

ALPHA PERFORMANCE



Alpha Performance Parts Alpha Engine Management System Alpha Plus Engine Management System

Components Manual - Edition 4.0



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All of the Alpha Performance kits are designed specifically for the application as detailed, and should therefore do not require further modification unless stated.

Any modifications made to components within the kits will invalidate the warranty. Should any problems be encountered during installation, please contact Standard Motor Products Europe Limited or your authorised Alpha dealer.

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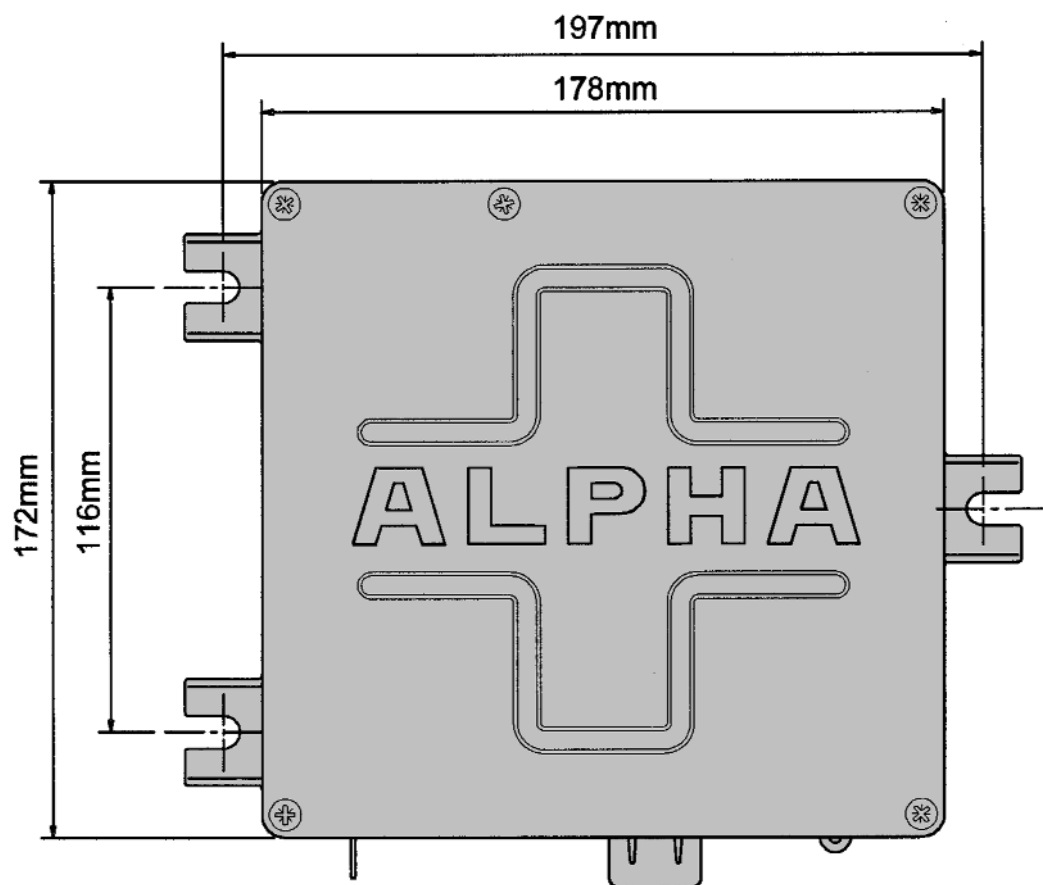
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GENERAL SPECIFICATION

- Housing: Die-cast aluminium alloy casing complete with cast mounting lugs.
- Location: Suitable only for the passenger compartment.
- Connector: 35-way D-type with retention latch and seal.
- Electronics: Microprocessor controlled digital unit with integral ignition amplifiers and original equipment engine speed signal interface.
- Functions: Controls ignition and injection with closed loop lambda fuel control and closed loop turbo wastegate control.



ECU TECHNICAL CHARACTERISTICS

Nominal power supply:	+12 Volts.
Range of power supply:	+7 to 16 Volts.
Temperature range:	-30° to +60° Centigrade.
Vibration general:	3g peak to peak. Field Frequency 5 to 300Hz.
Humidity & water ingress:	• Humidity below 90%, non-condensing. • No direct water splash. • No water entrapment within enclosure.
Injector drivers:	4
Ignition amplifiers:	2
Air valve driver:	1
Turbo wastegate drivers:	1

N.B. The turbo wastegate driver may be reconfigured as an extra ignition amplifier.

ORIGINAL EQUIPMENT RPM SIGNAL INTERFACES

The ECU PI043 is fitted with a micro controller device that is programmed to accept the correct Original Equipment RPM signal pattern and engine configuration. The dealer must detail the O.E. RPM signal pattern when ordering PI043 ECU's.

The PI043 ECU part number requires a suffix code to identify the O.E. RPM signal pattern to be programmed:

The first character specifies the O.E. RPM signal pattern:

B =	Bosch	60-2
M =	*Rover MEMS	36-1-1
E =	Ford EECIV	36-1
R =	*Renault Renix	44-2-2
G =	*Weber IAW	60-2
K =	*Rover 1.8 K Series Non-VVC	
L =	*Rover 1.8 K Series VVC	

*** Special Order Only - Please Contact Alpha Group.**

The second character specifies the number of cylinders:

4 =	4 Cylinders
6 =	6 Cylinders
8 =	8 Cylinders

e.g. A 6 cylinder engine with a Bosch 60-2 teeth signal pattern will require a PI043;B6 ECU.

The ECU PI0142 is fitted to engines that have been fitted with an Alpha trigger disc kit.

Part Number	Product Description
PI042	ECU For Alpha Type Signal Frame
PI043	ECU For Original Equipment Signal Frame Interface
9990226100	Micro Controller

TECHNICAL SPECIFICATION PI150

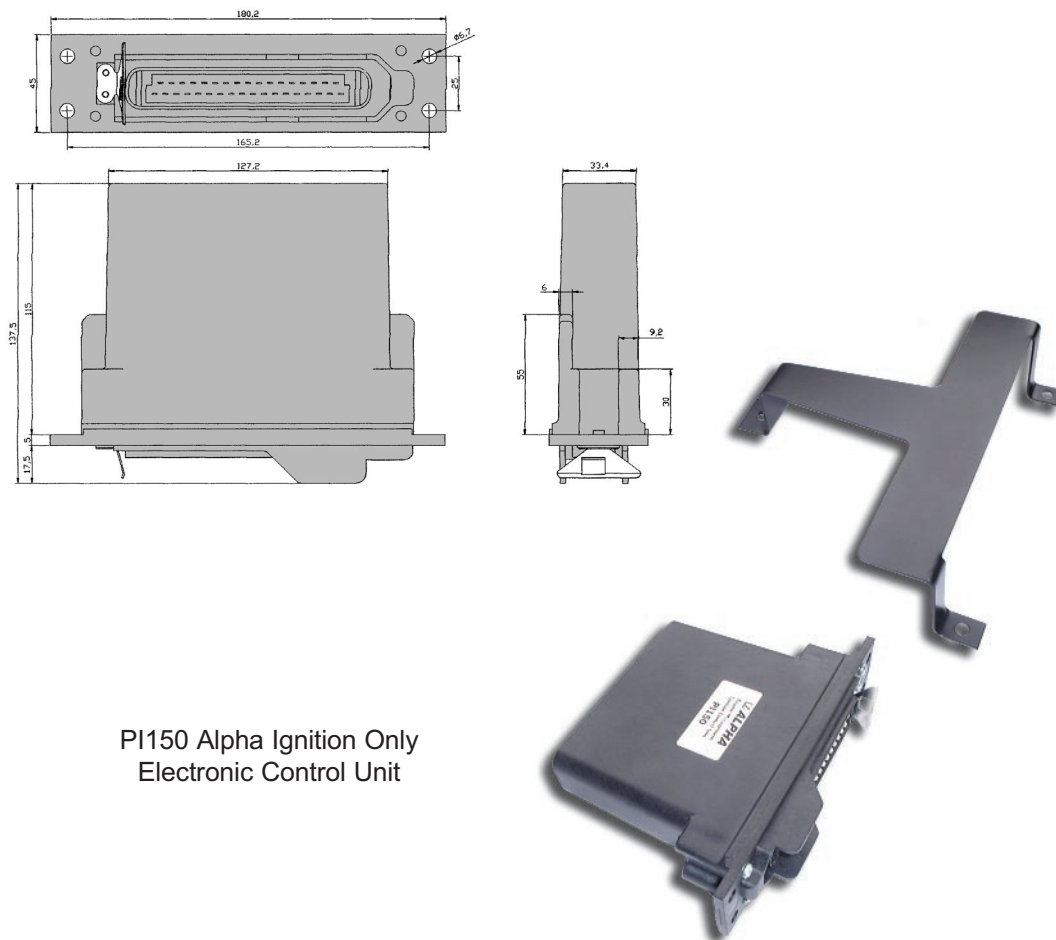
Ignition Control

- Drives up to two internal ignition amplifiers to cover all distributor and static ignition system types.
- 256 point calibration table (16 engine speed points against 16 load points).
- Air temperature correction.
- Engine rev limiter (soft and hard cut).

General

The ECU is supplied with a calibration to suit one of a range of engine types and specifications or with a safe ignition base map. For non-standard specifications it needs to be programmed by an approved Alpha Dealer for maximum benefit.

- Inbuilt tachometer output drive.
- Inbuilt gear shift indicator lamp drive (Gear Shift Lamp Kits. See Page 84)
- Direct 36-1 or 60-2 O.E. Signal input.



PI150 Alpha Ignition Only
Electronic Control Unit

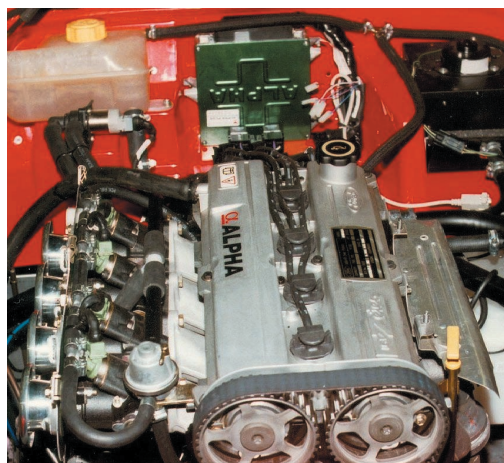
Part Number	Product Description
PI150	Alpha Ignition Only Electronic Control Unit (ECU)
9990297900	PI150 Retaining Bracket



These Gold Performance Kits release the performance potential of production Ford, Renault, VW, Vauxhall/Opel & Peugeot/Citroën engines. A complete kit covers both fuel injection and distributorless ignition requirements in a fully integrated package. The kits are supplied with a lambda sensor and can operate with exhaust catalytic convertors. The kits are calibrated for a standard specification engine. For non-standard engines please contact us.

Each kit includes:

- 2 x ALPHA throttle bodies.
- Performance air filters.
- Throttle linkage system.
- Inlet manifold & fitting kit.
- ALPHA PLUS engine management system.
- Fitting instructions & setting procedure.



Typical Power Figures

Ford Zetec	2.0 16v	Std	128 bhp (95kW)
		Alpha	165 bhp (123kW)
Renault Clio (@ Flywheel)	1.8 16v	Std	137 bhp (102kW)
		Alpha	155 bhp (116kW)
Renault Clio Sport 172 (@ Flywheel)	2.0 16v	Std	165 bhp (123kW)
		Alpha	185 bhp (138kW)
Vauxhall Ecotec (Fast Road Cams)	2.0 16v	Std	132 bhp (98kW)
		Alpha	171 bhp (128kW)
Vauxhall XE	2.0 16v	Std	150 bhp (112kW)
		Alpha	180 bhp (135kW)
VW (@ Flywheel)	1.8 16v	Std	139 bhp (104kW)
		Alpha	167 bhp (124kW)
Peugeot/Citroën (205 GTi)	1.9 8v	Std	128 bhp (96kW)
		Alpha	170 bhp (127kW)

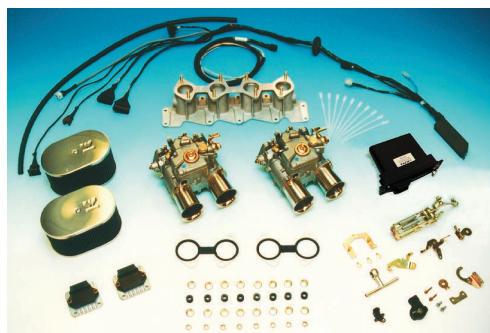
Part Number	Product Description
K98003	General Alpha Plus 4 Cylinder Engine Management Kit
K99010	Alpha Plus Engine Management Kit - Ford Zetec 1.8 16v
K99011	Alpha Plus Engine Management Kit - Ford Zetec 2.0 16v
K99012	Alpha Plus Engine Management Kit - Vauxhall/Opel XE 2.0 16v (Distributor)
K99013	Alpha Plus Engine Management Kit - Vauxhall/Opel XE 2.0 16v (Static)
K99016	Alpha Plus Engine Management Kit - Vauxhall Ecotec 2.0 16v
K99018	Alpha Plus Engine Management Kit - Peugeot/Citroën (XU9) 1.9 8v (Static)
K99019	Alpha Plus Engine Management Kit - Ford Kent 1.7 8v (Static)
K20002	Alpha Plus Engine Management Kit - VW 1.8 16v (Static)
K20003	Alpha Plus Engine Management Kit - Renault Clio/19 1.8 16v (Distributor)
K20013	Alpha Plus Engine Management Kit - Renault Clio Sport 172 2.0 16v (Static)*

* Contact Alpha Group For Availability.

These Silver Performance Kits are a combination of the legendary WEBER DCOE carburettor and the hi-tech ALPHA Ignition Management System. This proven combination releases the performance potential of production engines from Ford, Vauxhall/Opel & Peugeot/Citroën. The Vauxhall/Opel kits have been developed from knowledge gained developing the "Super Touring" car race engines. They are complete kits that cover both fuelling and ignition requirements in a fully integrated package. The kits are calibrated for standard specification engine. For non-standard engines please contact us.

Each kit includes:

- 2 x WEBER DCOE sidedraught carburettors.
- Performance air filters.
- Throttle linkage system.
- Inlet manifold & fitting kit.
- ALPHA 3D ignition system.
- Throttle position sensor.
- Fitting instructions & setting procedure.



Typical Power Figures

Ford Zetec	2.0 16v	Std	128 bhp (95kW)
		Alpha	165 bhp (123kW)
Vauxhall XE	2.0 16v	Std	150 bhp (112kW)
		Alpha	180 bhp (135kW)
Peugeot/Citroën (205 GTi)	1.9 8v	Std	128 bhp (96kW)
		Alpha	170 bhp (127kW)

Part Number	Product Description
K99001	Weber/Alpha Performance Kit - Ford Zetec 1.8 16v (45 DCOE)
K99002	Weber/Alpha Performance Kit - Ford Zetec 2.0 16v (45 DCOE)
K99004	Weber/Alpha Performance Kit - Vauxhall/Opel XE 2.0 16v (45 DCOE/Distributor)
K99005	Weber/Alpha Performance Kit - Vauxhall/Opel XE 2.0 16v (45 DCOE/Static)
K99006	Weber/Alpha Performance Kit - Ford Zetec 1.8 16v (40 DCOE & Small Air Filters)
K99007	Weber/Alpha Performance Kit - Ford Zetec 1.8 16v (40 DCOE)
K99008	Weber/Alpha Performance Kit - Peugeot/Citroën XU9 1.9 8v (40 DCOE/Distributor)
K99009	Weber/Alpha Performance Kit - Peugeot/Citroën XU9 1.9 8v (40 DCOE/Static)
K99020	Weber/Alpha Performance Kit - Ford Pinto 2.0 8v (45 DCOE/Distributor)
K99021	Weber/Alpha Performance Kit - Ford Pinto 2.0 8v (45 DCOE/Static)

A 2D electronic ignition system featuring an ignition map of 16 RPM sites that can be upgraded to full 3D ignition management by the addition of a throttle position sensor (16 RPM x 16 engine load points)

SYSTEM FEATURES

Each PI150 Ignition Only ECU has the following features:

- 2D ignition timing giving 16 ignition advance values located at 16 variable engine speed sites.
- Option of 3D ignition timing giving 256 ignition values at 16 variable engine load sites for each of the 16 engine speeds sites.
- Linear interpolation between engine speed and load sites for smooth transition of ignition advance values.
- Correction to ignition advance values for inlet air temperature.
- Engine speed limiter via ignition cut.
- Tachometer and gearshift indicator lamp drives.
- 1 or 2 ignition outputs for distributor or static ignition.
- Direct 36-1 or 60-2 engine speed trigger inputs.



Each kit contains every part needed to install and run the ignition system. This includes PI150 ECU, ignition coil (except K97014), specific wiring harness, air temperature sensor & cable ties.

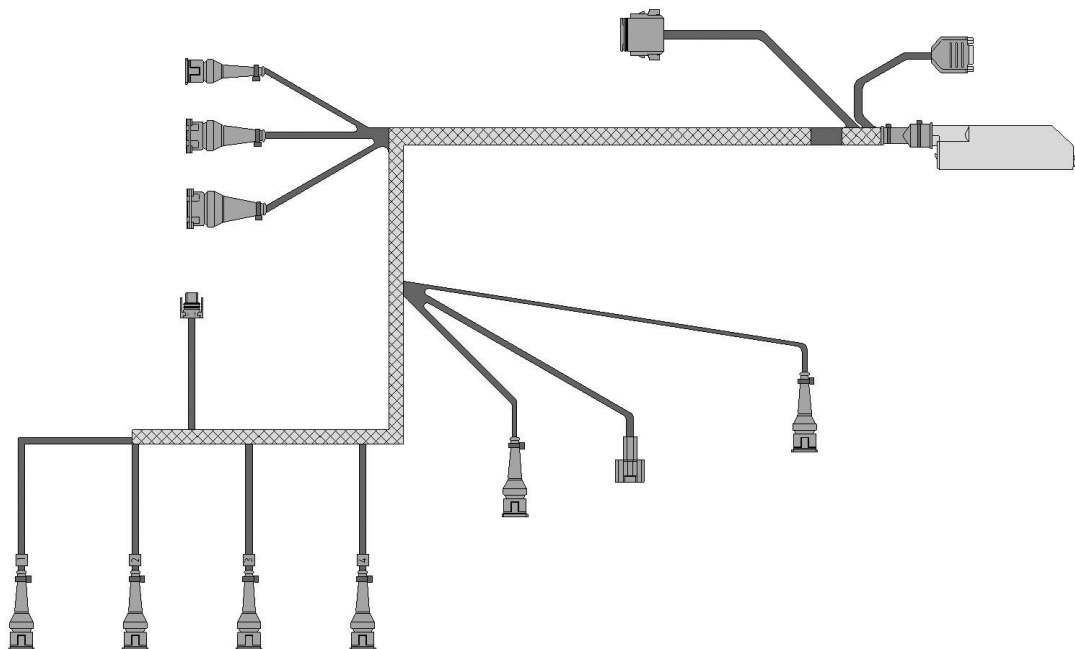
For engine applications where the original equipment ignition coil and/or crank trigger system can not be used, the kit will include some or all of the following:

- Relevant ignition coil.
- Trigger disc kit.
- Ignition lead set.
- Coil mounting bracket.
- Engine speed sensor.

