BOSCH INJECTOR 980cc
BOSCH INJECTOR 1462cc

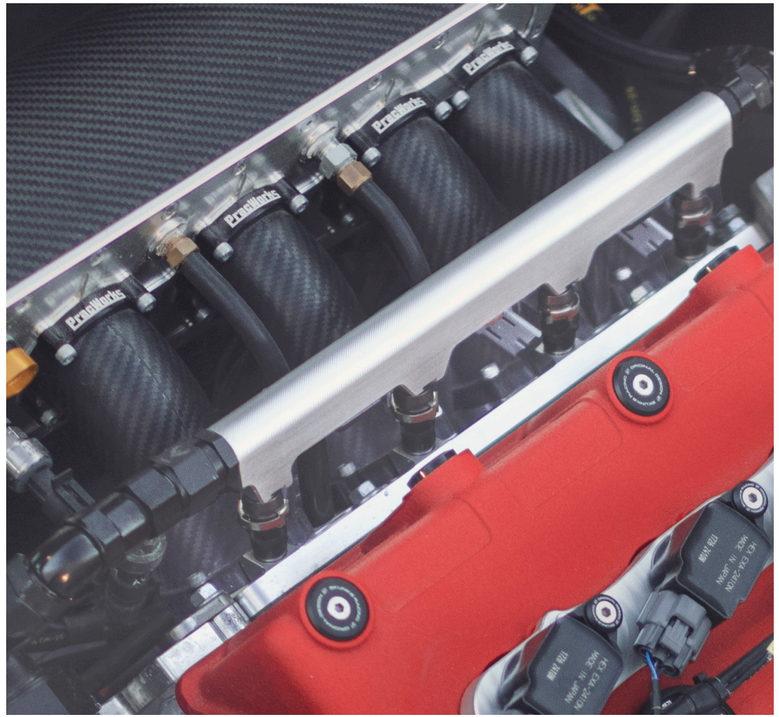
QUICK START GUIDE

FUEL INJECTOR OVERVIEW

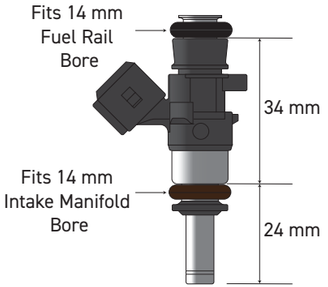
A fuel injector is an electronically operated solenoid that opens and closes to deliver precise amounts of fuel to the engine for each combustion cycle.

Modifying an engine to produce more power typically involves increasing the volume of air it can burn along with fuel. This increased air volume means the engine will also require more fuel to maintain a specific range of air-to-fuel ratio for safe operation. If you have a programmable ECU, you can increase fuel delivery by adjusting the fuel map, which in turn increases the injector's operating duty cycle. Ideally, injectors should operate at around 80% duty cycle or lower when the engine is producing peak power. If they exceed this, upgrading to larger injectors may be necessary.

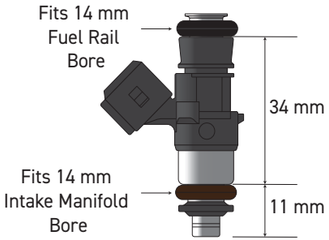
When selecting injectors, it's also important to consider the type of fuel being used. Certain fuels, such as E85, require injectors that are approximately 40% larger to deliver the necessary amount of fuel. Proper injector sizing ensures the engine operates optimally and safely when modified to produce more power.



BOSCH INJECTOR 980cc SPECIFICATIONS	
Bosch part number	0280158040
Flow rate (measured at 3 bar fuel pressure)	980 cc/min | 670 g/min | 89 lb/hr
Spray pattern	Single cone
Body length	Compact
Nozzle	Extended tip
Resistance	12.0 ohm
Connector	Bosch EV1 / Jetronic
E85 compatible	Yes



BOSCH INJECTOR 1462cc SPECIFICATIONS	
Bosch part number	0280158333
Flow rate (measured at 3 bar fuel pressure)	1462 cc/min | 1000 g/min | 132 lb/hr
Spray pattern	Single cone
Body length	Compact
Nozzle	Regular tip
Resistance	8.5 Ohm
Connector	Bosch EV1 / Jetronic
E85 Compatible	Yes



WHAT'S IN THE BOX?

