FUEL INJECTOR CLINIC
Featuring DATA MATCH TECHNOLOGY

!! Always lubricate your injector seals with engine oil (or similar) prior to installation !!

Please DO NOT Discard this Data Match Technology information sheet, which contains data for entry into your ECU. Keep it with your important papers.

Information about this Injector Set

Part #:	IS302-0775H	Driver req.: Saturated	Design flow: 775 cc/min
Injector Valve Type:	Stainless steel		Impedance: High 12.3 Ohm

Data Match Technology

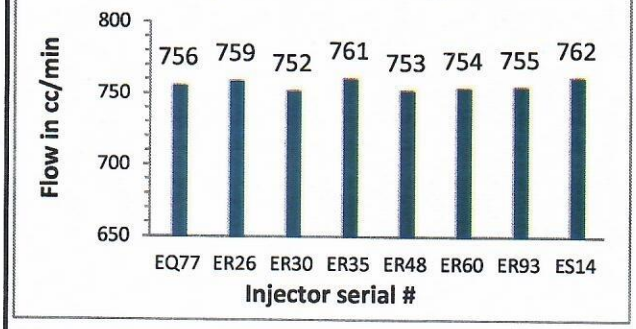
DMT test conditions information:

Test fluid: 16B

Test Bench Injector Driver - OEM Denso ECU

Test fluid temp: 88-91 °F / 32°C

Slope Flow Matching Data

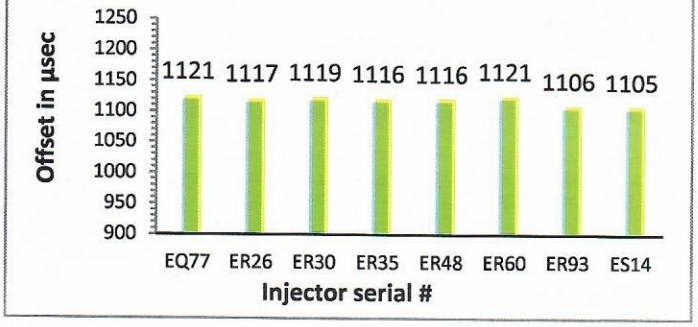


Average Flow rate at 43.5 psi: 757 cc/min

Your set is flow matched within 1.3%

Matching individual injector dynamic flow rates, called the slope of the injector, results in matched AFR's benefitting good idle, cruise and startup.

Injector Offset Matching Data



Average Offset at 3 bar & 13.5V: 1115 µs

Your set is offset matched within 1.5%

Offset/ latency matching ensures that all injectors pulse the same amount of fuel at all pulse widths, which is especailly critical at the short idle pulses.

Injector Voltage Offset values in milliseconds (1ms=1000µs)

		Base Fuel Pressure in psi/bar			
		43.5 psi 3.0 bar	58.0 psi 4 bar	72.5 psi 5.0 bar	87.0 psi 6.0 bar
Flow at each pressure →		757 cc/min	874 cc/min	977 cc/min	1070 cc/min
System / ECU voltage at injector	8 Volt*	2.250 ms	2.666 ms	3.195 ms	6.060 ms
	10 Volt	1.499 ms	1.689 ms	1.946 ms	2.313 ms
	12 Volt**	1.112 ms	1.257 ms	1.406 ms	1.582 ms
	14 Volt**	0.846 ms	0.975 ms	1.074 ms	1.230 ms
	16 Volt	0.705 ms	0.783 ms	0.872 ms	0.939 ms

*Injectors may not pulse at low voltage & high pressure

**Typical operating voltage zone of a running engine.

Estimated WHP* supported at different BSFC's @ 3 bar (43.5psi) *WHP assumes 15% transmission losses	Base fuel pressure →	43.5 psi	50.0 psi	58.0 psi	83.0 psi
	BSFC @ 0.5 NA on Gas	882 hp	946 hp	1019 hp	1218 hp
	BSFC @ 0.6 Turbo on Gas	735 hp	788 hp	849 hp	1015 hp
	BSFC @ 0.78 Turbo on E85	565 hp	606 hp	653 hp	781 hp
	Numbers based on 90% IDC! - To protect your engine, Fuel Injector Clinic does not recommend running injectors over 90% Injector Duty Cycle				

Better tuning with Fuel Injector Clinic Data Match Technology

Short Pulse Width from 0 to 2.5msec for Various Injector Flow Sizes

This Data Match Technology information sheet provides the following essential tuning data, specific to your serialized set of injectors:

!! Always lubricate your injector seals wi

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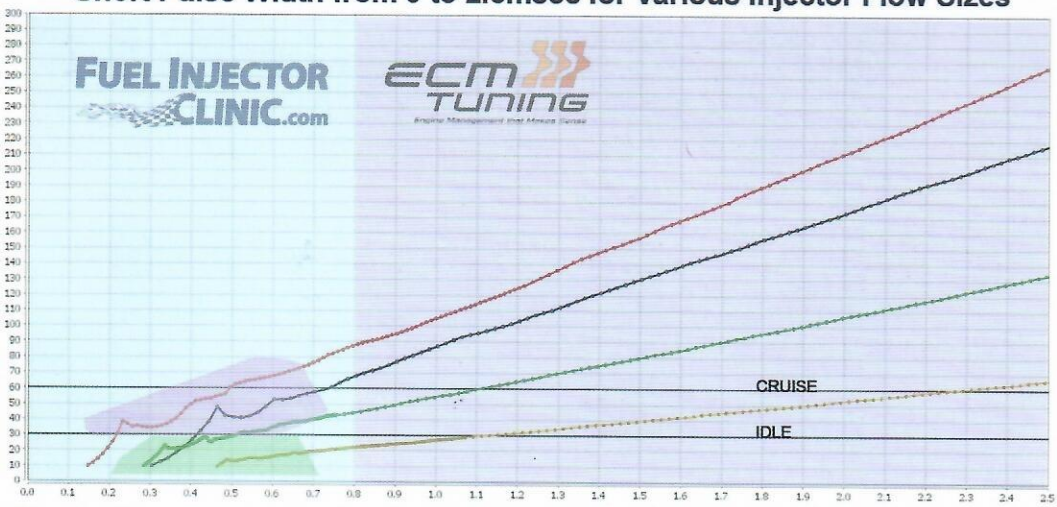