All of the kits below can be upgraded to full 3D ignition timing by the addition of a Throttle Position Sensor, See Page 31. All general Alpha ignition management systems are supplied with a safe base ignition map, ideal for checking correct installation. Engine specific systems are supplied with a calibration for a standard specification engine. General systems must be calibrated by one of the "Alpha System Dealers" to obtain the maximum benefit from programmed ignition timing.

Part Number	Product Description
K97013	General Ignition Only Kit (Distributor)
K97014	General Ignition Only Kit (Static)
K97015	Ignition Only Kit - Ford Kent 1.7 8v (Distributor)*
K97016	Ignition Only Kit - Ford Kent 1.7 8v (Static)*
K97017	Ignition Only Kit - Ford Zetec 1.8 16v & 2.0 16v
K97018	Ignition Only Kit - Vauxhall/Opel XE 2.0 16v (Distributor)
K97019	Ignition Only Kit - Vauxhall/Opel XE 2.0 16v (Static)
K97025	Ignition Only Kit - Peugeot/Citroën XU9 1.9 8v (Distributor)*
K97026	Ignition Only Kit - Peugeot/Citroën XU9 1.9 8v (Static)*
K97027	Ignition Only Kit - Ford Pinto 2.0 8v (Distributor)*
K97028	Ignition Only Kit - Ford Pinto 2.0 8v (Static)*

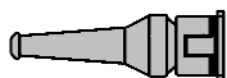
* Also include all necessary trigger disk kits and component brackets.



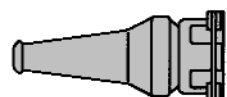
Part Number: 9990287100

Wiring harnesses especially designed for the range of Alpha engine management systems. The harness supplements the vehicles existing wiring harness.

Part Number	ECU Type	Product Description
9990180500	Ignition Only	Ignition Only Harness, Feed Harness
9990224800	Alpha Plus	General 6 Cylinder Static Harness
9990225000	Alpha Plus	Porsche 911 6 Cylinder Harness
9990225400	Alpha Plus	General 8 Cylinder Harness
9990272400	Ignition Only	Ford Zetec Static Harness
9990272500	Ignition Only	Vauxhall/Opel XE Static Harness
9990272600	Ignition Only	Vauxhall/Opel XE Distributor Harness
9990283900	Ignition Only	General 4 Cylinder Static Harness
9990287100	Alpha Plus	General 4 Cylinder Static Engine Harness (Race)
9990287200	Alpha Plus	General 4 Cylinder Static Vehicle Harness (Race)
9990290000	Alpha Plus	V8 Distributor Harness
9990293500	Alpha Plus	A-Series Two Injector Static Harness
9990298200	Alpha Plus	Kit Car Harness 4 Cylinder (Ford Zetec 1.8 & 2.0 Only)
9990298300	Alpha Plus	General 4 Cylinder Harness (Replaces 9990205300)



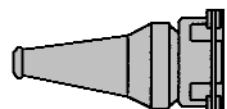
Minitimer 2 pin female



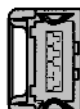
Minitimer 3 pin female



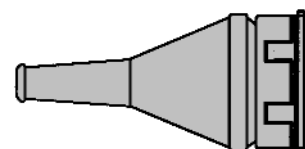
Minitimer 3 pin male



Minitimer 4 pin female



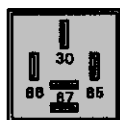
Minitimer 35 pin female



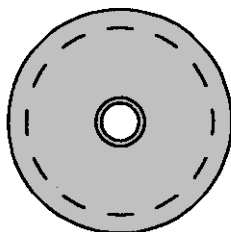
Minitimer 7 pin female



Part Number	Product Description
9990098900	Female Minitimer Connector Pin 0.5-1.5mm Wire
9990204700	Female Minitimer Terminal Pin (High Spec.) 0.5-1.0mm Wire
9990204800	Female Minitimer Terminal Pin (High Spec.) 1.0-2.5mm Wire
9990166400	Female Minitimer Connector 2-Pin Black
9990166500	Female Minitimer Connector 2-Pin White
9990166600	Female Minitimer Connector 2-Pin Blue
9990166700	Female Minitimer Connector 2-Pin Brown
9990166800	Female Minitimer Connector 2-Pin Grey
9990201500	Female Minitimer Connector 2-Pin Green
9990166900	Female Minitimer Connector 3-Pin Black
9990284400	Male Minitimer Connector 3-Pin Black
9990181700	Female Minitimer Connector 4-Pin Black
9990167000	Female Minitimer Connector 7-Pin Black
9990098600	Female Minitimer Connector 35-Pin Black
9990157900	Rubber Boot 2-Pin Female Minitimer Connector - 90°
9990175600	Rubber Boot 2-Pin Female Minitimer Connector
9990175700	Rubber Boot 3-Pin Female Minitimer Connector
9990188500	Rubber Boot 4-Pin Female Minitimer Connector
9990155200	Rubber Boot 7-Pin Female Minitimer Connector



9990179400



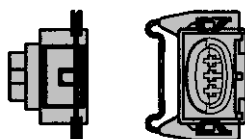
9990221600



9990180600



9990181200

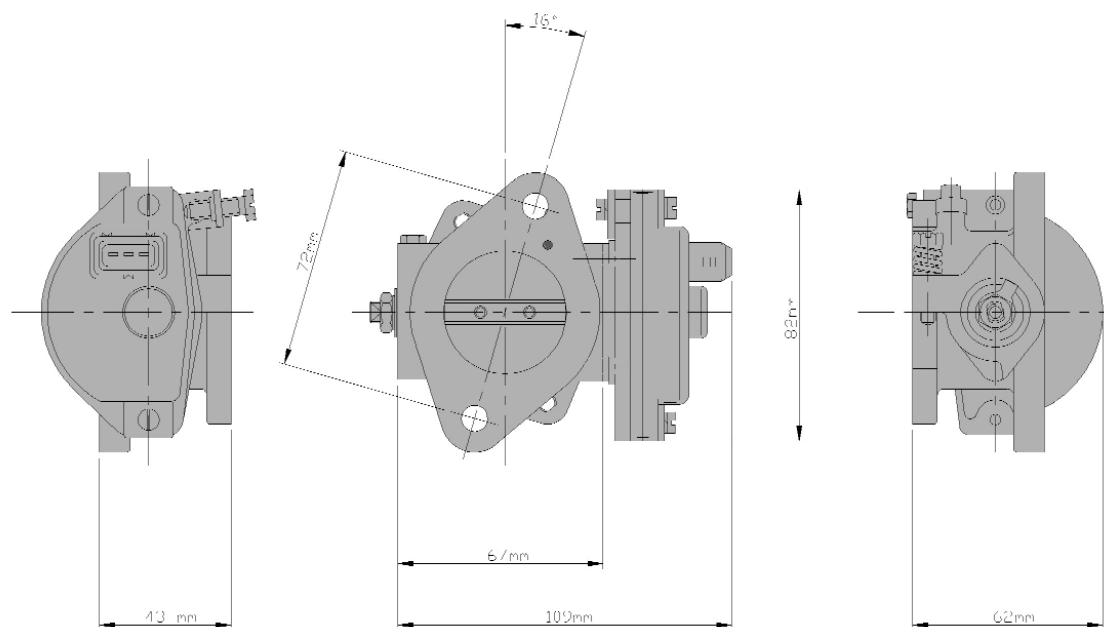


9990241600



9990230300

Part Number	Product Description
9990126900	Relay
9990179400	Relay Holder
9990152500	Packard Connector 2-Way (BAE800AK Coil & ATS05)
9990152600	Terminal Pin For Connector 9990152500
9990206900	Fuse Holder (Supplied With Terminals)
9990127000	10 Amp Blade Fuse
9990127100	15 Amp Blade Fuse
9990137400	Mountable Cable Tie
9990180600	Inertia Switch Connector - Early 'Pop Up' Button Type
9990180700	Inertia Switch Terminal - Early 'Pop Up' Button Type
9990181200	Connector 6-Pin White - CD Pack
9990181300	Terminal Pin For Connector 9990181200
9990221600	Wiring Harness Grommet 45mm To 50mm Hole
9990230300	Male Minitimer Connector 2-Pin Black
9990230400	Terminal Pin For Connector 9990230300 & 9990284400
9990241600	Connector Ford 3-Pin Static Ignition Coil
9990241700	Terminal Pins 1 & 3 For Connector 9990241600
9990241800	Terminal Pin 2 For Connector 9990241600
9990241900	Seal For Terminals 9990241700 & 9990241800
9990208300	3-Pin Female Inertia Switch Connector Kit
9990206500	Terminals For Connector 9990206600
9990206600	Female Lambda Sensor Connector (9990205300 Harness)
9990206700	Spacer For 9990206600
9990181800	Sureseal Male Pin
9990181900	Sureseal Female Pin
9990182100	Sureseal Receptacle Housing



Illustrated: 40mm right hand potentiometer 9990121400
Supplied with a quadrant type throttle lever (not shown)

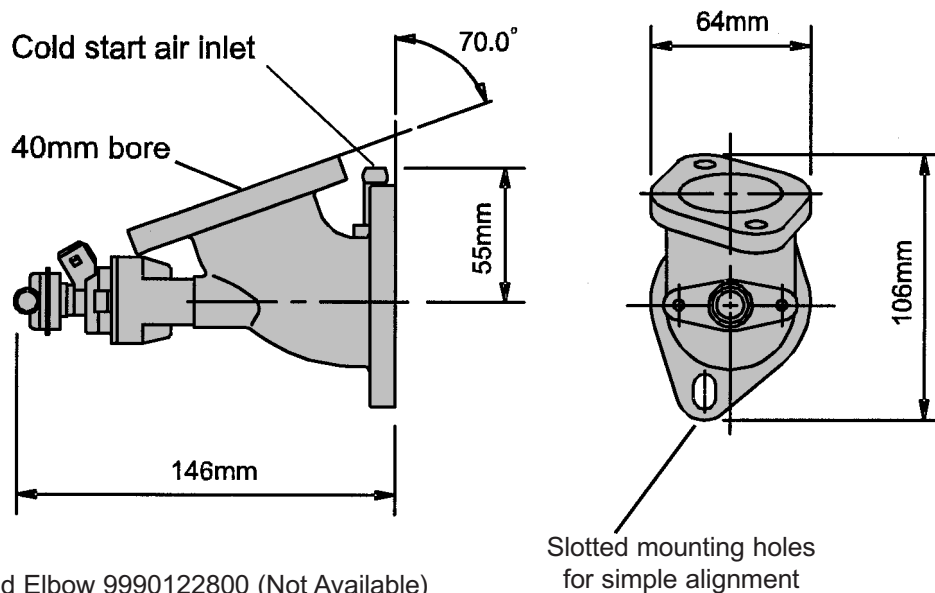


GENERAL SPECIFICATION

- Material: Aluminium alloy LM25.
- Finish: Hard wearing black crinkle powder coating.
- Shaft support: Two SKF single groove ball race bearings.
- Shaft drive: Weber 5 x 7mm double 'd' drives.
- Bore size: 40mm and 45mm.
- Mounting: Standard DCOE/DHLA carburettor type flange.
- Air horns: Standard DCOE/DHLA airfilter mounting flange.
- Potentiometer: High resolution logarithmic type fitted to potentiometer throttle bodies.

Part Number: 9990121400

Part Number	Product Description
9990121400	40mm Right Hand Potentiometer
9990121500	40mm Right Hand Slave
9990121600	40mm Left Hand Potentiometer
9990121700	40mm Left Hand Slave
9990232400	45mm Left Hand Slave
9990232500	45mm Left Hand Potentiometer
9990232600	45mm Right Hand Slave
9990232700	45mm Right Hand Potentiometer



Right Hand Elbow 9990122800 (Not Available)
shown fitted with an injector and mounting kit.



Illustrated: Left Hand Elbow 9990122900.

GENERAL SPECIFICATION

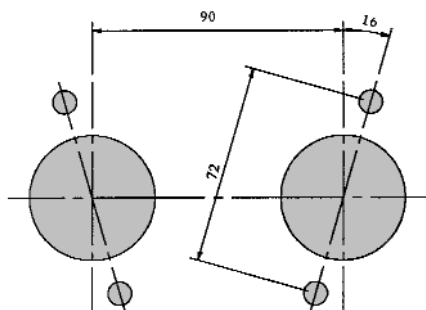
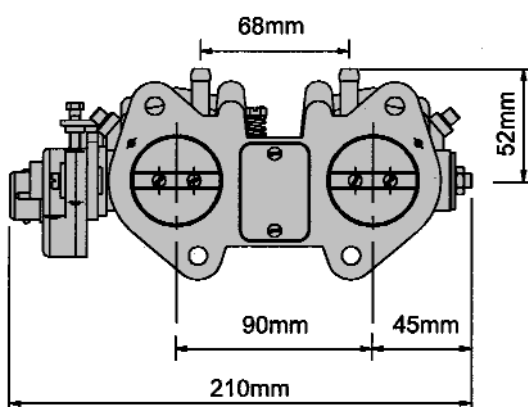
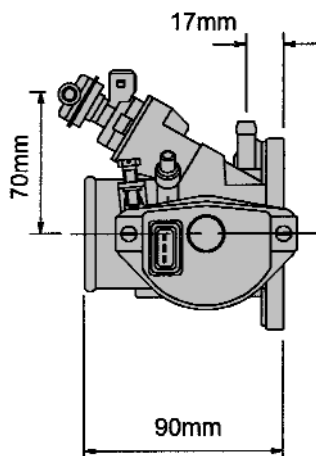
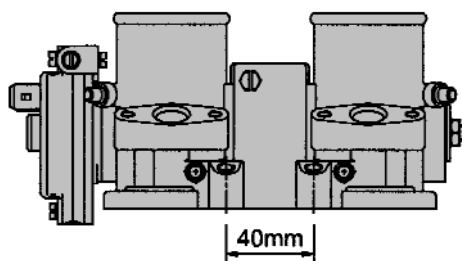
Material: Aluminium alloy.
Finish: Hard wearing black crinkle powder coating.
Injectors: Accepts standard 14mm 'O' ring injector fittings.
Mounting: Standard DCOE/DHLA carburettor type flange.

N.B. Uses Injector Mounting Kits listed on pages 34 and 35 to fit injectors.
Suitable for use with Webcon UK 'Mono Throttle Bodies' listed on page 15.

Part Number	Product Description
9990122900	Left Hand Elbow With Injector Port

Illustration: 40mm Right Hand
Potentiometer 9990120300.

Fuel connection can be
rotated through 360° to provide
the best installaion position



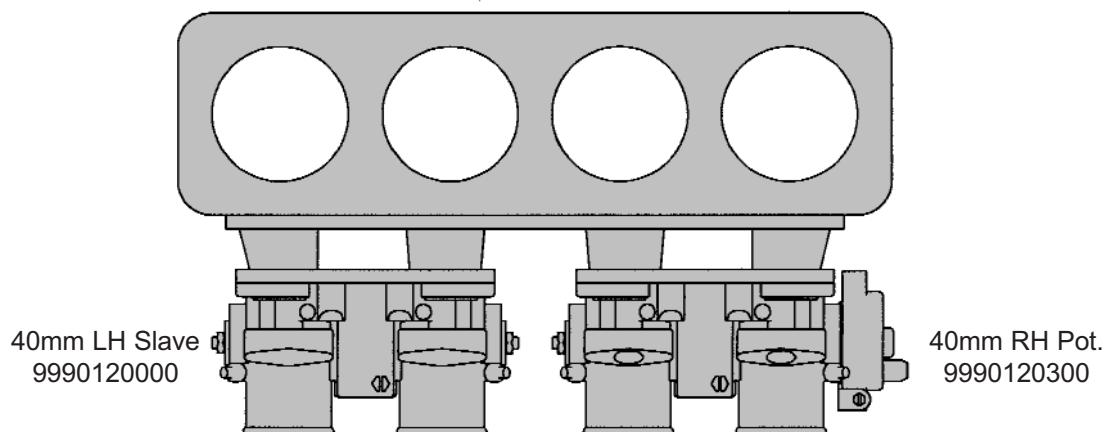
45mm Left Hand
Potentiometer
9990120600

GENERAL SPECIFICATION

- Material: Aluminium alloy LM25.
- Finish: Hard wearing black crinkle powder coating.
- Shaft support: Two SKF single groove ball race bearings.
- Shaft drive: Weber 5 x 7mm double 'D' drives.
- Bore sizes: 40, 45, 48, and 50mm diameter.
- Mounting: Standard DCOE/DHLA carburettor type flange.
- Air horns: Air inlet hose fitting for maximum tuning and installation flexibility.
- Potentiometer: High resolution logarithmic type fitted to potentiometer throttle bodies.
- Injectors: Accepts standard 14mm 'O' ring injector fitting.

N.B. 2 injector mounting kits required per twin throttle body.

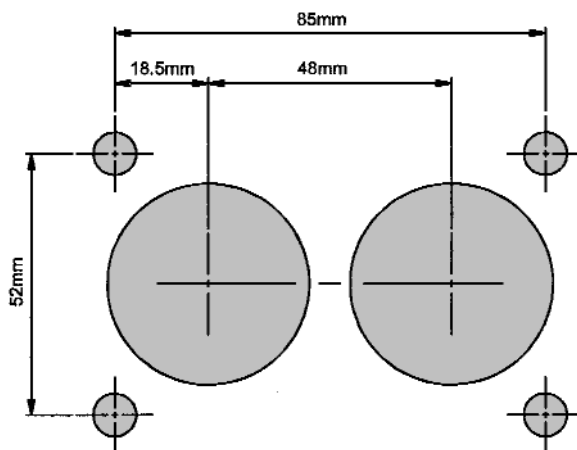
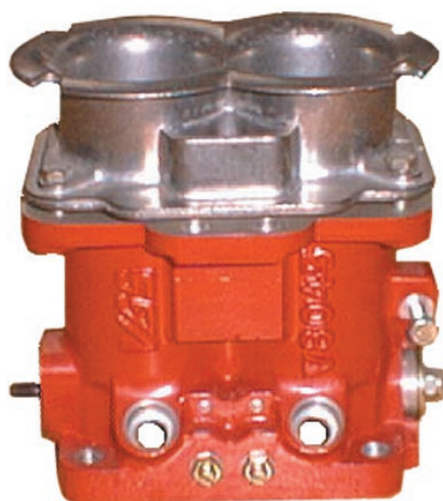
EXAMPLE OF TYPE AND PART NUMBERING



Type Identification From This Side

Part Number	Product Description
9990120000	40mm Left Hand Slave
9990120100	40mm Right Hand Slave
9990120200	40mm Left Hand Potentiometer
9990120300	40mm Right Hand Potentiometer
9990120400	45mm Left Hand Slave
9990120500	45mm Right Hand Slave
9990120600	45mm Left Hand Potentiometer
9990120700	45mm Right Hand Potentiometer
9990193000	48mm Left Hand Slave
9990193100	48mm Right Hand Slave
9990193200	48mm Left Hand Potentiometer
9990193300	48mm Right Hand Potentiometer
9990189000	50mm Left Hand Slave
9990189100	50mm Right Hand Slave
9990189200	50mm Left Hand Potentiometer
9990189300	50mm Right Hand Potentiometer

N.B. LHP bodies are fitted with PF3B Potentiometers, RHP bodies are fitted with PF4B Potentiometers.



