

# CRDi & Fuel Injection Pump Test Bench

## VDT-500



## Product Features

It is combination machine common rail injector test bench and diesel injection pump test bench

### Common rail test

- Testing for injector injection quantity
- Testing for injection figures
- Testing for injector injection returns
- Testing for various high-pressure pump discharge rate (Bosch, Delphi, Denso)
- Testing for various common rail high pressure input
- All kinds of common rail simulation testing
- Injector automatic cleaning during testing (Optional)
- Injector cleaning during vehicle engine starting (Optional)

### Diesel fuel injection pump test

- The testing bench is an experimental equipment and it is used to repair and remove the defects of injection pump in diesel engine of automotive, marine, etc. It can control all kinds of diesel injection pump.
- Control test of the injection time
- Timer angle test
- Control test of the injection amount
- Supply pressure and amount test of feed pump
- Overflow amount test
- Control test of each part
- Air boost and pneumatic governor test
- Rack position adjusting test(Digital rack scale)

### Monitor control box

- Display injection amount and common rail pressure by engine R.P.M

### Standard accessories & tools

Refer to the attachment

Technical specifications are subject to changes without notice.



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# CRDi & Fuel Injection Pump Test Bench

## Technical Specifications

Description	CRDi (Common Rail Injector) Test system
High Pressure pump drive motor	AC 220V/380V/3PH/60HZ (control by inverter) Working pressure 180MPA(1800bar)
Low pressure pump drive motor	AC 220V/380V/3PH/60HZ 200W (1/3HP)
Low pressure pump Output pressure	0~7 kg/cm <sup>2</sup>
Max. output flow	7 ℓ / min
Fuel tank	20 ℓ(working capacity 15 ℓ)
Temperature control	0 ~ 100 °C
Measuring glass	150 cc (4ea), 32cc (4ea)
Stroke counter	auto
Working testing injector	4 cylinders
Engine RPM	600 ~ 4,100 (600,650m,700 ...4,100) Digit
High pressure pump RPM	0 ~ 4,000 (4 digit 0 ~9999 rpm indication)
Low pressure analog gauge	100 Ø 6 kg/cm <sup>2</sup>
Low pressure regulator	0 ~ 6kg/cm <sup>2</sup> supply pressure control
High pressure regulator	0 ~ 2000 kg/cm <sup>2</sup> (2000 bar) / working pressure 1800bar
High pressure pump output	measuring valve
Fuel cooling device	400 x 400 (mm)
Fan for cooling(motor with 40W)	300 x 300 (mm)
Fuel filter for line	30 Microns
Testing time setting timer	0 ~ 60 min.
Dimensions	500x800x1750 mm
Weight	100kg

Description	Fuel Injection Pump Test Bench
Drive Motor	AC 220-380V/3Ph/ 50-60Hz, 4 pole induction motor(Control by inverter)
Speed range	0 ~3600rpm, in both directions
Pump Motor	AC 3ph 0.75 KW (1 HP) 4 pole induction motor
Pump	Max output pressure 50kg/㎤ <sup>2</sup> (Working pressure: 25kg/㎤ <sup>2</sup> ) Max output flow 7.7ℓ/min Vane pump
Heater	AC 220-380V, 1 KW PT 1" tank heater
Speed control	Manual / Auto (It can be operated 9 steps in auto mode)
Glass	200cc and 45cc both sides
Stroke Counter	0, 100, 200 ~ 1,000 / 0, 150, 250... 1,050 turns
RPM Counter	4 digit 7 segment LED display (0-9999 rpm indication)
VM.VE(Rotary)Fuel control valve	0 - 2kg/㎤ <sup>2</sup> supply pressure control
LOW(PE. In-line)Fuel control valve	0 - 6kg/㎤ <sup>2</sup> supply pressure control
PE-A (In-line) pressure gauge	Ø 100 x 6 kg /㎤ <sup>2</sup>
VM. VE(Rotary) pressure gauge	Ø 60 x 2 kg /㎤ <sup>2</sup>
Transfer pressure gauge	Ø 100 x 15 kg/㎤ <sup>2</sup>
Overflow pressure gauge	Ø 60 x 2 kg /㎤ <sup>2</sup>
High pressure gauge	Ø 60 x 50 kg/㎤ <sup>2</sup>
Governor pressure gauge	-760 mmHG ~ 1100 mmHG (Digital type)
Vacuum Regulator & Air Regulator (1 set)	For Vacuum Regulator: -760mm Hg ( *1Bar= 0.999 kg/cm <sup>2</sup> =14.22 psi) For air regulator: 0 ~ 1500 mmHg
Air compressor	Motor capacity AC 220/380V 3ph 0.37kw(1/2HP) Compressor 1HP
Air tank	Capacity 40 ℓ Pressure switch 10 kg/㎤ <sup>2</sup>
Rack Scale	0 ~ 50mm with 0.05 mm
Dimensions (mm)	1,690 x 950 x 1,660 mm
Weight	1100kg