Haltech offers flow matched injector kits for 4-, 6-, and 8-cylinder applications, ensuring precise fuel delivery for most builds.

HT-080102 - Bosch 980cc Injectors (Set of 4)

- 4 x Bosch 980cc Injectors, flow matched set
- 4 x Bosch EV1 connector and pins set

HT-080103 - Bosch 980cc Injectors (Set of 6)

- 6 x Bosch 980cc Injectors, flow matched set
- 6 x Bosch EV1 connector and pins set

HT-080104 - Bosch 980cc Injectors (Set of 8)

- 8 x Bosch 980cc Injectors, flow matched set
- 8 x Bosch EV1 connector and pins set

HT-080100 - Bosch 980cc Injector (Single)

- 1 x Bosch 980cc Injector
- 1 x Bosch EV1 connector and pins set



HT-080102



HT-080107

HT-080105 - Bosch 1462cc Injectors (Set of 4)

- 4 x Bosch 1462cc Injectors, flow matched set
- 4 x Bosch EV1 connector and pins set

HT-080106 - Bosch 1462cc Injectors (Set of 6)

- 6 x Bosch 1462cc Injectors, flow matched set
- 6 x Bosch EV1 connector and pins set

HT-080107 - Bosch 1462cc Injectors (Set of 8)

- 8 x Bosch 1462cc Injectors, flow matched set
- 8 x Bosch EV1 connector and pins set

HT-080101 - Bosch 1462cc Injector (Single)

- 1 x Bosch 1462cc Injector
- 1 x Bosch EV1 connector and pins set

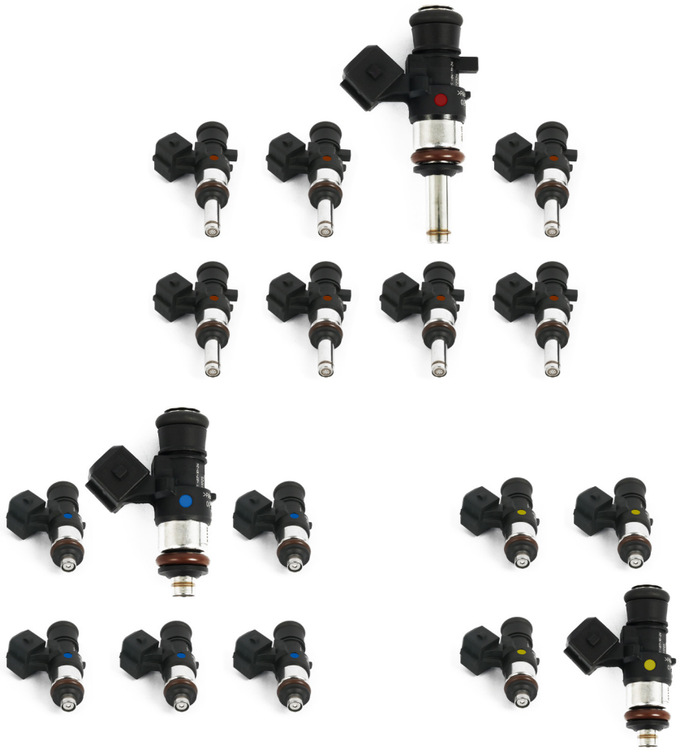
What is Injector Flow Matching?

Injector flow matching is the process of measuring and grouping fuel injectors based on their exact fuel flow rates to ensure that each injector in the matched set delivers identical amounts of fuel throughout engine operation, maintaining consistent air-fuel ratios across all cylinders.

Once flow matching is completed, each injector is marked with a colored dot on the injector body. Injector groups are assigned colors blue, red, or yellow.

Benefits of Injector Flow Matching

- Flow matching helps achieve uniform fuel delivery across all cylinders.
- Ensures a consistent air-to-fuel ratio for optimal engine performance.
- Allows for more precise tuning with using Haltech's Nexus Software Programmer.
- Promotes balanced power output throughout the rev range.



Haltech Nexus Software Programmer (NSP) is the software used for tuning and programming Haltech Elite and Nexus ECUs.