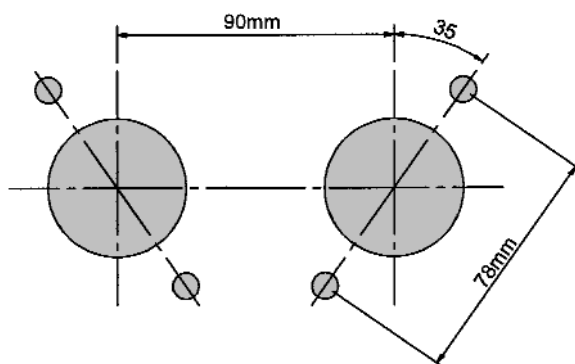
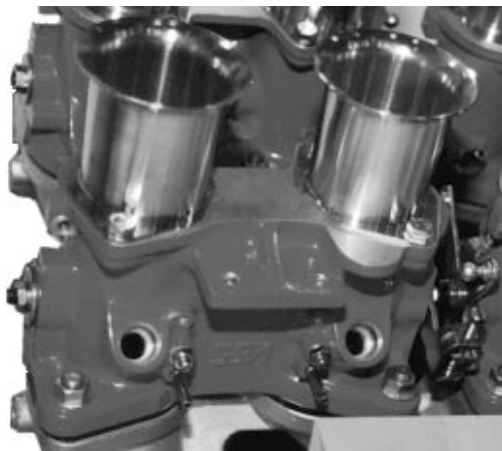
GENERAL SPECIFICATION

These twin DCNF throttle bodies are based upon the DCNF carburettor and mounting flange (shown above) and are available in two bore sizes: 40mm and 42mm. This range of throttle bodies offer the benefit of simpler engine management conversions on engine previously fitted with downdraught DCNF carburettors and manifolds.

There are two styles of the DCNF throttle body, the first is suited for straight engine configurations, while the second is designed for narrow 'V' engines and feature a smaller overall width allowing the injectors and fuel rail to be mounted in-board of the engine 'V'. This second style has the suffix S on the part numbers.

The bodies are supplied with fuel rails that mount the injectors in position, throttle levers (male and female) and a single D shaft drive for a throttle position sensor.

Part Number	Product Description
V80450LS	40mm Left Hand Slave
V80450RS	40mm Right Hand Slave
V80452LS	42mm Left Hand Slave
V80452RS	42mm Right Hand Slave
V804540L	40mm Left Hand Potentiometer
V804540R	40mm Right Hand Potentiometer
V804542L	42mm Left Hand Potentiometer
V804542R	42mm Right Hand Potentiometer

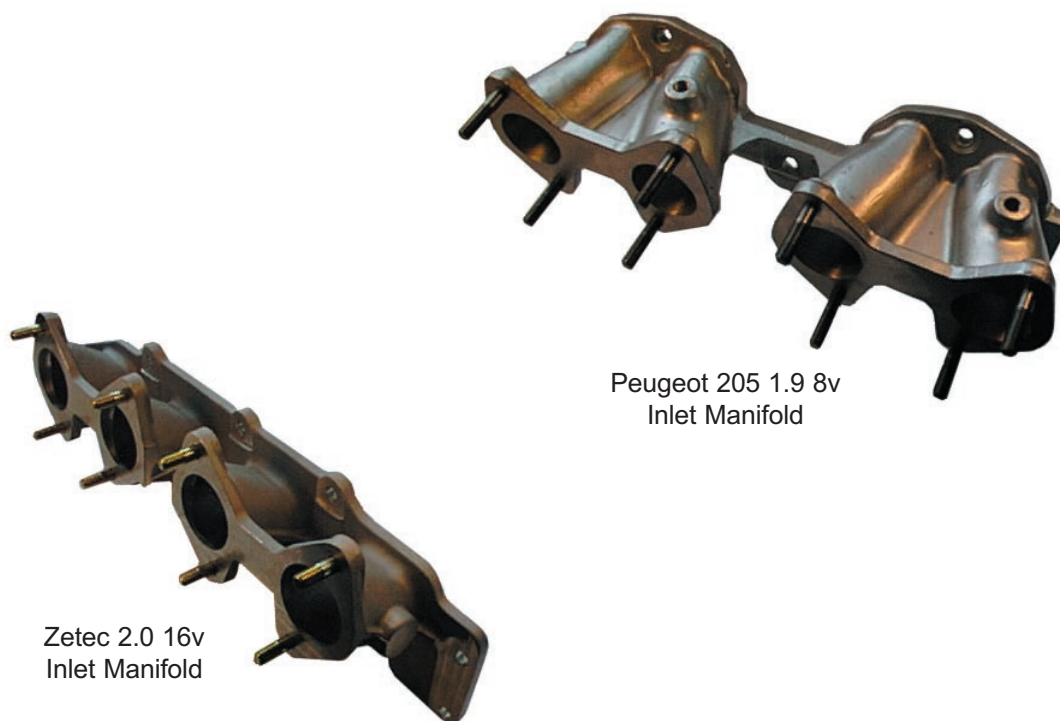


GENERAL SPECIFICATION

These twin IDF throttle bodies are based upon the IDF carburettor and mounting flange (shown above) and are available in two bore sizes: 40mm and 45mm. This range of throttle bodies offer the benefit of simpler engine management conversions on engines previously fitted with down draught IDF carburettors and manifolds.

The bodies are supplied with air horns, fuel rails that mount the injectors in position, throttle levers (male and female) and a single D shaft drive for a throttle.

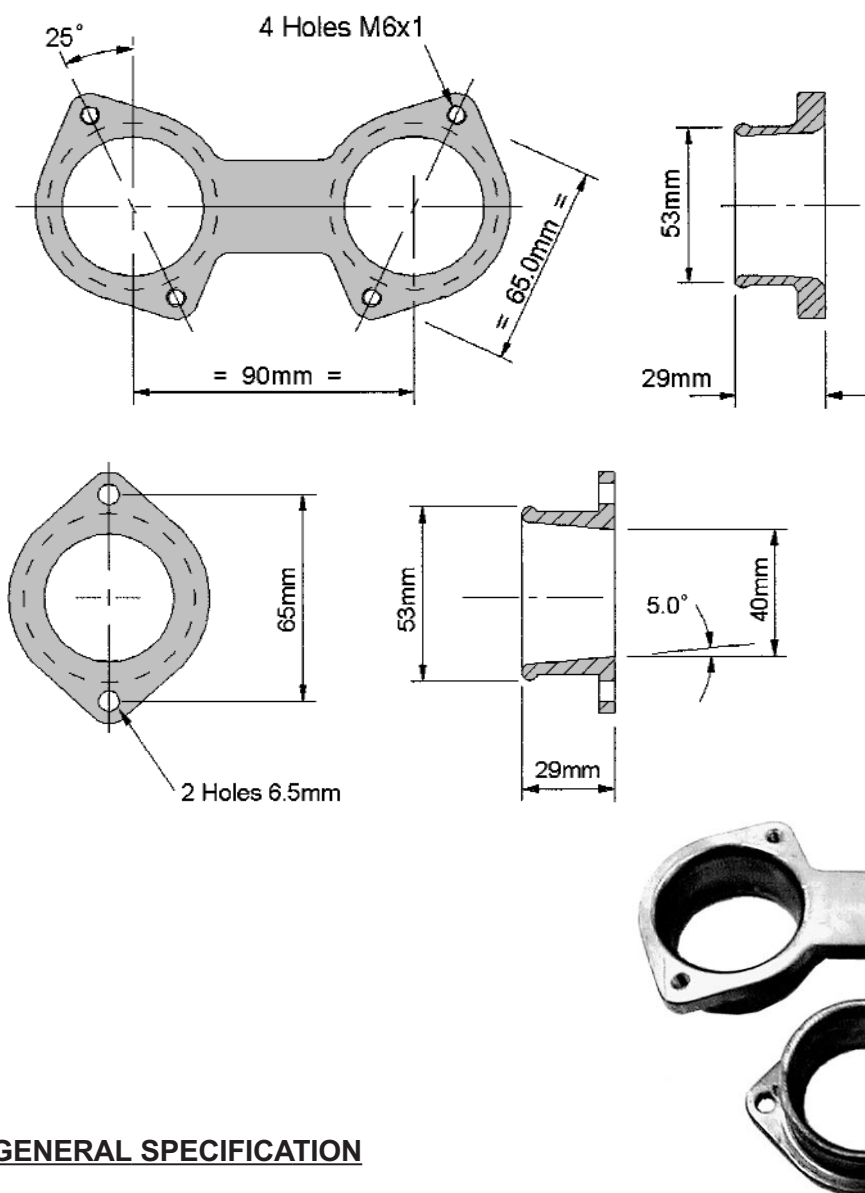
Part Number	Product Description
V804440PL	40mm Left Hand Potentiometer
V804440L2	40mm Left Hand Slave
V804440PR	40mm Right Hand Potentiometer
V804440R2	40mm Right Hand Slave
V804445PL	45mm Left Hand Potentiometer
V804445L2	45mm Left Hand Slave
V804445PR	45mm Right Hand Potentiometer
V804445R2	45mm Right Hand Slave



GENERAL SPECIFICATION

- Material: Cast Aluminium alloy.
 Flange: Standard Weber DCOE side draught bolt pattern, which fits both DCOE and throttle body requirements.
 Fitting: All manifolds come with the necessary steel fitting studs.

Part Number	Engine Type	Choke Size (mm)	Side/Down Draught	Carburettor/Throttle Body Type
MM4242B	Ford CVH 8v	45	Side	DCOE
MM44240A	Ford X-Flow 8v	40	Side	DCOE
MM4270B	Ford Pinto 8v	45	Side	DCOE
MM5000	Ford Zetec 1.6,1.8,2.0 16v, Short	45	Side	DCOE
MM42806B	Ford Zetec 1.6,1.8,2.0 16v, Long	45	Side	DCOE
MM5100	Vauxhall XE 2.0 16v	45	Side	DCOE
MM5200	Vauxhall Ecotec 2.0 16v	45	Side	DCOE
MM5600	Vauxhall Ecotec 1.6 16v	40	Side	DCOE
MM5700	Vauxhall Ecotec 1.6 16v (7°)	40	Side	DCOE
MM5400	Rover K-Series 16v	40/45	Side	DCOE
MM4980A	Peugeot/Citroën XU9 1.9 8v	40	Side	DCOE
MM4980B	Peugeot/Citroën XU9 1.9 8v	45	Side	DCOE
MM5300	VW Golf 1.8/2.0 16v, Short	45	Side	DCOE
MM5500	VW Golf 1.8/2.0 16v, Long	45	Side	DCOE

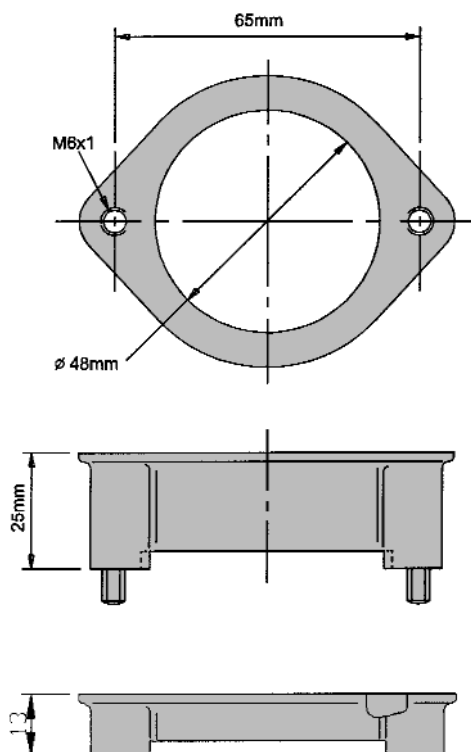


GENERAL SPECIFICATION

Material: Aluminium alloy.
 Flange: Standard Weber side draught DCOEair filter fitting.
 Installation: Accepts 50mm ID hose.

Part Number	Product Description
9990100400	Twin Bore Air Filter Flange - 40mm and 45mm
9990235400	Twin Bore Air Filter Flange - 48mm
9990121800	Single Air Horn / Inlet Air Hose Adaptor

Part Number	Throttle Body Fitting	Air Intake Tube Hose Dimns
9990252700	40mm & 45mm	50mm I/D - 60mm O/D - Straight 0.5m
9990188900	48mm & 50mm	57mm I/D - 67mm O/D - Straight 0.5m



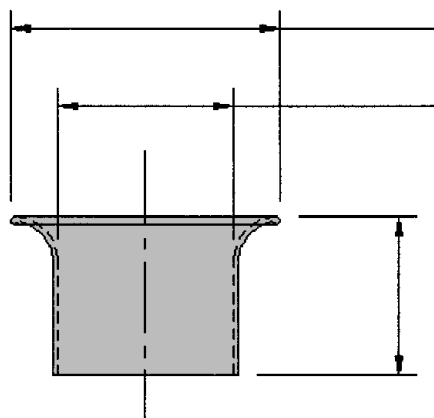
GENERAL SPECIFICATION

A clamp-on assembly for use on ALPHA twin throttle bodies (40mm & 45 mm). Converts to a standard DCOE style air filter mounting flange. An aluminium casting finished in black crinkle to match the throttle bodies.

Kit contents:

- 2 x Air filter flanges.
- 4 x M6 studs.
- 4 x Locating tabs.
- 4 x M6 Nyloc nuts.
- Throttle body and air filter flange (25mm) assembly height 110mm.
- Throttle body and air filter flange (13mm) assembly height 98mm.
- DCOE carburettor height 118mm.

Part Number	Product Description
9990261500	Air Filter Mounting Flange Kit (25mm)
9990298800	Air Filter Mounting Flange Kit (13mm)



GENERAL SPECIFICATION

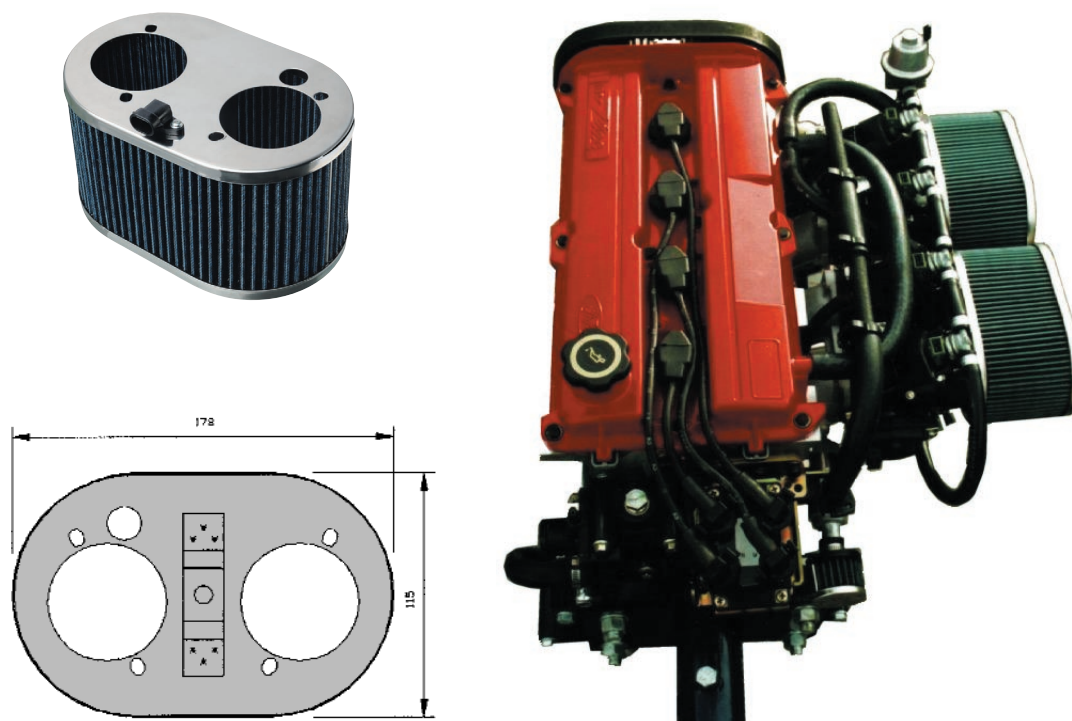
Carburettors/Throttle Bodies will require air horns weather air filters are fitted or not. Air horns smooth the flow of air entering, which reduces turbulence therefore improving performance and response.

Construction: Either a spun Steel or Aluminium construction which is bolted to the main casting.

Part Number	Application	Length (mm)	I/D (mm)	O/D (mm)
AH801	40 DCOE	16	40	58
AH802	40 DCOE	26	40	57
5284001200	40 DCOE	39	40	58
AH813	45 DCOE	16	45	70
AH814	45 DCOE	26	45	70
AH815	45 DCOE	39	45	70
AH841*	40mm & 45mm T/Bodies	40	45	70
AH851**	40mm & 45mm T/Bodies	52	45	70
5284000101	45 DCOE	62	50	64
5284003400	48 DCO/SP	95	52	65
5284003300	48 DCOE & T/Bodies	56.5	53	70

* To be used with Air Filter Mounting Kit Part No. 9990261500

** To be used with Air Filter Mounting Kit Part No. 9990298800



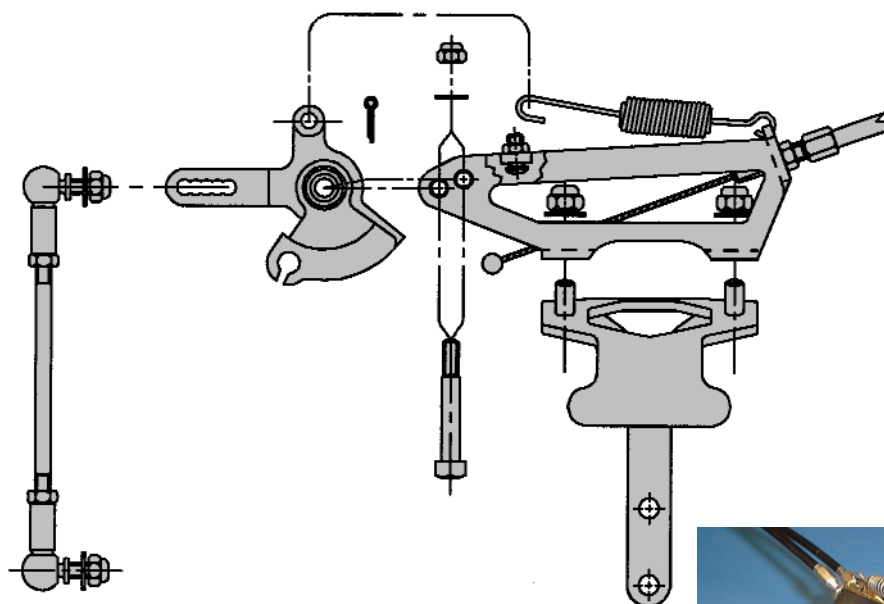
GENERAL SPECIFICATION

The performance air filters that are supplied as part of the Alpha performance kits are cotton with wire mesh sandwich type filter element. All performance air filters and bases are compatible with the Weber performance carburettor and throttle body range.

Each kit includes a polished stainless steel base and cover, a mounting gasket and cleaning instructions. Kit JRW516/ATS has an air temperature sensor fitted as standard which is utilised by the carburettor performance kits and full engine management kits. All performance air filters are washable therefore ensuring a long life.

A wide range of performance filters for many types of vehicles are stocked, please phone for details of availability and price.

