for rapid degassing of (newly prepared) cleaning fluids
- For simple and professional cleaning of injectors, injector parts and small mechanical parts.
- Technical data
- Ultrasound frequency: 37 kHz
- Filling volume max.: 2.75 l
- Working volume: 1.9 l
- External device dimensions W/D/H: 301/189/218 mm
- Internal dimensions of tray W/D/H: 222/122/99 mm
- Internal dimensions of basket W/D/H: 198/106/49 mm
- Weight: 3.3 kg;

#### EQUIPMENT

Model	Description	Ref-No
USB_Z1	Rack for gasoline direct injectors for USB 01_EU	130611_1
USB_Z2	Rack for diesel common rail injectors for USB 01_EU	130612_1
USB_Z3	Cage for small parts and cover plate for USB 01_EU	130613_1
USB_Z4	Cage for small parts for USB 01_EU	130614_1
USB_Z5	Cover plate for USB 01_EU	130615_1
USB_Z6	Cleanser, concentrate ,1 liter for USB 01_EU	130616_1

Архангельск (8182)63-90-72 Астана (7172)727-132 Астрахань (8512)99-46-04 Бариаул (3852)73-04-60 Белгород (4722)40-23-64 Брянск (4832)59-03-52 Владивосток (423)249-28-31 Волгоград (8412)26-80-348 Волгоград (8172)26-41-59 Воронеж (473)204-51-73 Екатеринбург (343)384-55-89 Иваново (4832)77-34-06

Ижевск (3412)26-03-58 Иркутск (395)279-98-46 Казань (843)206-01-48 Калининград (4012)72-03-81 Калуга (4842)92-23-67 Кемерово (3842)65-04-62 Киров (8332)68-02-04 Краснодар (861)203-40-90 Краснодрск (391)204-63-61 Курск (4712)77-13-04 Липецк (4742)52-20-81 Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Новосибирск (3843)20-46-81 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04 Пенза (8412)22-31-16 Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (862)22-31-93 Симферополь (8652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13

Сургут (3462)77-98-35 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Ярославль (4852)69-52-93

Киргизия (996)312-96-26-47

Россия (495)268-04-70

Казахстан (772)734-952-31

#### https://leitenberger.nt-rt.ru/ || bge@nt-rt.ru