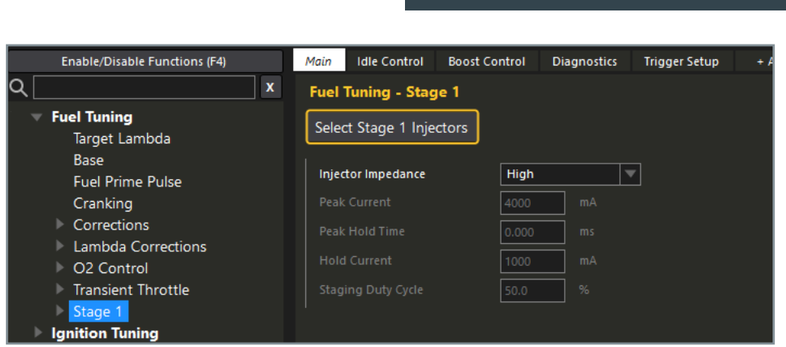
To configure your map with the correct injector settings for Bosch injectors:

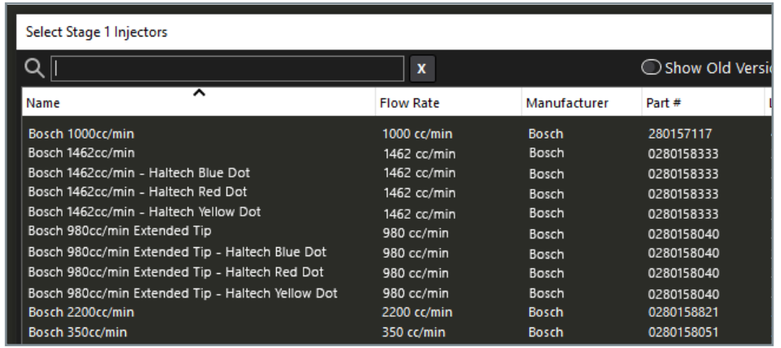
1. Go to the Navigation Tree on the left side of the software, expand the Fuel Tuning node, and then click **Stage 1**.
2. Click the "**Select Stage 1 Injectors**" button in the main window.
3. Choose the appropriate Bosch injector from the list, then click OK.

Following the above steps will update the Injector Dead Time and Injector Flow Rate tables based on the selected injector.

If you wish to view or modify these tables, the NSP software provides the option to display these settings.

For additional data on the injectors scan the QR below:





Fuel Injector Adapters (Sold Seperately)

Haltech offers fuel injector adapters designed to provide flexibility when integrating aftermarket injectors across a range of engine configurations. These adapters facilitate compatibility between injectors and aftermarket fuel rails with varying bore diameters and heights. By accommodating differences in injector body dimensions and mounting requirements, they help ensure a secure and leak-free installation

HT-080000 - Fuel Injector Adapter - 10.5mm 1/2 to Full Length

HT-080001 - Fuel Injector Adapter - 10.5mm Nissan RB26DETT GTR

HT-080002 - Fuel Injector Adapter - 11mm 1/2 to Full Length

HT-080003 - Fuel Injector Adapter - 11mm 3/4 to Full Length

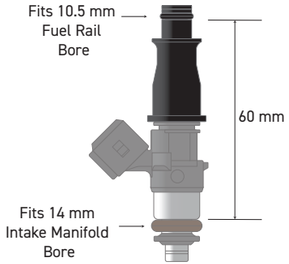
HT-080004 - Fuel Injector Adapter - 14mm 3/4 to Full Length

HT-080005 - Fuel Injector Adapter - 14mm 1/2 to 3/4 Length

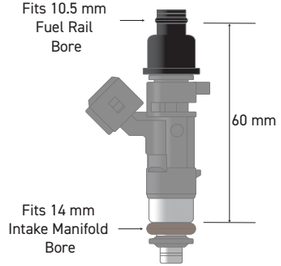
HT-080006 - Fuel Injector Adapter - 14mm 1/2 to Full Length

HT-080007 - Fuel Injector Adapter - 14mm Base

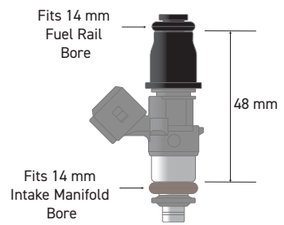
HT-080008 - Fuel Injector Adapter - Nissan Base