Part Number	Product Description	Filter Depth (mm)	Colour
JRW514	Air Filter	50	Blue
JRW515	Air Filter	70	Blue
JRW516	Air Filter	90	Blue
JRW516/ATS	Air Filter	90	Blue
CR-05203	Conical Air Filter	7	Blue
CR-01601	Oil Breather	38	Blue
1006	Oil & Cleaner (300cc & 500cc)	N/A	N/A



Alpha throttle body top mounting linkage

GENERAL SPECIFICATION

Alpha Throttle Body Top Mounting Linkage

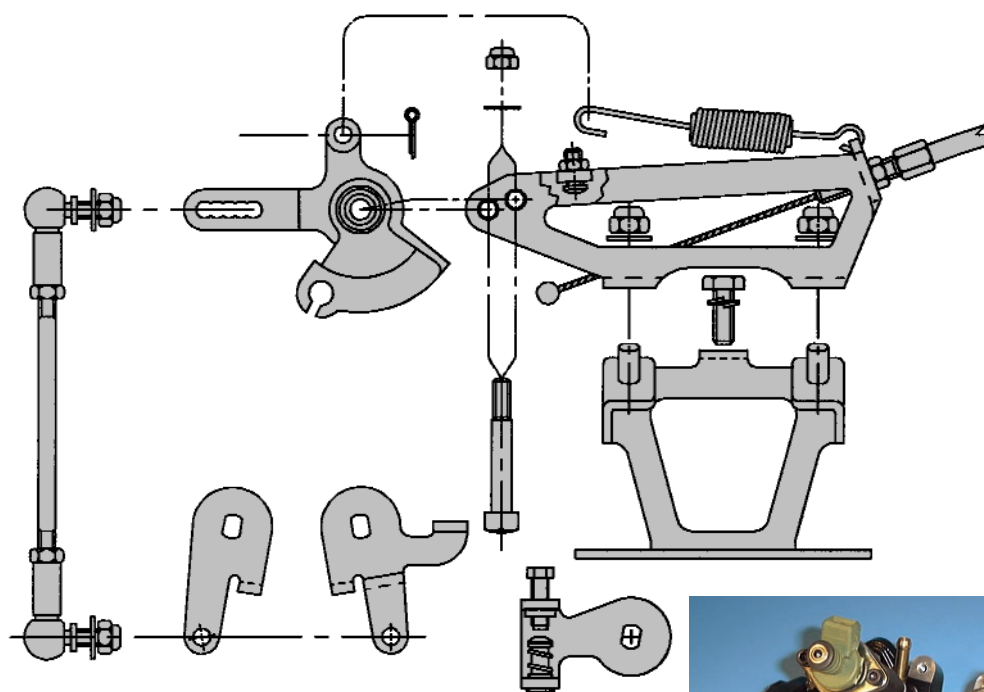
Utilising the existing DCOE throttle linkage kits LP1000 and LP2000, this linkage assembly requires the fitment of the mounting lever 9990172100. LP linkages are supplied complete with full fitting instructions and accessories.

NOTE:- When using Pico Injectors, a Pico Clearance Kit will be needed to enable the linkage to function correctly.

- Construction:
- Mild steel plate protected with zinc and yellow passivate plating.
 - Twin return springs.
 - Adjustable over centre throttle stop.
 - Twin sintered bronze self-lubricating quadrant bearings.
 - High quality 8mm steel ball joints.
 - Supplied with low friction teflon coated cables.
 - Inner cable connects to quadrant cam for smooth linear action.
 - Adjustable throttle cable movement - 22mm to 40mm.

- Fitting:
- Mounts directly to one Webcon Alpha twin throttle body. Suitable for both left and right hand throttle bodies.

Part Number	Product Description
LP 1000	Single Cable - DCOE (For Use With Existing Cable)
LP 2000	Twin Cable - DCOE (Cables Included)
9990172100	Top Mounting Bracket
9990298700	Pico Injector Clearance Kit



GENERAL SPECIFICATION

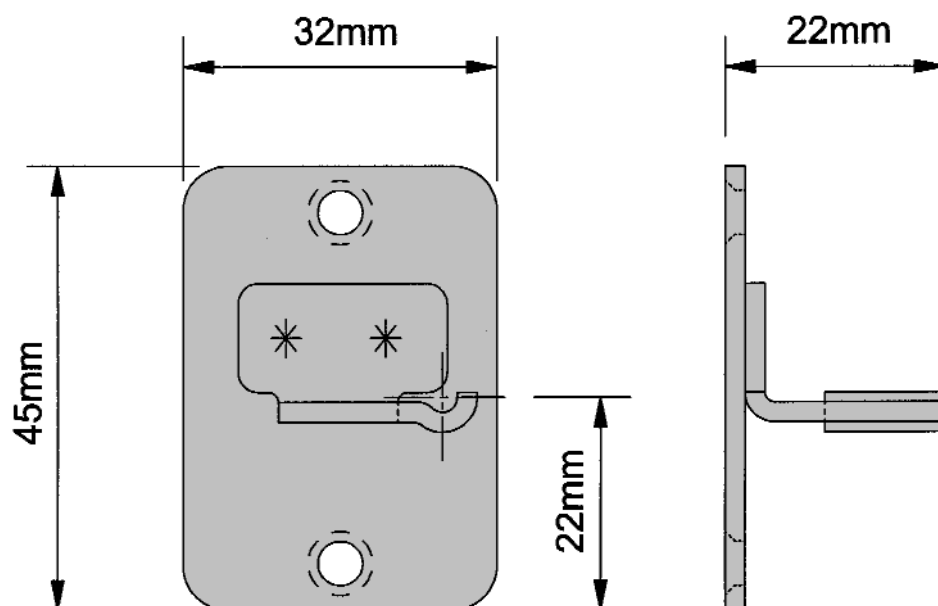
Alpha Throttle Body Underside Mounting Linkage

The LP 7000 linkage kit is supplied complete with full fitting instructions and accessories.

- Construction:
- Mild steel plate protected with zinc and yellow passivate plating.
 - Twin return springs.
 - Adjustable over centre throttle stop.
 - Twin sintered bronze self-lubricating quadrant bearings.
 - High quality 8mm steel ball joints.
 - Supplied with two low friction teflon coated cables.
 - Inner cable connects to quadrant cam for smooth linear action.
 - Adjustable throttle cable movement - 22mm to 40mm.

- Fitting:
- Mounts directly to one throttle body.
 - 40, 45, 48 and 50mm Webcon Alpha twin throttle bodies. Suitable for left or right hand throttle bodies.

Part Number	Product Description
LP 3000	Single Cable - DCOE (For Use With Existing Cable)
LP 4000	Twin Cable - DCOE (Cables Included)
LP 7000	Twin Cable - Throttle Bodies (Cables Included)



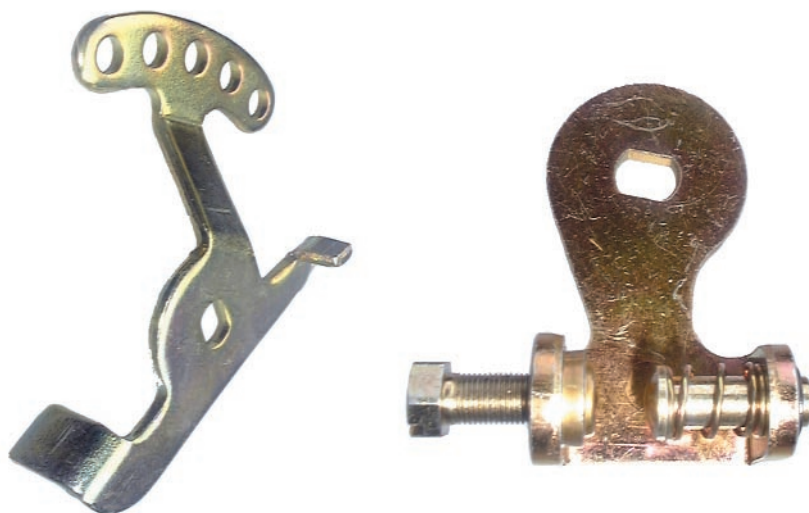
GENERAL SPECIFICATION

Twin throttle body cover plate with integral return spring anchor

This part will fit all Alpha DCOE style throttle bodies and will reduce the return spring tension by approximately 30%.

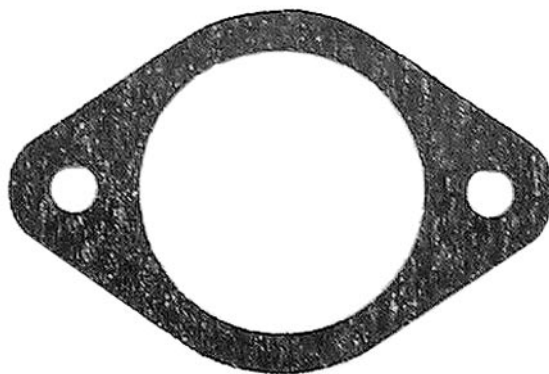
Part Number	Product Description
9990192700	Cover Plate With Return Spring Adaptor

THROTTLE LEVERS

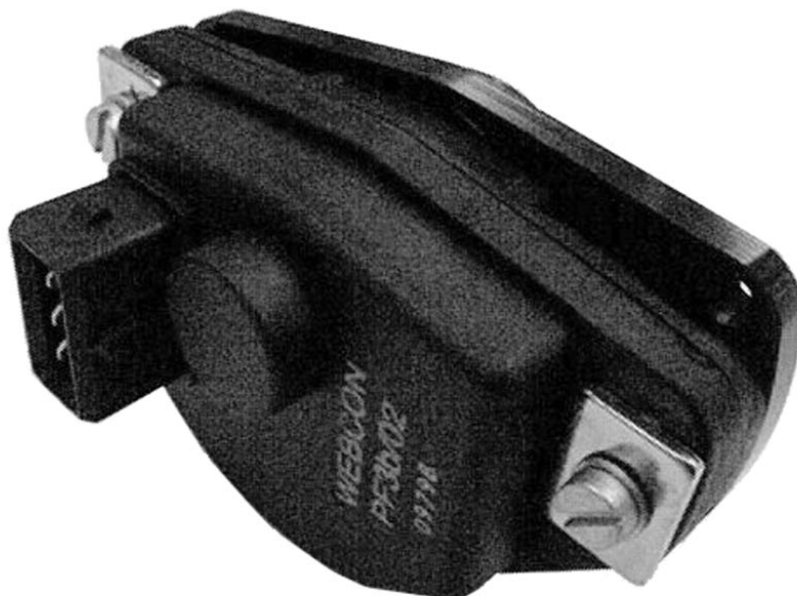


Part Number	Product Description	Type
9990123300	Twin Throttle Body Lever	Male
9990123400	Mono Throttle Body Lever	Male
4504814900	Mono/Twin Throttle Body Lever	Female

GASKETS



Part Number	Product Description
9990124400	40mm Flange Gasket
9990124500	45mm Flange Gasket
9990191700	48mm Flange Gasket
9990189700	50mm Flange Gasket



GENERAL SPECIFICATION

Logarithmic Throttle Potentiometer And Mounting Kit

- Shaft Rotation: •Type PF3B - clockwise. (Part Number WTP023).
 •Type PF4B - anticlockwise. (Part Number WTP069).
 Shaft drive: Requires 4mm double 'D' drive.
 Resistance: 550 Ohm.

Each kit includes:

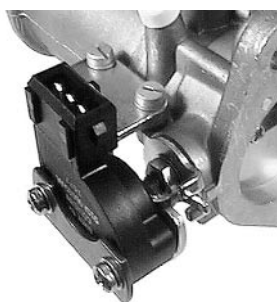
- High resolution potentiometer.
- Mounting casting.
- Adjusting bracket.
- 'O' ring seal.
- Mounting screws and washers.
- Fitting instructions.

Wiring details for Alpha System harness:

- Pin 1 Ground Blue
- Pin 2 Signal Purple / Blue
- Pin 3 5V Ref. Green / Red

N.B. Use service tool 9990140400 to set potentiometers in the correct position.

Part Number	Product Description	Shaft Rotation
9990149900	Potentiometer PF3B & Mounting Kit	Clockwise
9990150000	Potentiometer PF4B & Mounting Kit	Anti-clockwise



40/45 DCOE Throttle Position
Sensor Mounting Kit.



48 DCO SP Throttle Position
Sensor Mounting Kit.

GENERAL SPECIFICATION

Throttle Position Sensor kits for Weber sidedraught carburettors

Quick and easy to fit, no machining required, fitting instructions included.

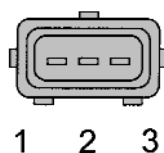
These kits include:

- Throttle position sensor.
- Mounting bracket and fittings.
- Throttle lever.
- Fitting instructions.

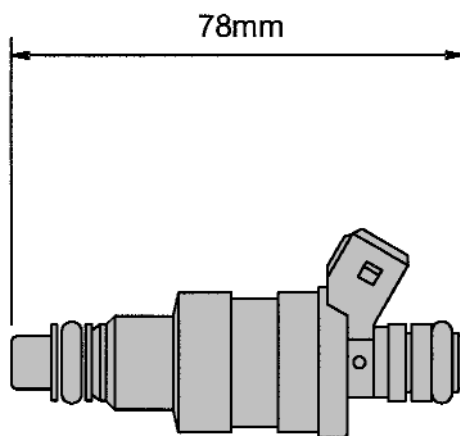
Suitable for fitment to 40/45 DCOE, 48 DCO SP and Dellorto 40/45 DHLA in conjunction with the ignition management systems detailed on pages and to complete 3D ignition mapping for both distributor and distributorless ignition systems.

Wiring details for Alpha System harness:

- Pin 1 Signal Purple / Blue
- Pin 2 Ground Blue
- Pin 3 5V Ref. Green / Red



Part Number	Product Description
9990266000	TPS Mounting Kit 40/45 DCOE
9990266800	TPS Mounting Kit 48 DCO SP
9990290200	TPS Mounting Kit 40/45 DHLA



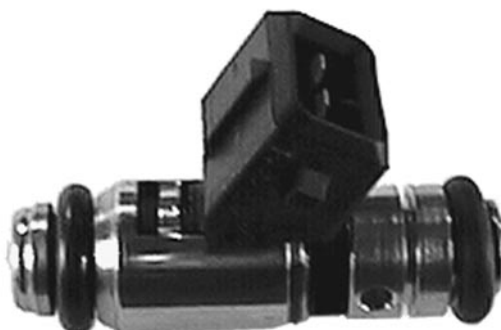
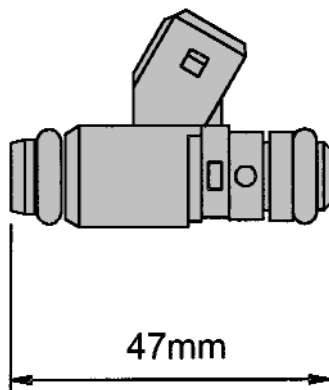
GENERAL SPECIFICATION

Type: Electromagnetic petrol injector, calibrated orifice type.
 Construction: Fully sealed unit.
 Electrical: Standard 2-pin Minitimer connector.
 Weight: 100 grams.

Sealing 'O' ring, 14mm O.D. is available separately. Part Number 4156504700.

N.B. Matched sets of Injectors are available to special order.

Part Number	Product Description	Type	Colour	DC Resistance	Static Flow (3 Bar)
WFI005	Injector	IW052	Brown	14.5 Ohms	149 cc/min
WFI192	Injector	IW042	Red	16.2 Ohms	190 cc/min
WFI191	Injector	IW031	Green	16.2 Ohms	270 cc/min
WFI193	Injector	IW058U	Biege	14.5 Ohms	384 cc/min



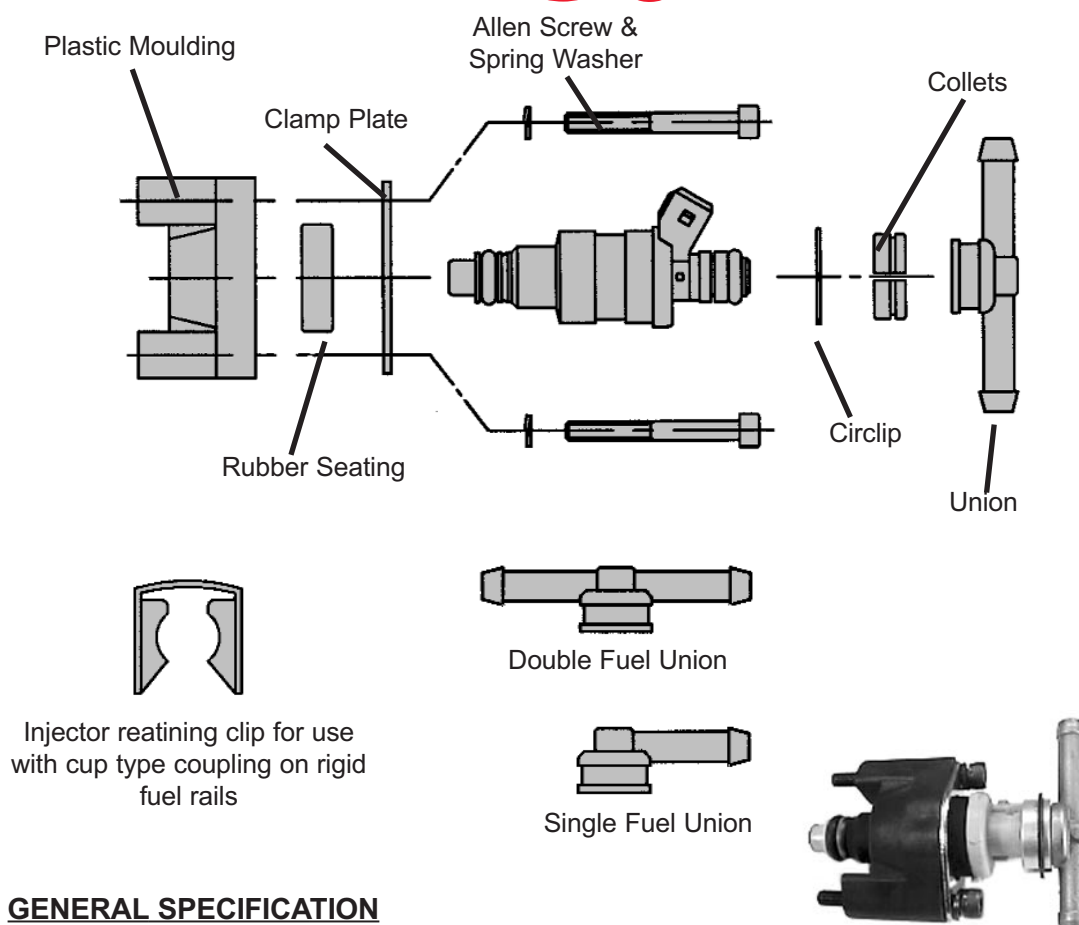
GENERAL SPECIFICATION

Type: Electromagnetic petrol injector, calibrated orifice type.
 Construction: Fully sealed unit standard 14mm 'O' ring fitting.
 Electrical: Standard 2-pin Minitimer connector.
 Weight: 40 grams.

Sealing 'O' ring, 14mm O/D is available separately, Part Number 4156504700.

N.B. Matched sets of Injectors are available to special order.