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## CRDi & Fuel Injection Pump Test Bench

### Standard Accessories

Part No.	Part Name	Q'ty	Pump
DN-001	Ring Bracket	1EA	VE.VM
DN-002	Flat Bracket	2EA	IN
DN-003	Mount Ring 68mm	1EA	VE.VM
DN-004	Mount Ring 78mm	1EA	VE.VM
DN-005	Mount Ring 85mm	1EA	IN
DN-006	Mount Ring 87mm	1EA	IN
DN-007	Mount Ring 95mm	1EA	IN
DN-008	VE Transfer Pressure Measuring Banjo	1EA	IN
DN-009	Packing Piece 7mm	2EA	IN
DN-010	Packing Piece 16mm	2EA	IN
DN-011	Packing Piece 23mm	2EA	IN
DN-012	Packing Piece R45	2EA	IN
DN-013	Packing Piece R56	2EA	IN
DN-014	Clamp Handle Ass'y	3EA	BOTH
DN-015	Quick Clamp	2EA	IN
DN-016	PR-A Quick Clamp	2EA	IN
DN-017	Coupling pump half 20mm(12mm dog)	1EA	VE.VM
DN-018	Coupling pump half 25mm(12mm dog)	1EA	IN
DN-019	Coupling pump half 30mm(12mm dog)	1EA	IN
DN-020	Coupling pump half 35mm(12mm dog)	1EA	IN
DN-021	PE-A Supply Hose Ass'y 3/4-16UNF 14mm Banjo	1EA	IN
DN-022	Transfer Pressure Hose Ass'y 7/16-20UNF	1EA	VE
DN-023	Rotary Supply Hose Ass'y 12mm Banjo 1D10 Braid	1EA	VE
DN-024	High Pressure Supply Hose Ass'y 7/16-20UNF	1EA	IN
DN-025	Governor Supply Hose Ass'y 10mm, 12mm Banjo 1D10 Braid	1EA	VE.VM
DN-026	Feed Pump Supply Hose Ass'y 1D10 Braid	1EA	VE
DN-027	Overflow Hose Ass'y 1D10 Braid	1EA	BOTH
DN-028	Dismantling Jig	1EA	BOTH
DN-029	High Pressure Pipe 600x2x6 IN-Line pump(nut 17*19)	12EA	IN
DN-030	High Pressure Pipe 600x3x8 IN-Line pump	12EA	IN
DN-031	High Pressure Pipe 840x2x6 Rotary pump	6EA	VE

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## CRDi & Fuel Injection Pump Test Bench

### Standard Accessories

Part No.	Part Name	Q'ty	Pump
DN-032	M20x1.5 Pulley Extractor	1EA	VE
DN-033	M22x1.5 Pulley Extractor	1EA	VE
DN-034	M24x1.5 Pulley Extractor	1EA	VE
DN-035	M26x1.5 Pulley Extractor	1EA	IN
DN-036	M30x1.5 Pulley Extractor	1EA	IN
DN-037	M32x1.5 Pulley Extractor	1EA	IN
DN-038	M32x1.5 Inner Timer Extractor	1EA	IN
DN-039	Coupling pump Half Extractor	1EA	VE
DN-040	Coupling Dog 38mm (12mm Dog)	1EA	IN
DN-041	Coupling Dog 44mm (12mm Dog)	1EA	IN
DN-042	Coupling Dog 52mm (12mm Dog)	1EA	IN
DN-043	Overflow Hose Banjo (12mm)	1EA	VE
DN-044	Overflow Hose Banjo (14mm)	1EA	IN
DN-045	T-Handle(8mm)	1EA	BOTH
DN-046	Tapper Insert-B	8EA	IN
DN-047	Mass Cylinder 200cc	12EA	BOTH
DN-048	Mass Cylinder 45cc	12EA	BOTH
DN-049	Rackscale Sensor 50mm	1EA	IN
DN-050	Magnetic base	1EA	IN
DN-051	Injector	12EA	BOTH
DN-052	Wheel Lever	1EA	BOTH
DN-053	Injector Shut-Open Handle	1EA	BOTH
DN-054	VE K-Dimension Measuring Device	1EA	VE
DN-055	VE Regulating Valve Socket Wrench	1EA	VE
DN-056	VE Timer Measuring Device	1EA	VE
DN-057	VE Feed Pump Pressure Measuring Adapter(M12)	1EA	VE
DN-058	VE Transfer Pressure Measuring Banjo(12*12)	1EA	VE
DN-059	VE Pivot Bolt Socket Wrench	1EA	VE
DN-060	VE Distributor Head Plug Socket Wrench	1EA	VE
DN-061	DPC Timing Gear Extractor	1EA	VE
DN-062	DPC Transfer Pressure Measuring Adapter	1EA	VE
DN-063	PE-P Block Lift	1EA	IN
DN-064	Air Gun & Hose Ass'y OD6 Hose	1EA	BOTH
DN-065	Filter Sub Ass'y	1EA	BOTH
DN-066	Fluorescent Lamp	1EA	BOTH
DN-067	High pressure pipe for high pressure pump and rail supply	1EA	
DN-068	High pressure zig for injector supply (17m , 19m )	4EA	
DN-069	High pressure injector supply rail	1EA	
DN-070	Injector power connect cable	2EA	
DN-071	Pressure sensor connector cable	1EA	