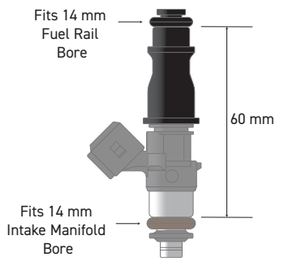
HT-080000



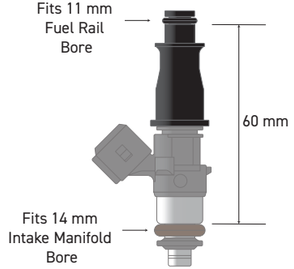
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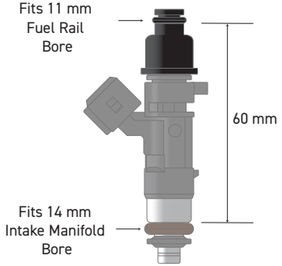
HT-080005



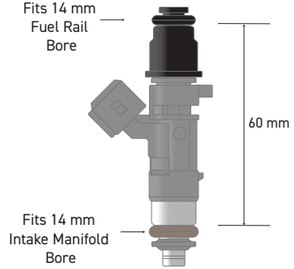
HT-080006



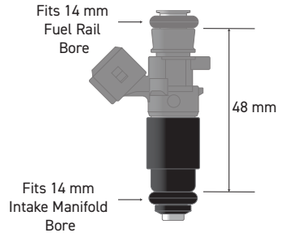
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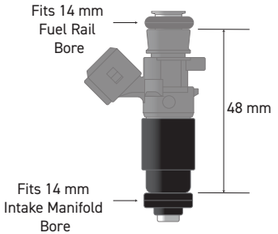
HT-080003



HT-080004



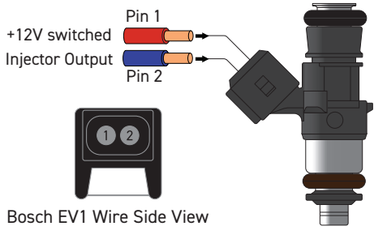
HT-080007



HT-080008

Injector Wiring

Wiring a fuel injector involves properly connecting it to the engine's electrical and fuel management systems. The injectors must be correctly wired to an injector output and a 12V switched power supply.



Bosch EV1 Wire Side View

It is recommended to uniformly assign injector pinouts. For example, all +12V connections can be assigned to Pin 1, and injector outputs to Pin 2. These injectors come with an EV1/Jetronic push-to-seat connector, including terminals and a rubber boot.

Tools Needed:

- Crimping tool/set (HT-070300)
- Wire stripper

Steps to Wire the Injectors:

1.) Cut the injector output and injector power supply wires to the required length, then insert them through the rubber boot.

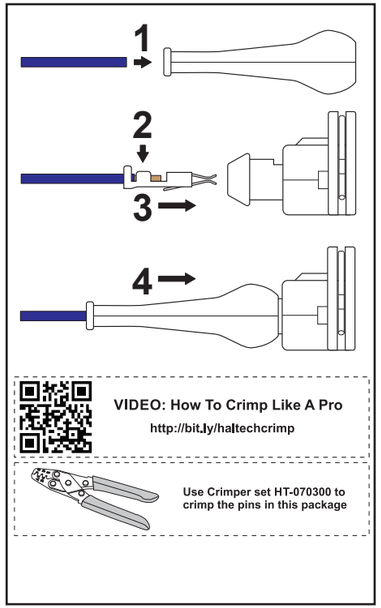
2.) Strip the wires, then crimp the pins onto each wire—starting with the conductor crimp, followed by the insulation crimp.

3.) Slide the crimped wires into the connector.

4.) Slide the rubber boot onto the connector to protect the pins and provide strain relief.



To learn how to crimp like a pro, scan the QR code below:



WARRANTY CERTIFICATE

At Haltech we make every effort to design and manufacture fault-free products that perform up to or above the market expectations. All our products are covered by a Limited 12 Month Warranty.