Part Number	Product Description	Type	Nozzle	DC Resistance	Static Flow (3 Bar)
WFI023	Injector	IWP023	1 Jet	14.5 Ohms	159 cc/min
WFI195	Injector	IWP001	4 Jet	14.5 Ohms	190 cc/min
WFI196	Injector	IWP042	4 Jet	14.5 Ohms	250 cc/min
WFI024	Injector	IWP043	1 Jet	14.5 Ohms	330 cc/min
WFI194	Injector	IWP069	1 Jet	14.5 Ohms	480 cc/min



GENERAL SPECIFICATION

To mount Weber type 'O' ring fitting injectors to Alpha twin throttle bodies and injector mounting elbows.

Fuel union kits contains:

- 1 x Union.
- 2 x Collets.
- 1 x Circlip.

N.B. Injector is not included with the mounting kit.

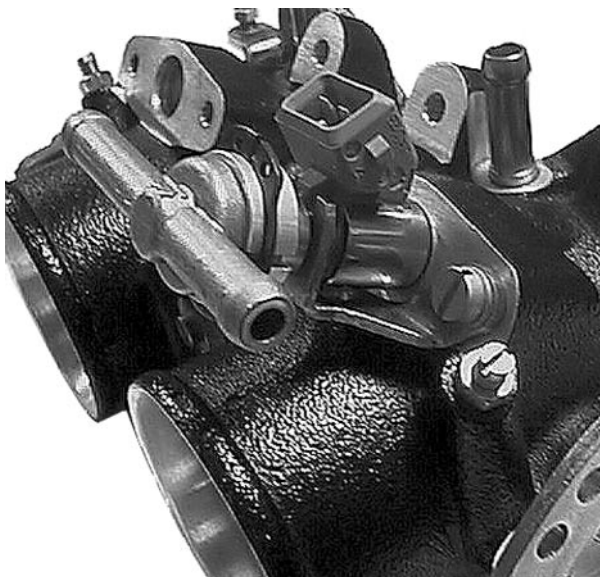
Injector retaining clip for use with cup type fittings on rigid fuel rails, Part Number 4761501101.

An injector cup, suitable for screwing into a solid fuel rail, is available. Part number 9990259400.

Part Number	Product Description
9990122300	Injector Mounting Kit (Double)
9990148900	Injector Mounting Kit (Single)
9990178900	Injector Fuel Union Kit (Double)
9990226000	Injector Fuel Union Kit (Single)
9990001200	13mm Fuel Hose Clip
4761501101	Injector Retaining Clip
9990259400	Injector Mounting Cup



Mounting Bracket



Kit 9990268600



Single Fuel Union



Double Fuel Union

GENERAL SPECIFICATION

Pico Injector Mounting Kits

A mounting kit to fit a Pico fuel injector onto the Webcon twin throttle bodies and injector mounting elbows.

Each kit contains:

- 1 x Mounting bracket.
- 2 x Insulation washers.
- 2 x Mounting screws.
- 2 x Collet.
- 1 x Circlip.
- 1 x Fuel union (single or double).

Part Number	Product Description
9990268500	Pico Injector Mounting Kit (Single Fuel Union)
9990268600	Pico Injector Mounting Kit (Double Fuel Union)
9990298700	Pico Injector Clearance Kit



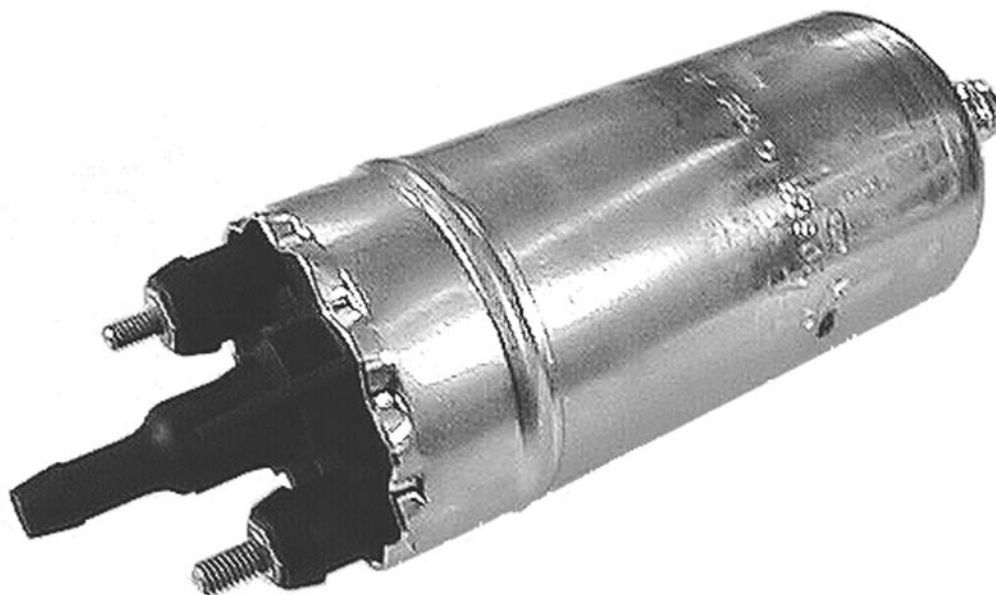
GENERAL SPECIFICATION

Construction: Fully sealed unit, steel casing, zinc plated and yellow pasivated.
 Connections: Accepts 'Push-On' fuel pipe at both ends, 8mm O/D at inlet and outlet.
 Electrical: Suitable for 12 volt operation, fitting supplied.
 Dimensions: Length 172mm x Ø54mm.

Supplied with the following parts:

- Mounting bracket.
- 2 x 100mm lengths of fuel line.
- Hose clips and unions.

Part Number	Product Description	Flow Range (L/Hr)	Pressure Range (Bar)
WFP501	Electric Fuel Pump	90 - 130	0.34 - 0.62
WFP502	Electric Fuel Pump	90 - 130	0.17 - 0.31



GENERAL SPECIFICATION

- Construction: Fully sealed unit, aluminium alloy casing with plastic end moulding at outlet.
 Connections: Accepts 'push-on' fuel pipe at both ends, 12mm O/D at inlet 8mm O/D at outlet.
 Electrical: Suitable for 12 volt operation, fitting supplied.
 Dimensions: Length 170mm x Ø52mm.
 Mounting: Unit must be gravity fed under all conditions.
 Fuel inlet must be protected by 50 micron in tank (not in-line type).

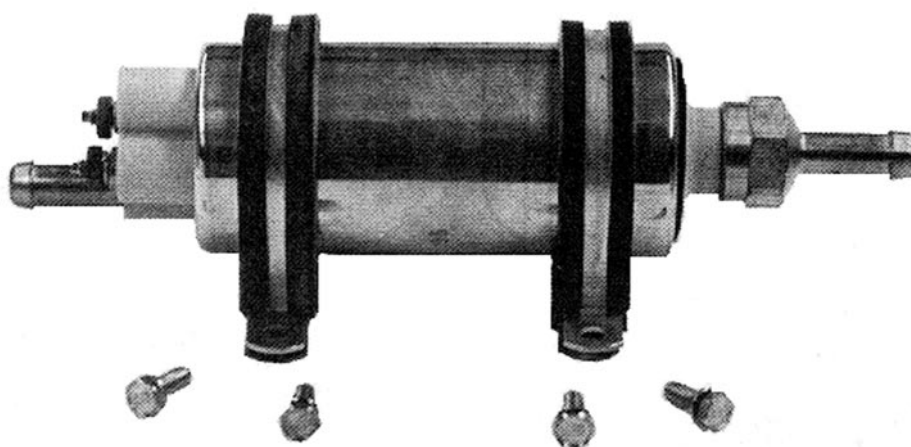
Part Number	Product Description	Output (Li/Hr@ 3 Bar)
WFP700	Electric Fuel Pump	100



GENERAL SPECIFICATION

Construction: Fully sealed unit, aluminium alloy casing with plastic end moulding.
 Connections: Outlet 9/16 x 18 UNF male, Inlet M16 x 1.5 female.
 Electrical: Suitable for 12 volt operation, accepts standard automotive connectors.
 Dimensions: Length 170mm x Ø52mm.
 Mounting: Unit must be gravity fed under all conditions.
 Fuel inlet must be protected by 50 micron in tank (not in-line type).

Part Number	Product Description	Output (Li/Hr@ 5 Bar)
WFP093	Electric Fuel Pump	100



GENERAL SPECIFICATION

A roller vane type electric fuel pump for use on high flow and high pressure installations. This pump is supplied complete with two wrap around cushioned mounting brackets and four bolts for quiet operation.

Connections: Accepts 'Push-On' 9.5mm I/D fuel pipe at both ends.
 Electrical: Suitable for 12 volt operation.
 Dimensions: Length 200mm x Ø48mm

Part Number	Product Description	Output (Li/Hr@ 3 Bar)
WFP503	Electric Fuel Pump	170



GENERAL SPECIFICATION

- Construction: Fully sealed unit with lightweight aluminium alloy casing for use as a pre-injector filter.
 Filtration: Highly efficient filter medium removes microscopic particles down to 10 microns to avoid contamination of fuel injectors.
 Dimensions: Length 130mm x diameter 55mm.(WFF042)
 Length 130mm x Ø58mm.(WFF213)
 Both units are interchangeable
 Connections: Inlet M14 x 1.5 male.
 Outlet M12 x 1.5 male.

Part Number	Product Description
WFF042	Fuel Filter (55mm O/D)
WFF213	Fuel Filter (58mm O/D)
9990138900	Ø8 Push-On Hose Connector (M14 x 1.5)
9990173800	14mm Dowty Washer
9990139100	Ø8 Push-On Hose Connector Banjo (12mm)
9990139200	M12 x 1.5 Banjo Bolt
9990224200	12mm Dowty Washer
9990191000	Ø8 Push-on Hose Connector Banjo (14mm)



GENERAL SPECIFICATION

Construction: A fully sealed fuel filter in black glass reinforced plastic for use as a pre-injector filter.
 Connections: Two 8mm Push-on fuel hose connections.
 Dimensions: Length 150mm (inc. connections) x 57mm main diameter.
 Unit fits into the fuel filter mounting kit 9990159400.

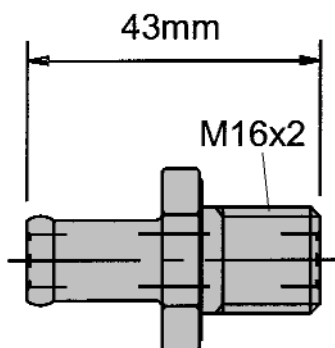
Part Number	Product Description
WFF214	Fuel Filter (Plastic)



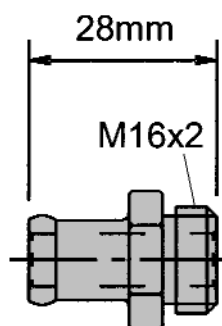
GENERAL SPECIFICATION

Fits Alpha system fuel filters WFF213 and WFF214.
 Kit supplied with all fittings and a self-adhesive insulation strip for mounting fuel pump WFP700.
 Rubber mounted bracket finished in zinc and yellow passivate.

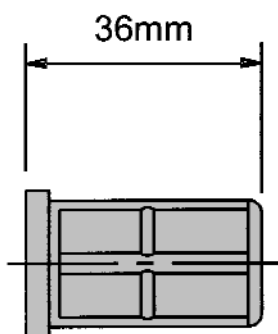
Part Number	Product Description
9990159400	Fuel Filter/Pump Mounting Kit



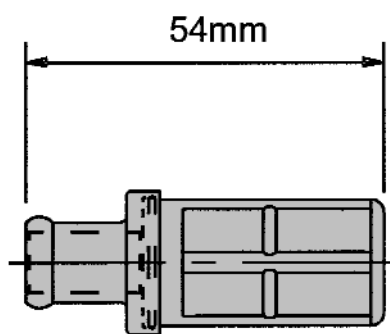
9990130200



9990130300



9990130400



9990154700



9990154700

Part Number	Product Description
9990130200	Union Ø 8 x 12mm - Plated Mild Steel - 43mm Long
9990130300	Union Ø 8 x 12mm - Plated Mild Steel - 28mm Long
9990130400	40 Micron In-tank Fuel Filter
9990154700	Union & In-tank Filter Assembly



Type RP9, RP12 & RP42



Type RP1, RP7, RP8, RP19
& RP22

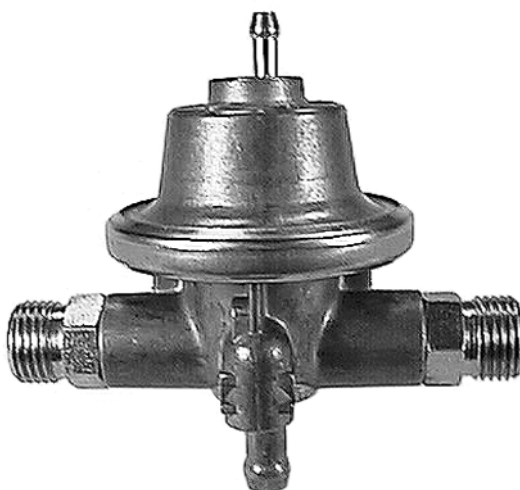


Type RP17

GENERAL SPECIFICATION

Construction: Die-cast aluminium alloy sealed unit.
Mounting: Threaded mounting holes in casing.

Part Number	Product Description	Type	Flow Rate (Li/Hr)	Fittings
WFR050	2.5 Bar Regulator	RP7	60	2 x 8mm Push-on
WFR040	3.0 Bar Regulator	RP1	60	2 x 8mm Push-on
WFR046	3.5 Bar Regulator	RP8	150	2 x 8mm Push-on
WFR052	3.0 Bar Regulator	RP9	60	1 x 14mm 'O' Ring & 1 x 8mm Push-on
WFR049	3.0 Bar Regulator	RP12	100	1 x 14mm 'O' Ring & 1 x 8mm Push-on
WFR037	3.5 Bar Regulator	RP17	150	3 x 8mm Push-on
WFR044	3.0 Bar Regulator	RP19	60	2 x 8mm Push-on
WFR045	2.5 Bar Regulator	RP42	100	1 x 14mm 'O' Ring & 1 x 8mm Push-on
WFR053	3.5 Bar Regulator	RP22	150	1 x 14mm 'O' Ring & 1 x 8mm Push-on
WFR047	3.5 Bar Regulator	RP21	150	1 x 14mm 'O' Ring & 1 x 6mm Push-on



GENERAL SPECIFICATION

Construction: Die-cast aluminium alloy sealed unit.
 Mounting: Threaded mounting holes in casing.
 Connections: 2 x M16 x 1.5 threaded fittings, high pressure side.
 1 x 8.0mm push on hose fitting, low pressure fuel return.

Part Number	Product Description	Type	Flow Rate (Li/Hr)	Fittings
WFR034	2.5 Bar Regulator	RP54	100	Threaded Inlet Connections



GENERAL SPECIFICATION

Construction: Stainless steel body and cover. Fabric-reinforced vulcanized-rubber elastic membrane, methanol resistant. Internal parts in contact with fuel are in stainless steel.

Mounting: Mounted in fuel rail with 20mm 'O' ring.

Connections: 4mm push-on connection and 5mm 'O' ring.

Fuel: Commercial and F1.

Part Number	Product Description	Type	Flow Rate (Li/Hr)
WFR048	2.5 Bar Regulator	RPM36	40
WFR024	3.0 Bar Regulator	RPM40	40
WFR029	3.5 Bar Regulator	RPM58	80
WFR043	4.5 Bar Regulator	RPM73	80



GENERAL SPECIFICATION

Specifically designed for motorsport applications up to and including Formula One, these regulators are manufactured from Ergal and weigh just 99 grams.

Construction: Ergal body and cover. Valve and seat made from martenistic stainless steel.
 Height: 56.9mm Max.
 Diameter: 47.5mm Max.
 Fuel: Commercial and F1.

Part Number	Product Description	Type	Flow Rate (Li/Hr)
WFR500	6.0 Bar Regulator	RPF22/01	25 - 700
WFR501	10.0 Bar Regulator	RPF17/04	25 - 700



GENERAL SPECIFICATION

Construction: Die-cast aluminium alloy sealed unit.
 Mounting: Threaded mounting holes in casing.
 Connections: 2 x 8.0mm push on hose fittings.
 Range: 1.7 to 4.0 bar.

Part Number	Product Description	Type
WFD001	Fuel Pressure Damper	SP01



GENERAL SPECIFICATION

Fuel Line Hose

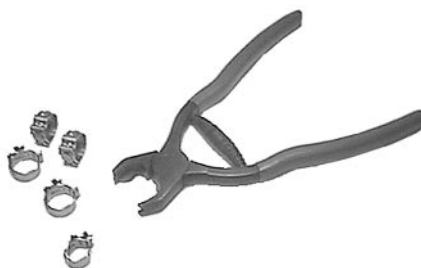
A high quality fuel line hose suitable for use with leaded and unleaded fuels on carburettor and injection system installations. This hose is available in three sizes and supplied in 10 metre reels.

Material: Nitrile Butadiene rubber liner.
 Construction: NBR liner with synthetic textile reinforcement and an oil and weather resistant cover.
 Working Pressure: 4 bar (58 psi).
 Burst Pressure: 12 bar (175 psi).
 Temperature Range: -35° to 100° Celsius.

Part Number	Product Description	I/D (mm)	O/D (mm)	Hose Clip Part Number
9990268700	Fuel Line Hose	5.8	12.0	9990009100
9990268800	Fuel Line Hose	7.4	13.5	9990001200
9990268900	Fuel Line Hose	9.5	15.5	9990008100

Part Number	Product Description	Dimns. (mm)
9990273600	Fuel Line Hose 1m Length	7.4 I/D
9990009400	Hose Clip	14
9990141600	180° Shaped Hose	10
9990141700	Herbie 'G' Clip	17 - 19
9990273700	Cobra Clip	N/A
9990274100	Cobra Clip Pliers	N/A

N.B. 180° Hose (Part Number 9990141600) is suitable for fuel pump inlet.