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### Standard Accessories

Part No.	Part Name	Q'ty	Pump
DN-072	High pressure regulate sensor connector cable	1EA	
DN-073	Ring bracket for Bosch H.P pump	1EA	
DN-074	Ring bracket for Delphi H.P pump	1EA	
DN-075	Ring bracket for D pump	1EA	
DN-076	Ring bracket for Denso H.P pump	1EA	
DN-077	Injector Injection return Hose	4EA	
DN-078	Injector over flower return Hose	4EA	
DN-079	Injector Injection measuring zig	4EA	
DN-080	Bosch injector Injection connector cable	4EA	
DN-081	Delphi Injector Injection connector cable	4EA	
DN-082	Denso Injector Injection connector cable	4EA	
DN-083	Piezo Injector Injection connector cable	4EA	
DN-084	Injector Injection flower adaptor	4EA	
DN-085	Injector over flower adaptor	4EA	
DN-086	Ring bracket fixing bolt	3EA	
DN-087	Rail fixing zig	1EA	
DN-088	High pressure supply pump	1EA	
DN-089	Computer	1EA	
DN-090	Computer : monitor (screen)	1EA	
DN-091	Computer key board	1EA	
DN-092	Electric supply connector	3EA	

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# Fuel Injection Pump Test Bench

## VDT-300



## Product Features

- Three ranges of pressure regulator, 0~2kg/cm<sup>2</sup> and 0~6kg/cm<sup>2</sup>, 0~50kg/cm<sup>2</sup> will provide more accurate pressure regulation.
- The solenoid coil of rotary type pump can be driven through the power supply of DC 12/24V inside of the test bench.
- The driving shaft and the driven shaft are connected with a clutch. while the driving motor keeps a certain speed, subsidiary action for test or maintenance can be done through clutch's ON-OFF function.
- The electrical breaker protects electric overload automatically.
- The fluorescent lamp behind the injector mount will give clear and accurate measurements of measuring cylinders.
- Injection pump mounting brackets consist of a plain bracket and a ring bracket.
- But any kind of injection pump can be attached through the combination of packing pieces and mounting ring.