Injector Flow Sizes

- 2150 cc/min
- 1650 cc/min
- 1100 cc/min
- 525 cc/min

Area Between Cruise and Idle - This area is challenging for larger injectors (1650cc to 2150cc) since some pulse widths are no longer linear.

Area Below Idle - Non-linear pulse widths of smaller injectors (525cc to 1100cc) are mostly below the idle line.

Cruise - Fuel used at cruise for a 2.0L 4-cyl on gas

Idle - Fuel used at idle for a 2.0L 4-cyl on gas

Short Pulse Width Area - Linearity becomes more challenging for bigger injectors in this area.

Linear Operating Pulse Width Area - All OEM injectors operate in this area; ECU's can simply calculate pulse widths needed based on one constant "global" injector size entered.

This Data Match Technology information sheet provides the following essential tuning data, specific to your serialized set of injectors:

- *Individual Dynamic Slope Flow Rates*
- *Individual Injector Offset Values*
- *Injector Voltage Offset Table customized for your injector set*

This level of detailed, in-depth data specific to each injector set can only be found with Fuel Injector Clinic injectors. We go the extra mile for our customers to ensure you receive the best performing injectors possible.

Fuel Injector Clinic also provides plug and play data on our website for many popular OE and aftermarket ECUs, including Ford, Chevrolet, Subaru, and more. This data is provided in native format, which simplifies the tuning process and ensures precise results. Our library of tuning data is always growing, so contact us about your application if you don't see it on our website.

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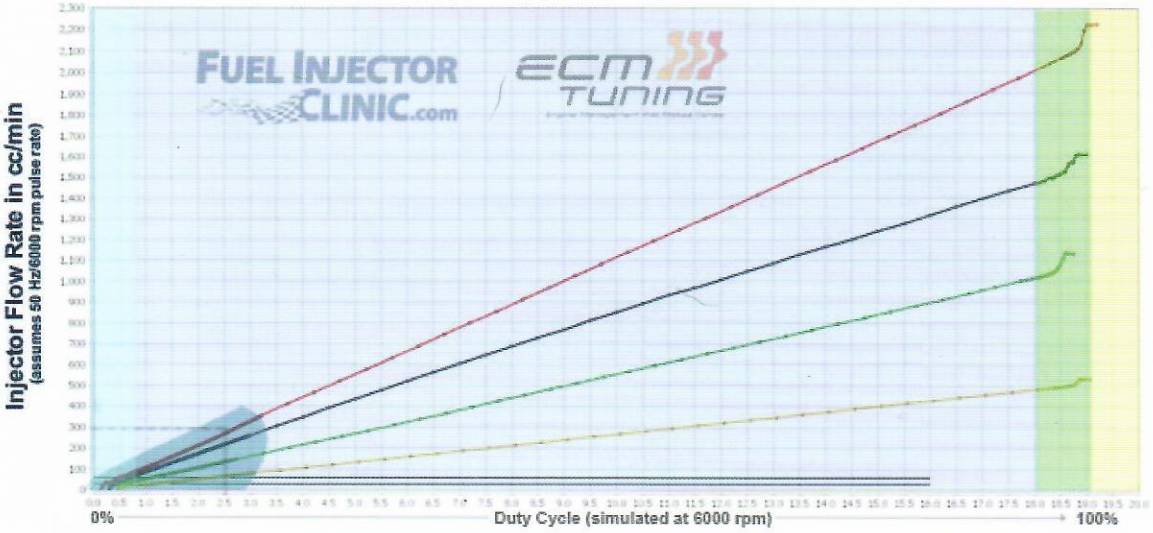
Full Pulse Width Range Comparison for Various Injector Flow Sizes



About the graphs: **The graph above** illustrates the full range of the injector being pulsed in a motor at 6000rpm or 50Hz, where a 20ms pulse would represent 100% duty cycle. **The graph on the opposite side** is a zoom on the low pulse width area to show why this is the most challenging condition for an injector. Here there is more detail between the idle and cruise lines. It becomes increasingly obvious why the smaller injectors are much easier to tune based on their very linear operation in this area.

Visit fuelinjectorclinic.com/data-match-technology for detailed information and more graphs.

What is Data Match Technology?

Data Match Technology features Dynamic Slope Flow Rates and Individual Injector Offset Values, as well as deviation values for both.

Using Fuel Injector Clinic's Data Match Technology, tuners can easily enter exact injector data into an ECU, allowing it to precisely control the injectors to supply the right amount of fuel and consistently achieve the target air fuel ratio.

This data is formulated using a specialized flow bench, designed in collaboration with ECMTuning, Inc. This flow bench accurately measures the microscopic volume of fluid dispensed through each injector during testing in order to provide tuners with the best possible data to successfully tune Fuel Injector Clinic injectors, every time.

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FIC
FUEL INJECTOR CLINIC
DATA MATCH TECHNOLOGY

Superior Idle and Drivability

Thank you for choosing Fuel Injector Clinic. By choosing our injectors, you benefit from **Fuel Injector Clinic's Data Match Technology** — the most complete flow matching and latency value information in the industry.

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