Part Number	Product Description	Dimns. (mm)
9990041100	Plastic 'Y' Connector	Ø4
9990043000	Plastic 'Y' Connector	Ø8
9990089700	Plastic 'Y' Connector	Ø6 - Ø8 - Ø6
9990095700	Plastic 'Y' Connector	Ø14
9990062600	Plastic 'Y' Connector	Ø16
9990070700	Plastic 'T' Connector	Ø6
9990041200	Plastic 'T' Connector	Ø8
9990097000	Plastic 'T' Connector	Ø8 - Ø6 - Ø8
9990135800	Plastic 'T' Connector	Ø16
9990101000	Plastic 'T' Connector	Ø15 - Ø8 - Ø15
9990045000	Plastic Elbow Connector	Ø19
9990048100	Plastic Elbow Connector	Ø14
9990048200	Plastic Elbow Connector	Ø13
9990048300	Plastic Elbow Connector	Ø12
9990048400	Plastic Elbow Connector	Ø15
9990052200	Plastic Hose Connector	Ø8 - Ø6
9990083500	Plastic Hose Connector	Ø12 - Ø8
9990087600	Plastic Hose Connector	Ø8
9990125500	Plastic Hose Connector	Ø8 - M12 x 1.5
9990125700	Plastic Hose Connector	Ø8 - M14 x 1.5
9990125600	Plastic Elbow Connector	Ø8 - M12 x 1.5
9990125800	Plastic Elbow Connector	Ø8 - M14 x 1.5
9990180200	Plastic 'T' Connector	Ø8 - Ø4 - Ø8



GENERAL SPECIFICATION

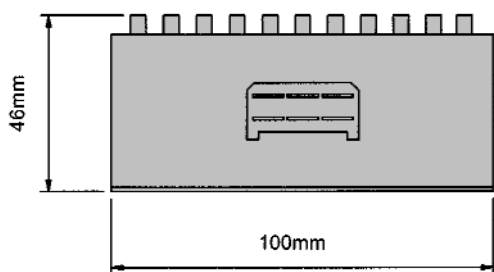
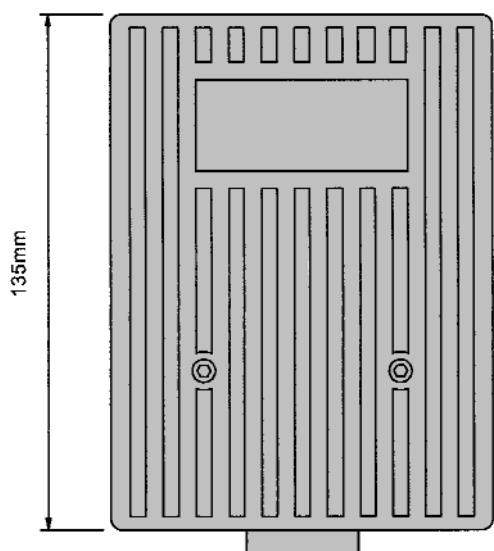
The inertia switch detects the deceleration of a motor vehicle when impacted in any direction. Designed to be immune to normal vehicle ride shocks and surface vibrations. The switch will operate at 12g peak, 0.06 secs and will not operate at 6g peak, 0.06 secs. Must be installed as directed on the instructions supplied only for use in deactivating the fuel pump in the event of an accident (safety related device).

Original equipment fitment by Rover with TUV (Germany) approval.

Suitable for under bonnet fitment provided the switch is free from the risk of spillage of liquids or direct water spray.

N.B. 9990208300 connector conversion kit enables wiring harnesses with connectors for inertia switch 9990135000 to use inertia switch 9990205700.

Part Number	Product Description
9990205700	Inertia Switch
9990208300	Inertia Switch Connector Conversion Kit



WARNING
This unit produces very high voltages.

General Specification

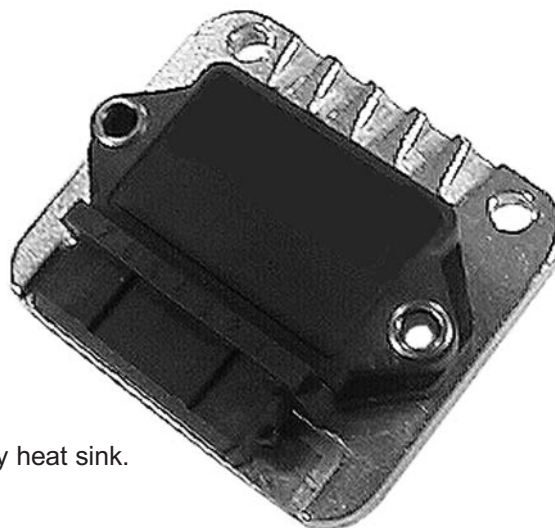
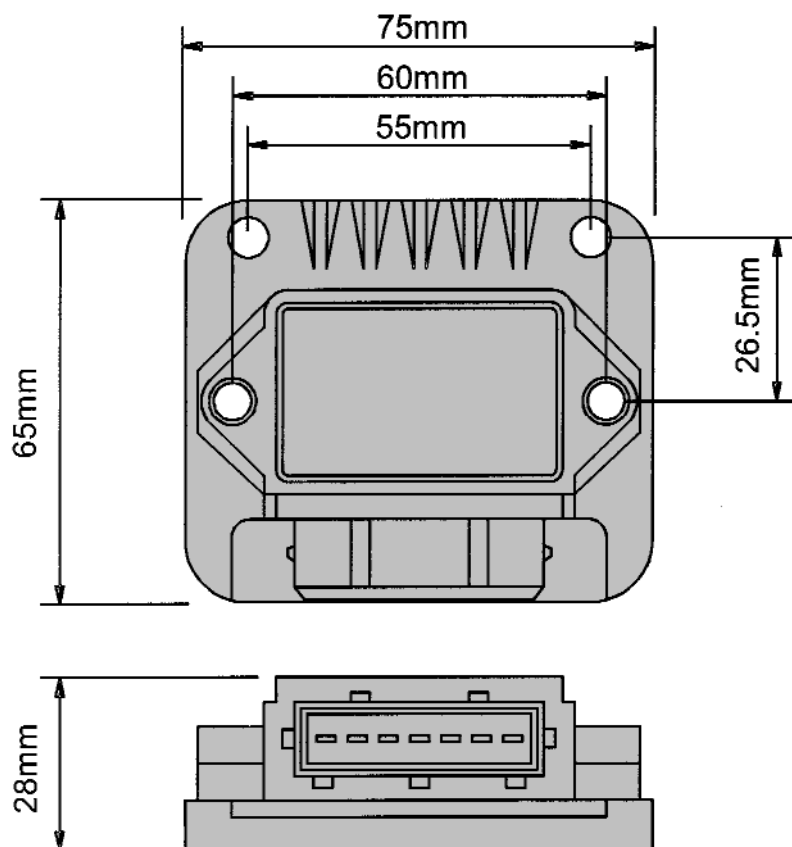
This is a HIGH VOLTAGE capacitive discharge unit that is compatible for use with the Alpha system. The CD unit replaces the ignition amplifier module.

The kit includes:

- C.D. Module.
- Standard automotive 6 way connector.
- Fitting instructions.

This module must be flexibly mounted by the installer.
The aluminium casting is black anodized finished.

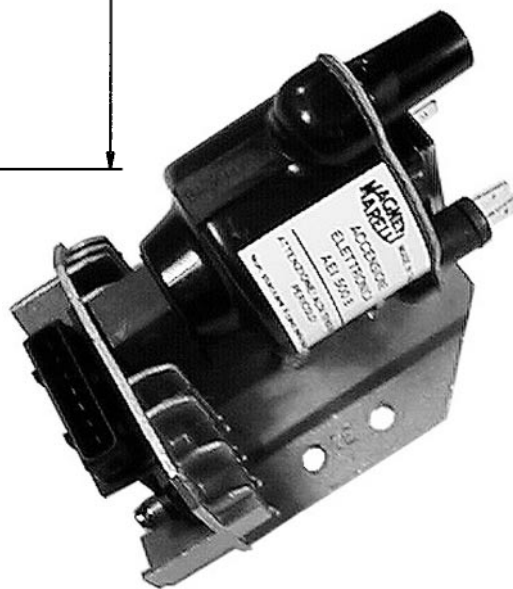
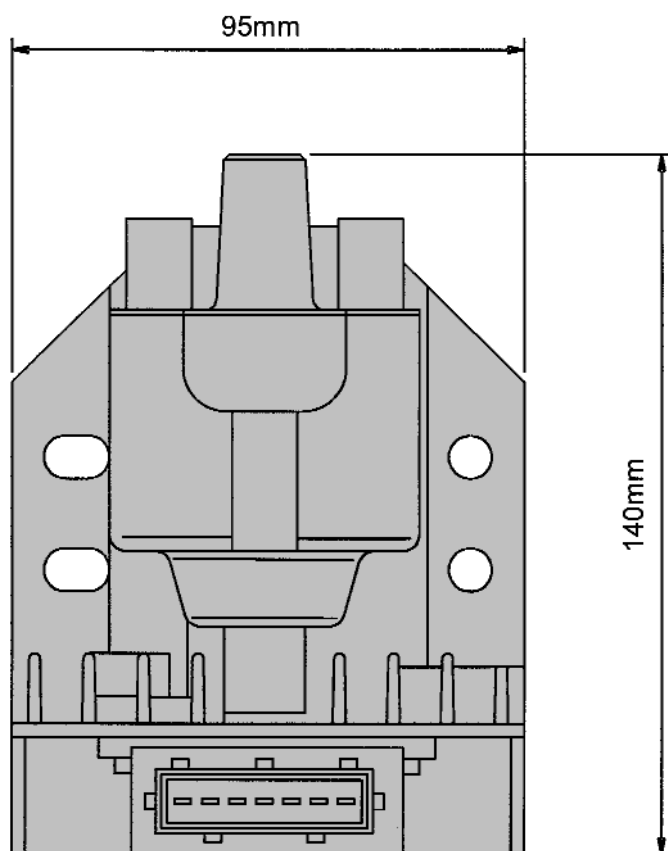
Part Number	Product Description
9990166200	CD Ignition Kit



GENERAL SPECIFICATION

An ignition module mounted on a die cast alloy heat sink.

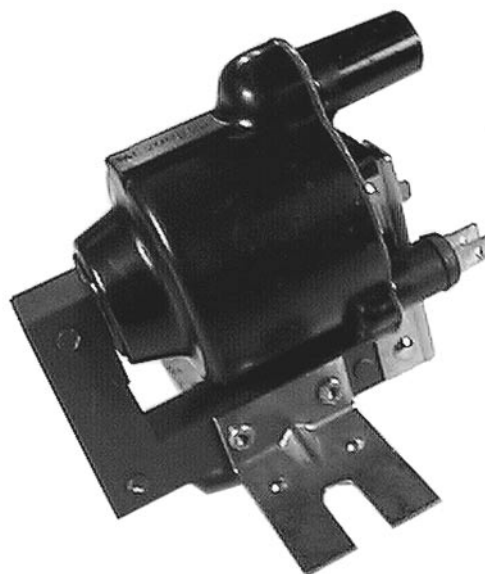
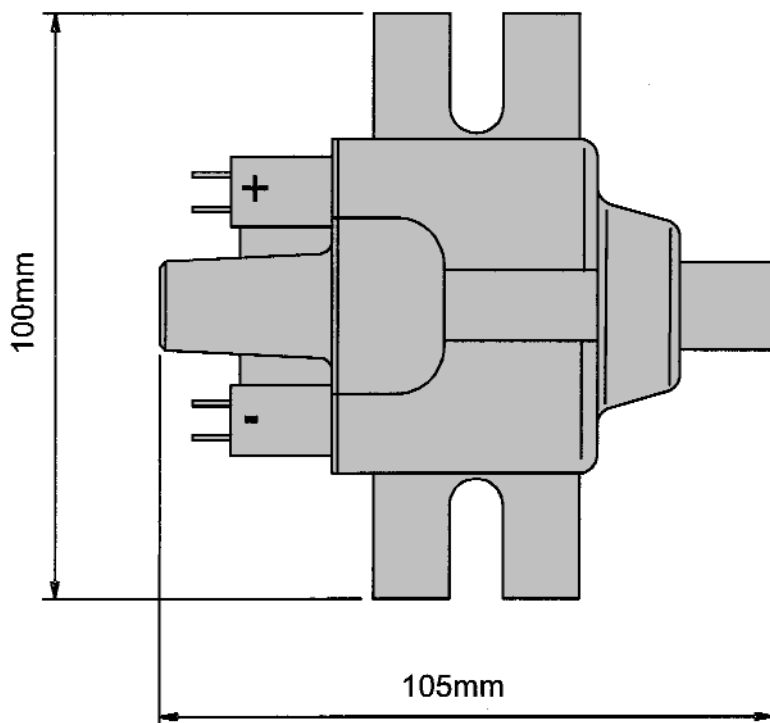
Part Number	Product Description
WIM081	Ignition Module
WIM082	BKL3B Ignition Module (No Heatsink)



GENERAL SPECIFICATION

- Principal of operation: Inductive discharge
 Construction: Resin-shrouded H.T. coil. Electronic power module.
 Aluminium alloy mounting chassis, also acting as a heat sink/dissipator and electrical shield.
 Electrical connections: Standard automotive electrical connectors:
 7-pin minitimer, male spade and H.T.

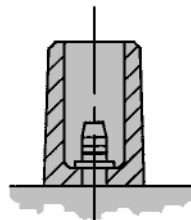
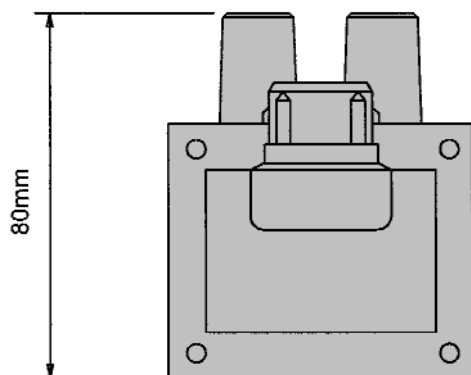
Part Number	Product Description	Type
WCM016	Coil & Module Assembly	AEI 600A



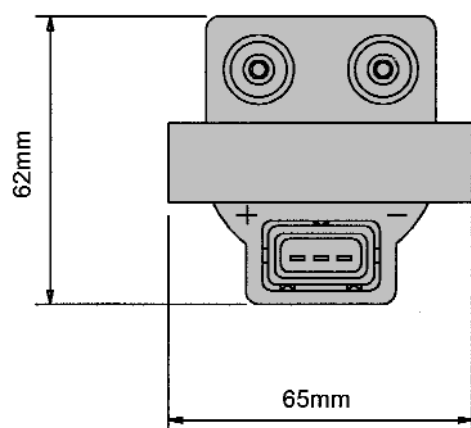
GENERAL SPECIFICATION

- Principle of operation: Inductive discharge.
 Construction: Resin shrouded HT coil steel mounting bracket.
 Electrical connections: Standard automotive electrical connectors: male spade and HT.
 Electrical characteristics: Primary coil resistance 0.35 Ohm.

Part Number	Product Description	Type
WIC003	Ignition Coil	BAE 209

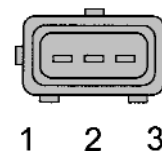


High tension connection.
Adaptors are available for the high tension connector
(Part Number 9990256600, Pack of 6).

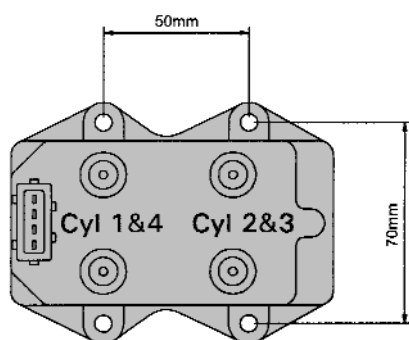


GENERAL SPECIFICATION

Type: Double ended coil.
Principal of operation: Inductive discharge.
Construction: Resin shrouded HT coil with steel banded core.
Electrical connections: 3 pin minitimer (EK).
Pin1 - Coil positive.
Pin 2 - Common with pin 1.
Pin 3 - Coil negative.
2 pin Packard connector (AK) (9990152500).
Two HT pillars (Standard post AK, VW post EK).
Electrical characteristics: Primary coil resistance 0.55 Ohms.



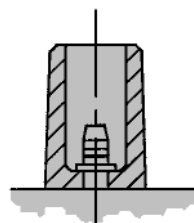
Part Number	Product Description	Type
WIC031	Double Ended Ignition Coil (Std HT Post, Packard Connector)	BAE 800AK
WIC130	Double Ended Ignition Coil (VW HT Post, Minitimer Connector)	BAE 800EK



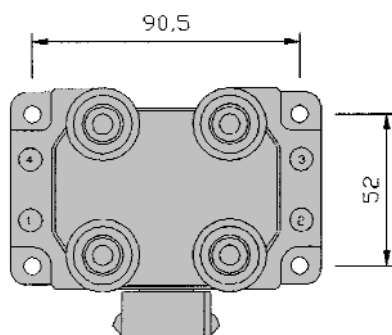
GENERAL SPECIFICATION

WIC062

- Principle of operation: Inductive discharge.
 Construction: Resin shrouded HT coil.
 Electrical connections: Standard 4-way minitimer connector.
 Pin 1 - Coil negative plugs 1 & 4.
 Pin 2 - Coil negative plugs 2 & 3.
 Pin 3 - Coil positive.
 Pin 4 - Common.



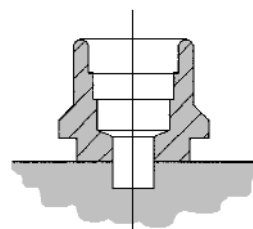
High tension connection.
 Adaptors are available for the high tension connector
 (Part Number 9990256600, Pack of 6).



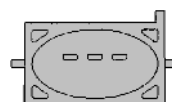
GENERAL SPECIFICATION

WIC133

- Principle of operation: Inductive discharge.
 Construction: Resin shrouded HT coil.
 Electrical connections: Ford 3 pin connector.
 Pin 1 - Coil negative, plugs 1 & 4.
 Pin 2 - Coil positive.
 Pin 3 - Coil negative, plugs 2 & 3.

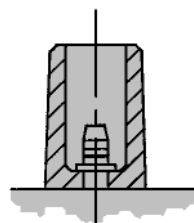
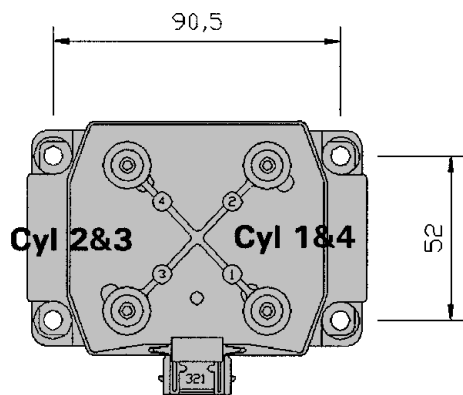


High tension connection.



1 2 3

Part Number	Product Description	Type
WIC062	Static Ignition Coil - General 4 Cylinder (4 Pin Connector)	BAE 04
WIC133	Static Ignition Coil - Ford Zetec 4 Cylinder (3 Pin Connector)	N/A



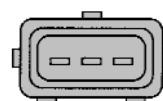
High tension connection.

Adaptors are available for the high tension connector (Part Number 9990256600, Pack of 6).

GENERAL SPECIFICATION

WIC134

Principle of operation: Inductive discharge.
Construction: Resin shrouded HT coil.
Electrical connections: Standard 3 way minitimer connector.
Pin 1 - Coil negative plugs 1&4.
Pin 2 - Coil positive.
Pin 3 - Coil Negative plugs 2&3.
Four HT pillars.



1 2 3



GENERAL SPECIFICATION

WIC062 Coil Bracket

Material: 3mm mild steel, laser cut.
Finish: Zinc & yellow passivated.
Fixings: Four threaded inserts.
Four M5 x 50mm cap head bolts.