Haltech Limited Warranty

Unless specified otherwise, Haltech warrants its products to be free from defects in material or workmanship for a period of 12 months from the date of purchase.

If the Haltech product is found to be defective as mentioned above, it will be replaced or repaired if returned prepaid along with proof of purchase. Proof of purchase in the form of a copy of the original purchase invoice, receipt or bill of sale which indicates that the product is within the warranty period, must be presented to obtain warranty service.

Replacement or repair of a defective product shall constitute the sole liability of Haltech. To the extent permitted by law, the foregoing is exclusive and in lieu of all other warranties or representations, either expressed or implied, including any implied warranty of merchantability or fitness. In no event shall Haltech, be liable for special or consequential damages.

Product Returns

Please include a copy of the original purchase invoice, receipt or bill of sale along with the unused, undamaged product and its original packaging. Any product returned with missing accessory items or packaging will incur extra charges to return the item to a re-saleable condition.

All product returns must be sent via a freight method with adequate tracking, insurance and proof of delivery services. Haltech will not be held responsible for product returns lost during transit.

Returns of Products Supplied in Sealed Packaging

The sale of any sensor or accessory supplied in sealed packaging is strictly non-refundable if the sealed packaging has been opened or tampered with. This will be clearly noted on the product packaging. If you do not accept these terms please return the sensor in its original unopened packaging within 30 days for a full refund.

A sensor or accessory product may be returned after 30 days of purchase (with its sealed packaging intact) for credit only (no refunds given) and will be subject to a 10% restocking fee.

Installation of Haltech Products

No responsibility whatsoever is accepted by Haltech for the fitment of Haltech Products. The onus is clearly on the installer to ensure that both their knowledge and the parts selected are correct for that particular application. Any damage to parts or consequential damage or costs resulting from the incorrect installation of Haltech products are totally the responsibility of the installer.

Always disconnect the battery when doing electrical work on your vehicle. Avoid sparks, open flames or use of electrical devices near flammable substances. Do not run the engine with a battery charger connected as this could damage the ECU and other electrical equipment.

Do not overcharge the battery or reverse the polarity of the battery or any charging unit. Disconnect the Haltech ECU from the electrical system whenever doing any welding on the vehicle by unplugging the wiring harness connector from the ECU.

After completing the ECU installation, make sure there is no wiring left un-insulated. Uninsulated wiring can cause sparks, short circuits and in some cases fire. Before attempting to run the engine ensure there are no leaks in the fuel system.

All fuel system components and wiring should be mounted away from heat sources, shielded if necessary and well ventilated. Always ensure that you follow workshop safety procedures. If you're working underneath a jacked-up car, always use safety stands!

Haltech Off-Road Usage Policy

In many states it is unlawful to tamper with your vehicle's emissions equipment. Haltech products are designed and sold for sanctioned off-road/competition non-emissions controlled vehicles only and may never be used on a public road or highway.

Using Haltech products for street/road use on public roads or highways is prohibited by law unless a specific regulatory exemption exists (more information can be found on the SEMA Action Network website www.semasan.com/emissions for state by state details in the USA).

It is the responsibility of the installer and/or user of this product to ensure compliance with all applicable local and federal laws and regulations. Please check with your local vehicle authority before purchasing, using or installing any Haltech product.

04/2025

Haltech Australia
17 Durian Place,
Wetherill Park NSW 2164
Australia
Phone: +61 2 9729 0999
Email: aus@haltech.com

Haltech New Zealand
9/B Weza Lane, Kumeu,
0810 New Zealand
Phone: +64 988 706 16
Email: nz@haltech.com

Haltech USA East
750 Miles Point Way,
Lexington, KY USA 40510
Phone: (888) 298 8116
Email: usa@haltech.com

Haltech USA West
Race Winning Brands,
10800 Valley View Street,
Cypress, CA 90630
Phone: (888) 298 8116
Email: usa@haltech.com

Haltech UK
Unit 1, Miras Business Estate,
Keys Park Road, Hednesford,
WS12 2FS
Phone: +44 121 285 6650
Email: uk@haltech.com

Haltech Europe
Ottogasse 2A,
2333 Leopoldsdorf, Austria
Phone: +43 720 883968
Email: europe@haltech.com


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