## Technical Specifications

Description	CRDi & Fuel Injection Pump Test Bench
MODEL	VDT-300
Drive Motor	AC 220-380V/3Ph/ 50-60Hz, 4 pole induction motor(Control by inverter) 11KW (15 HP) 12 cylinders : VDT-300 7.5Kw ( 10HP) 10 cylinders : VDT-200 5.5Kw ( 7.5 HP) 8 cylinders : VDT-100
Speed range	0 ~3,600 rpm, in both directions
Pump Motor	AC 3ph 0.75 KW (1 HP) 4 pole induction motor
Pump	Max output pressure 50kg/cm <sup>2</sup> (Working pressure: 25kg/cm <sup>2</sup> ) Max output flow 7.7ℓ/min Vane pump
Fuel Tank	45 liters working capacity
Temperature control	Variable from 0 ~ 100°C
Heater	AC 220-380V, 1 KW PT 1" tank heater
Speed control	Manual / Auto (It can be operated 9 steps in auto mode)
Glass	200cc and 45cc both sides
Stroke Counter	0, 100, 200 ~ 1,000 / 50, 150, 250... 1,050 turns
RPM Counter	4digit 7 segment LED display (0-9999 rpm indication)
VM.VE(Rotary)Fuel control valve	0 - 2kg/cm <sup>2</sup> supply pressure control
LOW(PE. In-line)Fuel control valve	0 - 6kg/cm <sup>2</sup> supply pressure control
PE-A (In-line) pressure Gauge	Ø 100 x 6 kg /cm <sup>2</sup>
VM. VE(Rotary) pressure gauge	Ø 60 x 2 kg /cm <sup>2</sup>
Transfer pressure gauge	Ø 100 x 15 kg/cm <sup>2</sup>
High pressure gauge	Ø 60 x 50 kg/cm <sup>2</sup>
Governor pressure gauge	-760 mmHG ~ 1100 mmHG (Digital type)
Vacuum Regulator & Air Regulator (1 set)	For Vacuum Regulator: -760mm Hg ( *1Bar= 0.999 kg/cm <sup>2</sup> =14.22 psi) For air regulator: 0 ~ 1500 mmHg
Air compressor	Motor capacity AC 220/380V 3ph 0.37kw(1/2HP) Compressor 1HP
Air tank	Capacity 40 ℓ Pressure switch 10 kg/cm <sup>2</sup>
Rack Scale	0 ~ 50mm
Dimension	1,690 x 950 x 1,660 mm
Net weight	1,000 kg



## CRDi & Fuel Injection Pump Test Bench

### Standard Accessories

Part No.	Part Name	Q'ty	Pump
DN-001	Ring Bracket	1EA	VE.VM
DN-002	Flat Bracket	2EA	IN
DN-003	Mount Ring 68mm	1EA	VE.VM
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DN-008	VE Transfer Pressure Measuring Banjo	1EA	IN
DN-009	Packing Piece 7mm	2EA	IN
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DN-021	PE-A Supply Hose Ass'y 3/4-16UNF 14mm Banjo	1EA	IN
DN-022	Transfer Pressure Hose Ass'y 7/16-20UNF	1EA	VE
DN-023	Rotary Supply Hose Ass'y 12mm Banjo 1D10 Braid	1EA	VE
DN-024	High Pressure Supply Hose Ass'y 7/16-20UNF	1EA	IN
DN-025	Governor Supply Hose Ass'y 10mm, 12mm Banjo 1D10 Braid	1EA	VE.VM
DN-026	Feed Pump Supply Hose Ass'y 1D10 Braid	1EA	VE
DN-027	Overflow Hose Ass'y 1D10 Braid	1EA	BOTH
DN-028	Dismantling Jig	1EA	BOTH
DN-029	High Pressure Pipe 600x2x6 IN-Line pump(nut 17*19)	12EA	IN
DN-030	High Pressure Pipe 600x3x8 IN-Line pump	12EA	IN
DN-031	High Pressure Pipe 840x2x6 Rotary pump	6EA	VE

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DN-043	Overflow Hose Banjo (12mm)	1EA	VE
DN-044	Overflow Hose Banjo (14mm)	1EA	IN
DN-045	T-Handle(8mm)	1EA	BOTH
DN-046	Tapper Insert-B	8EA	IN
DN-047	Mass Cylinder 200cc	12EA	BOTH
DN-048	Mass Cylinder 45cc	12EA	BOTH
DN-049	Rackscale Sensor 50mm	1EA	IN
DN-050	Mgnetic base	1EA	IN
DN-051	Injector	12EA	BOTH
DN-052	Wheel Lever	1EA	BOTH
DN-053	Injector Shut-Open Handle	1EA	BOTH
DN-054	VE K-Dimension Measuring Device	1EA	VE
DN-055	VE Regulating Valve Socket Wrench	1EA	VE
DN-056	Ve Timer Measuring Device	1EA	VE
DN-057	VE Feed Pump Pressure Measuring Adapter(M12)	1EA	VE
DN-058	VE Transfer Pressure Measuring Banjo(12*12)	1EA	VE
DN-059	VE Pivot Bolt Socket Wrench	1EA	VE
DN-060	VE Distributor Head Plug Socket Wrench	1EA	VE
DN-061	DPC Timing Gear Extractor	1EA	VE
DN-062	DPC Transfer Pressure Measuring Adapter	1EA	VE
DN-063	PE-P Block Lift	1EA	IN
DN-064	Air Gun & Hose Ass'y OD6 Hose	1EA	BOTH
DN-065	Filter Sub Ass'y	1EA	BOTH
DN-066	Fluoprescent Lamp	1EA	BOTH

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