Part Number	Product Description	Type
WIC134	Static Ignition Coil - General 4 Cylinder	Bosch
9990295800	WIC062 Coil Bracket	N/A



6070703800

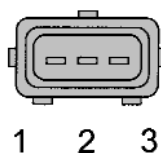
GENERAL SPECIFICATION

WIC131

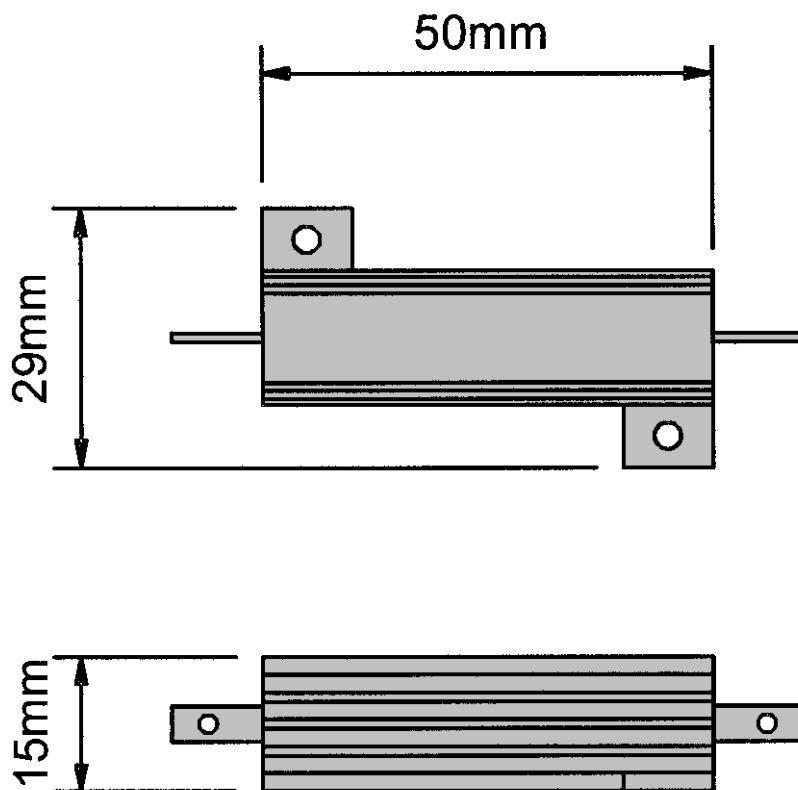
Principle of operation: Inductive discharge.
 Construction: Resin shrouded HT coil.
 Electrical connections: Standard 3-way minitimer connector.
 Pin 1 - 12 volt Power.
 Pin 2 - Ground.
 Pin 3 - Coil Signal.

WIC041

Principle of operation: Inductive discharge



Part Number	Product Description	Type
WIC131	Plug Top Coil	BAE 700 AK
WIC041	Plug Top Coil	BMW

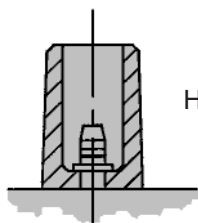
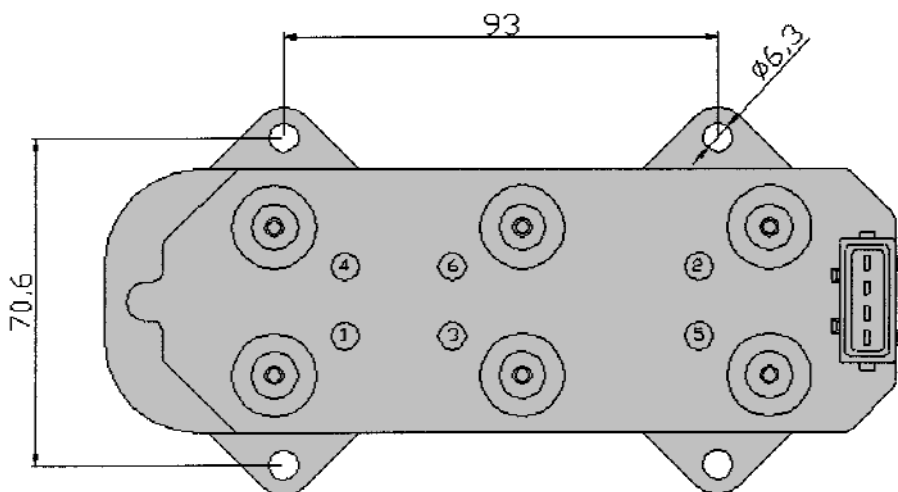


GENERAL SPECIFICATION

Electrical resistance: 1 Ohm at 20° Celcius.
Electrical connections: Solder tag.



Part Number	Product Description
9990195600	Ballast Resistor 1.0 Ohm



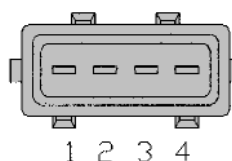
High tension connection.

Adaptors are available for the high tension connector (Part Number 9990256600, Pack of 6).



GENERAL SPECIFICATION

- Principle of operation: Inductive discharge.
 Construction: Resin shrouded HT coil.
 Electrical connections: Standard 4 way minitimer.
 Connections: Pin 1 - Coil negative plugs 2 & 5.
 Pin 2 - Coil negative plugs 3 & 6.
 Pin 3 - Coil negative plugs 1 & 4.
 Pin 4 - Coil positive.
 Six HT pillars.



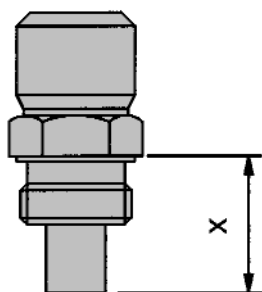
Part Number	Product Description	Type
WIC135	Static Ignition Coil - 6 Cylinder	Bosch

GENERAL SPECIFICATION

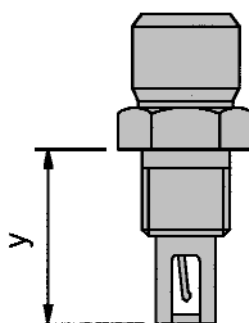
Webcon stock a wide range of our own manufactured, high quality plug leads equivalent to O.E. Specification, with purpose made outer jackets for maximum oil, water and temperature resistance. If we do not stock a specific lead set Webcon can custom build a set of leads to your requirements.

We also stock a wide range of other spark plugs & leads, coils, distributor caps, rotor arms, points and condensers for standard vehicle applications, please phone for details of availability and price.

Part Number	Ignition Type	Application
AIL294	WIC062	Normally Aspirated Cosworth
AIL188	WIC016	Ford 1.6 CVH
AIL170	WIC016	Ford Zetec 1.6 16v, 1.8 16v & 2.0 16v
AIL232	WIC062	Ford Pinto 1.6/2.0 & Ford X-Flow 8v Static
AIL174	WIC016	Ford X-Flow Static 1.3, 1.6 & 1.7
AIL076	Distributor	Peugeot/Citroën 1.9 8v
AIL214	Static	Peugeot/Citroën 1.6 8v & 1.9 8v
AIL053	WIC062	Peugeot/Citroën XU9 1.6 8v & 1.9 8v
WIL013	Distributor	Renault 19 1.8 16v
AIL095	Distributor	Rover A-Series
AIL251	WIC062	Rover A-Series
TBA	WIC062	Longitudinally Mounted A-Series
AIL064	WIL134 & Distributor	Vauxhall/Opel XE 2.0 16v
AIL195	WIC062	Vauxhall/Opel Ecotec 2.0 16v
AIL085	WIC062 & Distributor	VW 1.8 8v & 16v



Type	Length X (mm)
WTS05	27
WTS09	18



Type	Length Y (mm)
ATS04	27
ATS07	17

GENERAL SPECIFICATION

WTS Type

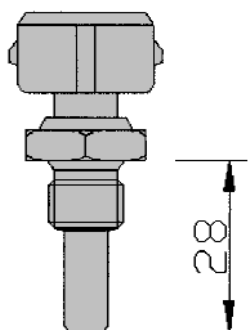
Sensor type: NTC-type thermistor.
 Construction: Threaded brass body.
 Electrical connection: Standard 2-pin Minitimer connector.
 Tightening torque: <25Nm.
 Thread Size: M12 x 1.5.

ATS Type

Sensor type: NTC-type thermistor.
 Construction: Threaded brass body with a slotted plastic frame.
 Electrical connection: Standard 2-pin Minitimer connector.
 Tightening torque: <25Nm.
 Thread Size: M14 x 1.5.



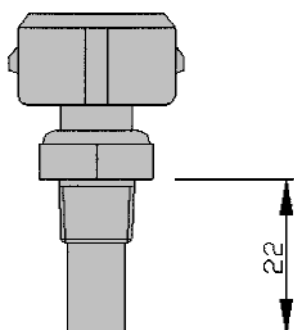
Part Number	Product Description	Type
WAS009	Air Temperature Sensor	ATS04
WAS011	Air Temperature Sensor	ATS07
WTS186	Coolant Temperature Sensor	WTS05
WTS185	Coolant Temperature Sensor	WTS09



Type	Length (mm)	Colour
WTS155	28	Black
WTS104	28	Blue

GENERAL SPECIFICATION

Part number: WTS104/155
 Sensor type: Thermistor.
 Construction: Threaded brass body.
 Electrical connection: Standard 2-pin Minitimer connector.
 Tightening torque: <25Nm
 Thread Size: M12x1.5

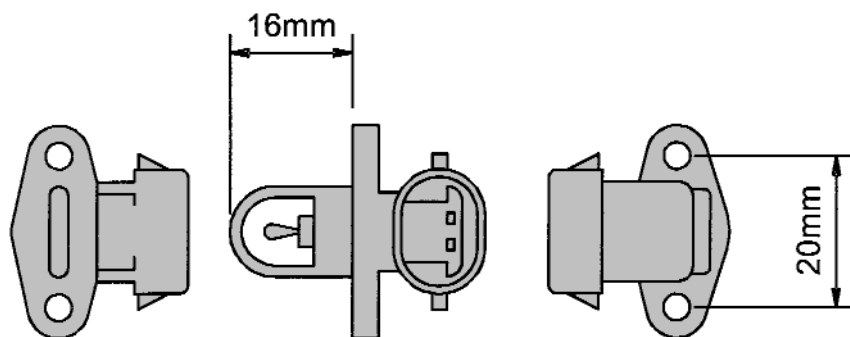


Type	Length (mm)	Colour
WTS133	22	Black

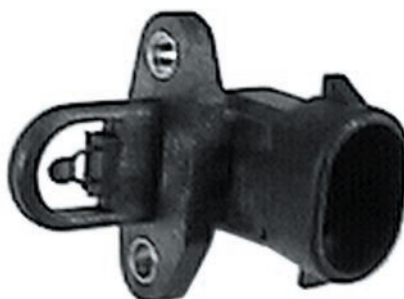
GENERAL SPECIFICATION

Part number: WTS133.
 Sensor type: Thermistor.
 Construction: Threaded brass body.
 Electrical connection: Standard 2-pin Minitimer connector.
 Tightening torque: <25Nm.
 Thread Size: 1/8 x 27 NPTF tapered thread.

Part Number	Product Description
WTS104	Coolant Temperature Sensor - Vauxhall Type
WTS155	Coolant Temperature Sensor - Vauxhall Type
WTS133	Coolant Temperature Sensor - Ford Zetec



Connection Housing



GENERAL SPECIFICATION

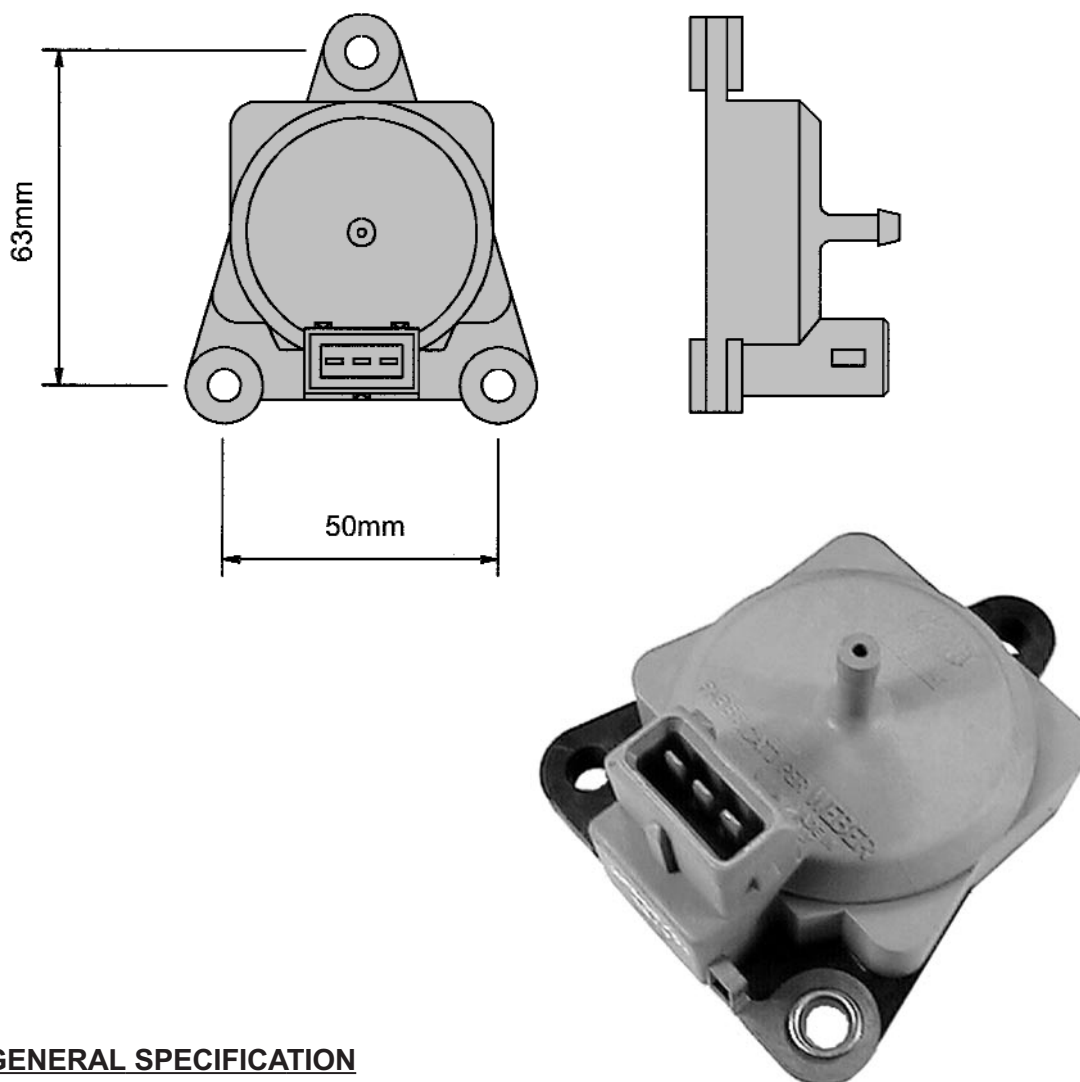
Sensor Kit Contents

- ATS05 Air temp sensor: NTC-type thermistor.
 Construction: Plastic moulded body, flange mounting for two Ø3mm or 1/8".
 Electrical connection: 2-pin Packard connector.
 Connector: Plastic moulding with rubber seal connector housing.
 Pins: 2 x Female crimp-type contacts.

Connector Kit Contents

- One connector and two female pins as described above.

Part Number	Product Description	Type
9990152700	Air Temperature Sensor Kit	ATS05
WAS008	Air Temperature Sensor	ATS05
9990224500	ATS05 Connector Kit	N/A

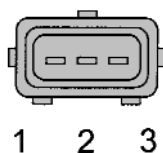


GENERAL SPECIFICATION

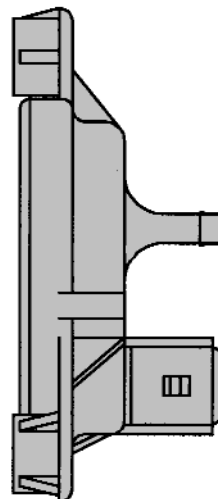
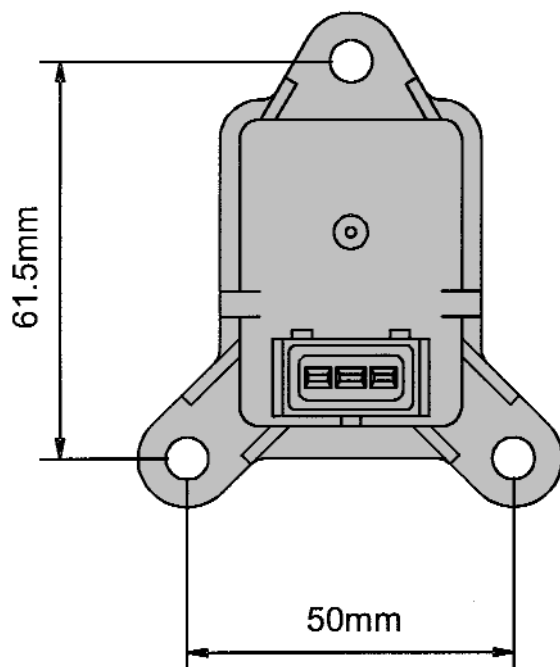
Pressure Sensor Type: Ratiometric absolute pressure sensor.
 Construction: Hard wearing plastic body.
 Mechanical operation: Ceramic diaphragm coupled to an electrical strain gauge.
 Electrical connection: Standard 3-pin minitimer connector.

Pin Out

Pin 1 Signal
 Pin 2 Ground
 Pin 3 5V Ref.



Part Number	Type	Pressure Range (Bar)
WMS013	APS02/03	0 - 2
WMS014	APS05/01	0 - 3

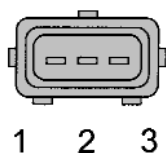


GENERAL SPECIFICATION

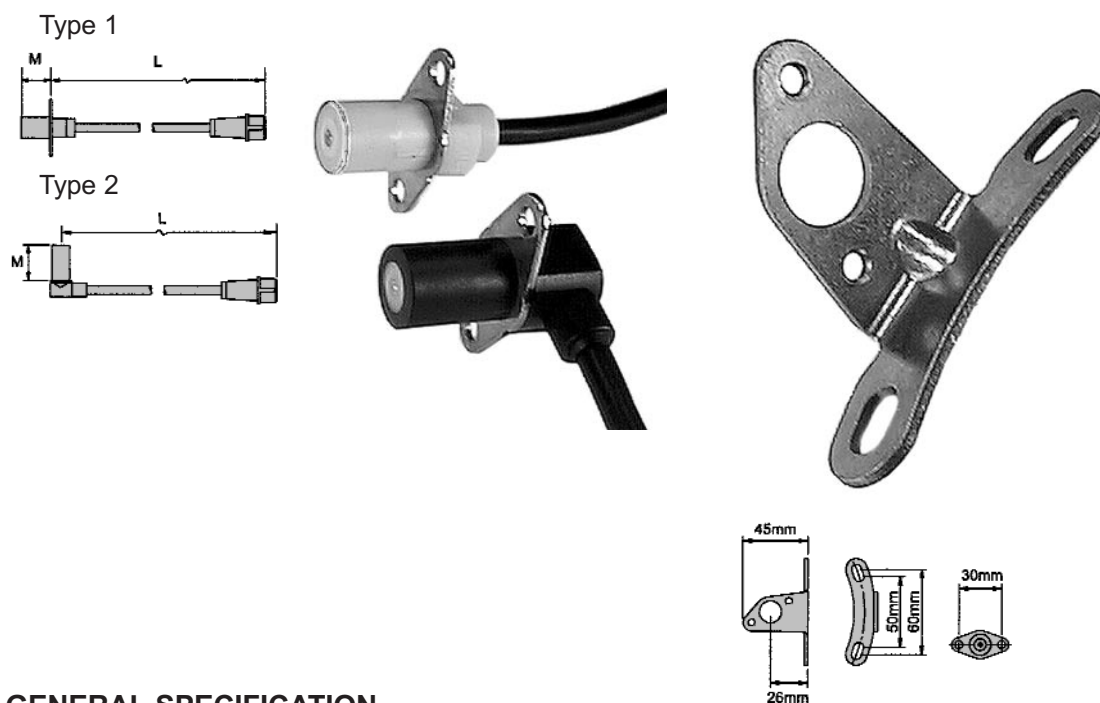
Pressure Sensor Type: Ratiometric absolute pressure sensor.
 Construction: Hard wearing black plastic body.
 Mechanical operation: Ceramic diaphragm coupled to an electrical strain gauge.
 Electrical connection: Standard 3-pin minitimer connector.

