



052

application
CRI / CRIN / PIEZO / MDI

Volumetric Tubes
 Precise. Graduated and led illuminated tubes are used for efficient diagnosis of uneven flow rates for both discharged and returned volumes. Automatic drainage after each test.


features
 resolution 1ml, accuracy $\pm 2\text{ml}/130\text{ml}$

Embedded Control Panel

features

- Piezo and solenoid actuation
- 3 Multiple Injections (programmable)
- Automatic / Manual modes
- Variable and customizable test-plans
- Expandability (Attachment units)
- On-display guided set-up
- Injector protection function
- PCB protection circuit
- User-friendly interface
- Language localization



Spray Chamber

Illuminated (high intensity LED) and fumes-clear spray chamber for clear view of injected pattern. You can virtually see the multiple injections.
 Diagnosis of: incorrect spraying, leaky or seized injectors



PIR – Piezo Injector Return regulator

Correct operation of Piezo injectors is only achieved when return pressure is regulated to the specific system requirements. (0-15 Bar)



Dual fluid-hydraulic system

Filtered at 2microns for testing and 8microns for cleaning injectors



Injector Clamp

Ergonomic, robust, fast & simple clamping with self positioning function



Adapters kit

A complete set of adapters, fittings and electrical connectors is supplied with the machine for all types of Bosch, Delphi, Denso and Siemens Common Rail injectors. A wide range of CRIN adapters for most commonly used commercial vehicles and trucks are available (optional)



Ultrasonic Device UB15e / UB15s

Ultrasound waves interact through a special fluid to provide safe & detailed cleaning of fuel injector components.

features

- Automatic function
- 42 kHz frequency range
- Electronic Heat control
- Sweep technology (UB15e)
- Degas action (UB15e)



Portable Stand

features

- Compact & Lightweight
- Accessories cabinet
- Modern design



UA2
 (DS2 & CRU 2* attachment device)

Piezo Solenoid Dual - Solenoid

Servicing of unit injection systems for the first time is made possible not only for the Diesel Specialists, but also for every workshop.

application
 Heavy Duty & Light Duty Trucks, Passenger Cars, Marines, Trains, Mining and Industrial Equipment

Spray Chamber
 Illuminated (high intensity LED) and fumes-clear spray chamber for clear view of injected pattern. You can virtually see the combined spring-valve-nozzle operation of the Unit System as it is performed. Control Panel can change the Unit Timing Signal [T] and also simulate different Cam Lobe Widths [W] for optimum testing of the Unit. Diagnosis of: incorrect spraying, proper operation of the control valve, leaky or seized injectors

Volumetric Tubes
 Attaching to the DS2 series machine, the UA2 can precisely measure the unit system discharged volume. Graduated and Led illuminated tubes are used for efficient diagnosis of uneven flow rates. Automatic drainage after each test.


features
 resolution 1ml, accuracy $\pm 2\text{ml}/130\text{ml}$ (DS2)
 resolution 0.2mg, accuracy 0.2% Electronic measurement (CRU.2)

Unit System Mounting
 Ergonomic, sturdy, fast & simple mounting with drawer style self-positioning function. The spray chamber moves backwards for volumetric testing phase. Adjustable Cam stroke 5-24mm with the use of shims.

Adapters kit
 A wide range of UI/UP adapters, fittings, adjusting rods, shims and electrical connectors for most commonly used systems are available (optional)

systems:
 Volvo (Bosch & Delphi), John Deere, Delphi, Scania/ Yanmar, Iveco, CAT, Cummins Celect, Cummins Mechanical, Detroit Diesel, Mercedes (Actros & Atego), Mack, VW PDE (Bosch & Siemens), etc.

* Future Upgrade



features

- Fast mounting and dismounting of injector/pump
- Pneumatic operated unit (Conventional test bench or motor is NOT required)
- Requires DS2 or CRU 2* to operate
- Clear protective injector assembly cover
- Cummins Low Pressure supply system
- Spill free quick-connectors for Discharge and return hoses
- Low pressure fluid control & indication (0-10 Bar)
- Electrical positive displacement fluid handling pump
- Dual-Fluid system (testing and chemical treatment)
- Filtered injection fumes extractor and collector
- Delphi E3 dual solenoid system (optional CRU 2*)
- Piezo actuation for all EUI's
- MACC (Advanced chemical treatment and flushing of the injector - *optional*)
- Ergonomic and dynamic design
- Short testing time required
- Expandable for HEUI systems*
- Quality & robust



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Diesel Tech Series		CRU.2	DS2	DSC
Technical Specifications				
● standard ○ optional ⊗ not applicable				
Diesel Injector Testing Spray Patterns / Atomization		●	●	⊗
Diesel Injector Testing Discharge volume		●	●	⊗
Diesel Injector Testing Return volume		●	●	⊗
Chemical cleaning and injector treatment for all types (MACC)		○	○	●
Diesel Injector Piezo driver		●	●	●
PIR- Piezo Injector Return regulator		○	○	○
Injector Driving characteristics for Bosch, Delphi, Denso and Siemens CR		●	●	●
Programmable Injector Driving Volts (V / 1 step)		1-150	1-150	1-150
Programmable Injector Driving peak & hold Ampere function (A / 0.1 step)		1-30	1-35	1-35
EUI Injector Driving characteristics for Cummins, CAT, Detroit Diesel, John Deere		●	●	●
EUI Injector Driving characteristics for Scania, Volvo, Iveco, VW		●	●	●
EUP Injector Driving characteristics for Mercedes Actros / Atego / Mack		●	●	●
Clear Protection cover for all machine operations		●	○	⊗
Digital indication of High Pressure		●	●	○
Electronic Pump control and regulator		●	⊗	⊗
Spray tube Fumes Extractor (vacuum clearing)		●	●	⊗
Fumes Extractor Filtered exhaust to the Environment		●	●	⊗
High intensity Led lighting		●	●	⊗
Automatic / Semi Automatic / Manual modes (testing programs)		●●●	⊗●●	⊗●●
User-programmable sector		●	●	●
CR customizable Multiple Injections activation (Pre-Main-Post)		⊗	○	⊗
CR customizable Multiple Injections activation (9 multiple injections)		○	⊗	⊗
Step-by-step instructions (LCD)		●	●	●
Interface (HMI) / Linux OS		8.4" Touch LCD TFT / ●	⊗	⊗
Future updates and upgrades		●	●	●
Automatic draining of volumetric tubes		⊗	●	⊗
Electric coil condition and [O] Ohm testing		●	●	●
Testing of electrical Coil Inductance / Piezo Capacitance		●●	⊗⊗	⊗⊗
Operating pressure (Bar / 1 Bar=10Kpa)		0-1800	0-1800	0-1000
Automatic adjustment of Pressure to system tested		●	⊗	⊗
Injector operating frequency (strokes in increments of 10)		10-10,000	30-6000	30-6000
Injector pulse width (µs / increments of µs)		100-50,000 / 10	200-200,000 / 100	200-200,000 / 100
Operating time (seconds)		1-Infinity	5-60,000	5-60,000
Injector Dynamic and Static tests		●	●	⊗
Volumetric measurement in graduated glass tubes (ml with 2% tol)		⊗	5-130	⊗
Dynamic electronic mass metering (Res 0.2mg / Acc. 0.2%)		●	⊗	⊗
Diagnose Injector Uneven flow rates/ bad spray pattern / electrical failures		●	●	⊗
Diagnose Weak or Defective injector nozzle springs / leaky or seized injectors		●	●	⊗
Standard Adapters CRI / DI / CRIN (All Makes*)		●●○	●●○	●●○
Adapters EUI / EUP / UI / UP (All Makes*)		○●○●○	○●○●○	○●○●○
UB15e Ultrasonic bath exclusive (Automatic, Sweep tech 21-42kHz, Degas, Heat control)		○	○	○
UB15s Ultrasonic bath Standard (Semi-Auto,42Khz, Heat control)		●	●	○
Compressed (Purified) Air Supply Input (Bar)		4-10	3-10	3-10
Avg air consumption (l/min) / Max air consumption (l/min)		500 / 1200	350 / 700	150 / 300
Testing Oil Tank / Cleaning detergent Oil Tank (L)		4 / 2.5	4 / 2.5	⊗ / 2.5
Testing Oil Tank / Cleaning detergent Oil Tank Filtering (µm)		2 / 8	2 / 8	⊗ / 8
Tightening torque for HP lines (Nm)		24-32	24-32	24-32
Flexible HP / LP Hose (Burst pressure / Operating pressure) (Bar)		4000 / 2500	4000 / 2500	3500 / 2000
Adjustable Injector Clamp for 8-45 mm		●	●	●
HP injector connection M12 and M14		●	●	●
Input power (Volts) / Power Consumption (Watt)		100-250 / 370	100-250 / 250	100-250 / 200
Operating Frequency (KHz)		50/60	50/60	50/60
Easy Access Emergency Stop Switch		●	⊗	⊗
Packaged Dimensions WxDxH (mm) / Weight (Kg)		605/702/925 / 84	605/702/1015 / 67	510/430/670 / 35
Language localization		●	●	●

* Some makes are subject to availability within normal delivery periods.
 Dimensions and weight values are subject to change without notice