Pin Out

Pin 1 Signal
 Pin 2 Ground
 Pin 3 5V Ref.



Part Number	Product Description	Type	Pressure Range (Bar)
WMS019	Pressure Sensor	PRT03/04	0 - 1

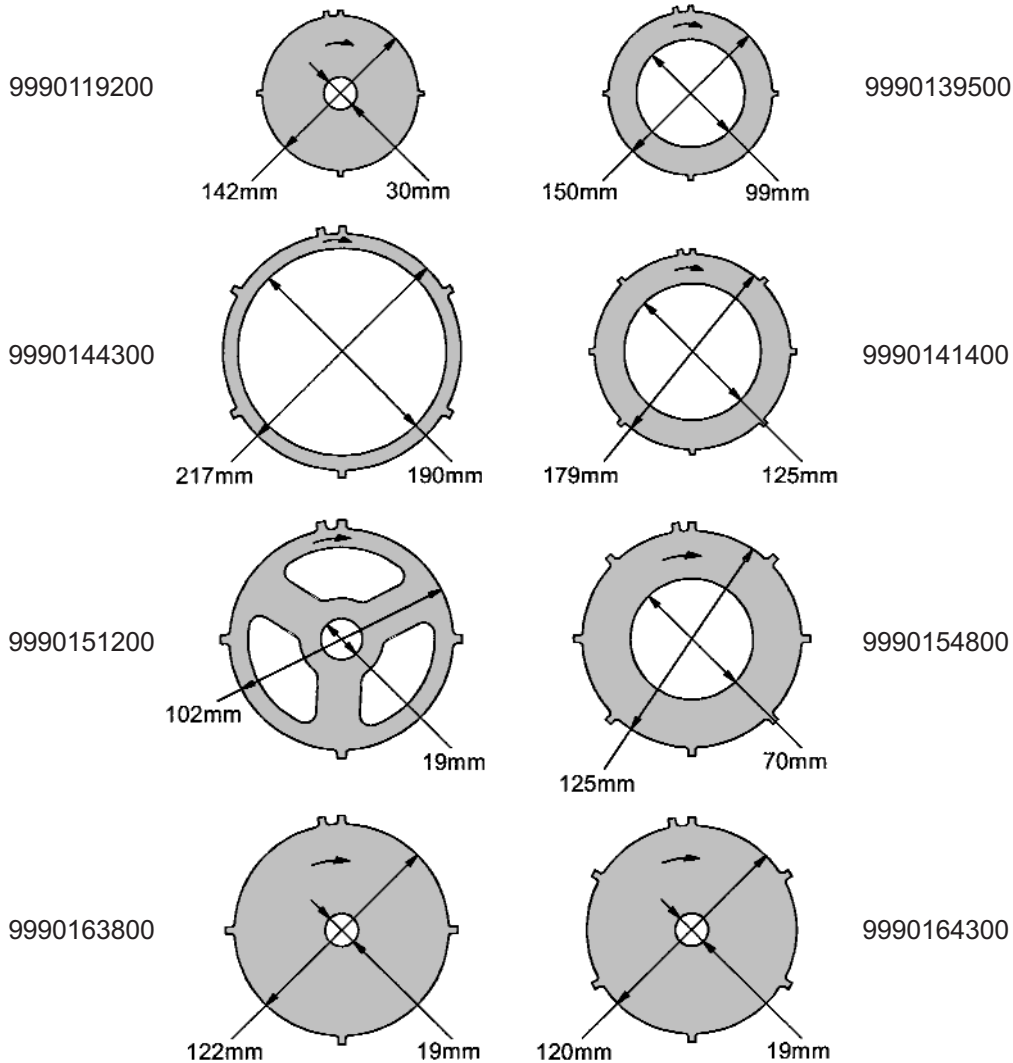


GENERAL SPECIFICATION

Speed Sensors: SEN 8*. Variable reluctance, electromagnetic sensor (open magnetic flux type) driven by toothed (phonic) wheels SEN8D3 is a shielded version of the SEN8D with a 3 pin minitimer connector.

Bracket: Suitable for mounting SEN 8 type speed sensors. 2.5mm mild steel plate finished Zinc and yellow passivate.

Part Number	Product Description	L (mm)	M (mm)	Type
WSS075	(Magnetti Marelli - Type 1)	460	20.7	SEN8D
WSS076	(Magnetti Marelli - Type 2)	460	20.7	SEN8K
WSS077	(Magnetti Marelli - Type 1)	460	20.7	SEN8D3
WSS001	(Type 1)	460	30	SEN8E
WSS002	(Type 2)	565	30	SEN8LA
WSS003	(Type 2)	465	13.5	SEN8M
WSS004	(Type 1)	1160	20.7	SEN8V
WSS005	(Type 1)	460	20.7	SEN8L
WSS022	(Type 1)	460	20.7	SEN8D3
WSS030	(Type 2)	450	30	SEN8I3
WSS032	(Type 2)	750	30	SEN8X
WSS026	VW Golf 2.0 8v & 16v - 1992 on	N/A	30.5	N/A
WSS006	Rover K Series 1.4 16v	260	31	N/A
WSS051	Vauxhall/Opel XE 2.0 16v	995	24.5	N/A
WSS074	Ford Zetec 1.6 16v & 2.0 16v	N/A	37	N/A
WSS078	Ford CFi Crank Sensor	35	40	N/A
WPU088	Camshaft Phase Sensor (For Distributor Fitment)	N/A	N/A	N/A
9990154600	Bracket	N/A	N/A	N/A

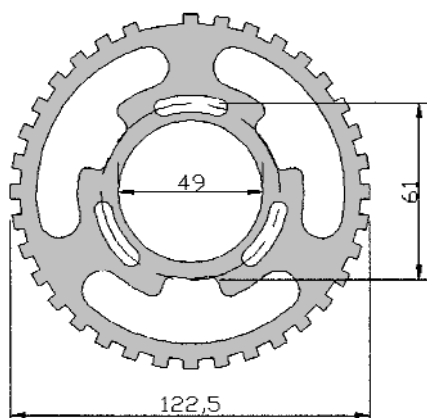


GENERAL SPECIFICATION

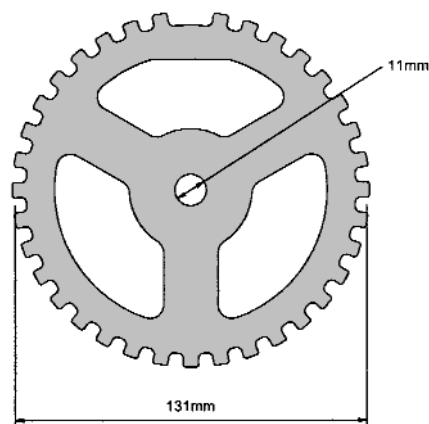
Material: 4mm thick HR15 mild steel (BS1449:1) Zinc plated and yellow passivated.

Part Number	Product Description	Type
9990119200	Trigger Disc 4 Cylinder	General In-line
9990139500	Trigger Disc 4 Cylinder	Mercedes 190E In-line
9990141400	Trigger Disc 8 Cylinder	Range Rover V8
9990144300	Trigger Disc 6 Cylinder	BMW In-line 6
9990151200	Trigger Disc 4 Cylinder	BDR In-line
9990154800	Trigger Disc 8 Cylinder	Rover V8
9990163800	Trigger Disc 4 Cylinder	A-Series In-line
9990164300	Trigger Disc 6 Cylinder	Porsche Flat 6

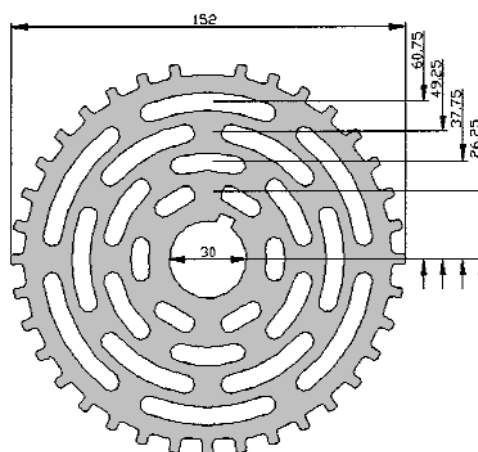




Triple Hole Mounting



Single Hole Mounting



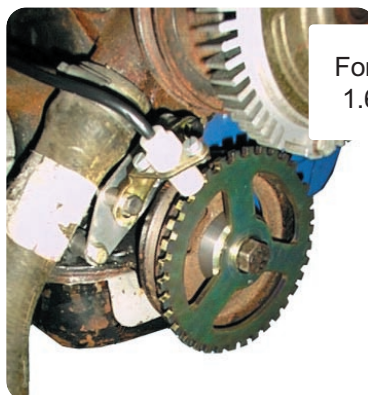
Peugeot 205 / Multi Slot
Mounting

GENERAL SPECIFICATION

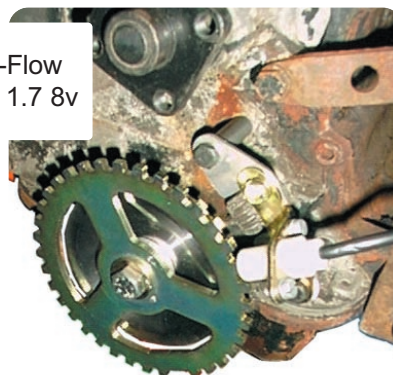
Crankshaft trigger discs with 36 - 1 teeth (Ford EECIV) for fitment to engines without an original equipment RPM trigger.

Material: 4mm thick HR15 mild steel (BS1449:1)
Zinc plated and yellow passivated.

Part Number	Product Description	Type
9990240400	Trigger Disc 36-1 Teeth	Single Hole Mounting
9990289900	Trigger Disc 36-1 Teeth	Triple Hole Mounting
9990291600	Trigger Disc 36-1 Teeth	Multi-slot Mounting



Ford Pinto
1.6 & 2.0



Ford X-Flow
1.3, 1.6, 1.7 8v



Ford CVH
1.3, 1.6 & 1.8



Peugeot/Citroën
1.6 & 1.9 8v

GENERAL SPECIFICATION

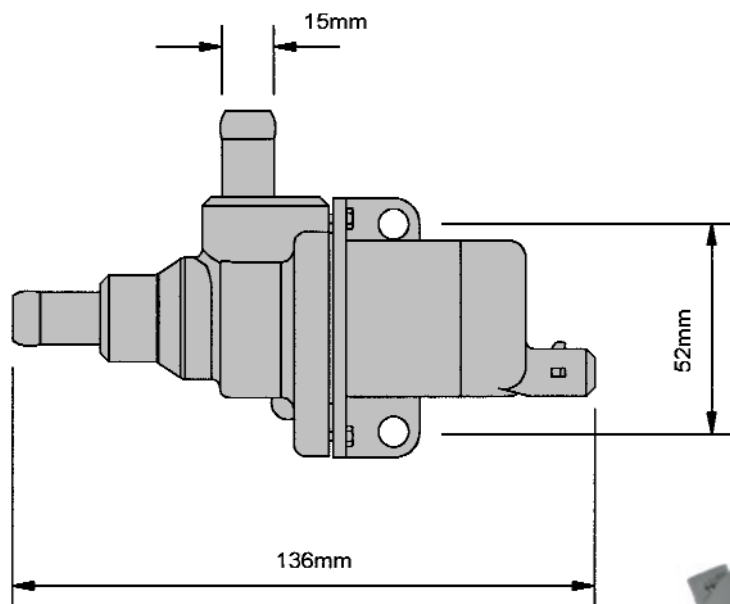
Each kit is supplied with the following:

- A speed sensor and mounting bracket.
- 36-1 trigger disc and a mounting boss.

All that is required is a hole to be drilled in the standard pulley wheel for accurate trigger disc location (except Peugeot/Citroën).

Specific trigger disc kits can be developed upon request.

Part Number	Product Description
9990291500	Ford Pinto Trigger Disc Kit
9990291400	Ford X-Flow Trigger Disc Kit
9990295600	Ford CVH Trigger Disc Kit
9990295700	Peugeot/Citroën 1.6 & 1.9 Trigger Disc Kit
Contact	
Alpha Group	Rover A-Series Trigger Disc Kit



Air valve and die cast housing assembly.
Part Number 3717000102

GENERAL SPECIFICATION

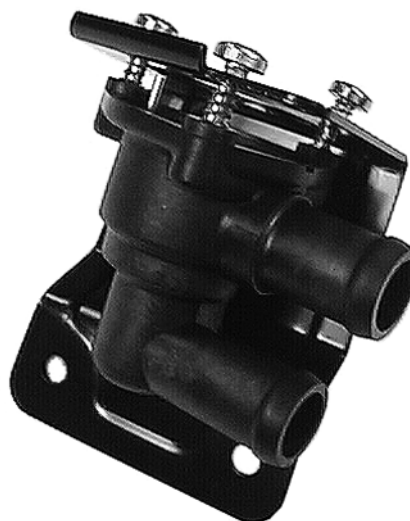
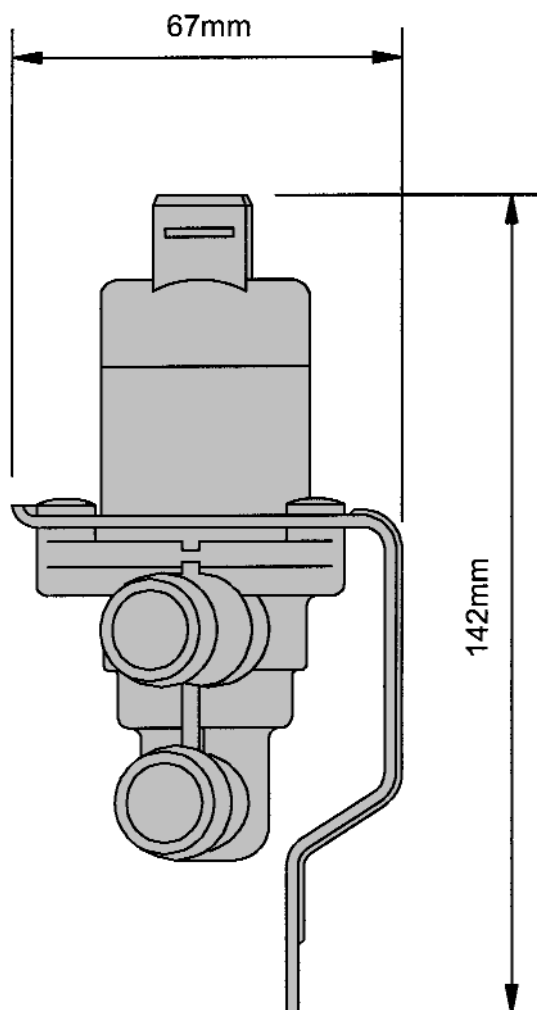
Control: Electrically operated air valve.
Valve construction: Fully sealed unit.
Electrical: Standard 2-pin minitimer connection.
Housing: Die-cast aluminium alloy.

Part Number	Product Description
WID028	Idle Air Valve 01/10 Standard Flow
WID029	Idle Air Valve 04/00 High Flow
3717000102	Assembly VAE 06/01 & Die Cast Housing
4156505000	Replacement 'O' Ring 24mm O/D
4156505100	Replacement 'O' Ring 30mm O/D

N.B. VAE 01/10 and VAE 06/01 have the same operational characteristics.

Part Number	Product Description	Dimns. (mm)
9990139600	Hose (Used For Idle Air Valve Circuit)	I/D 16
9990043400	Herbie 'J' Clip	21 - 24
9990110700	90° Shaped Hose	I/D 16

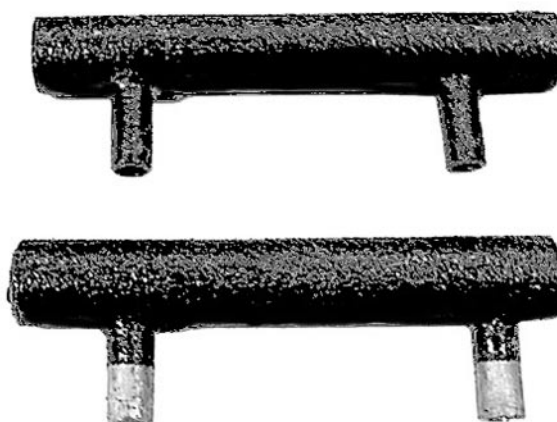
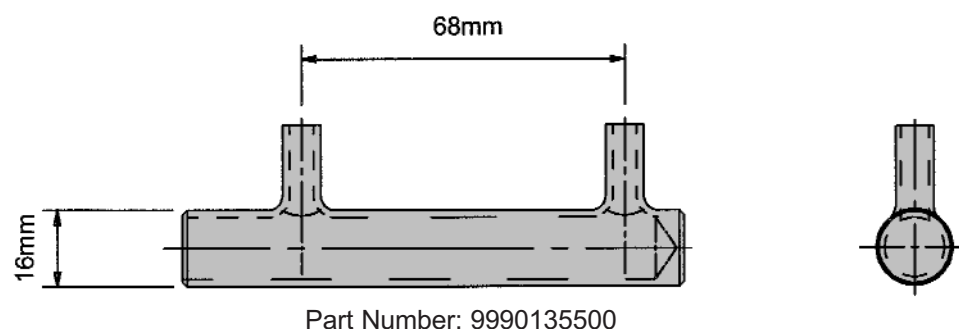
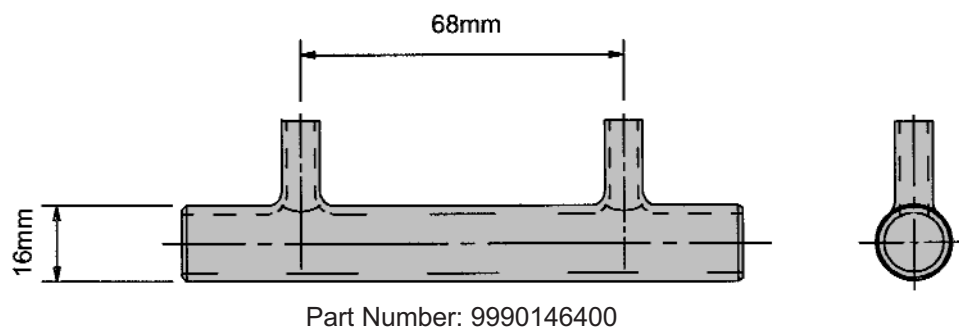
N.B. Hose (Part Number 9990139600) is available in lengths as required.



GENERAL SPECIFICATION

- Black plastic air valve housing with parallel unions.
- Complete with black finished mounting bracket and fittings.

Part Number	Product Description
9990167100	Air Valve Mounting Kit (Plastic)



GENERAL SPECIFICATION

- Material: Cast aluminium alloy.
 Finish: Hard wearing black crinkle coating.
 Installation: For use with twin throttle body assemblies to provide passage for extra air to the engine side of the throttle plates during the cold start phase.

Installation Examples:

- For 4 cylinder application - 2 x 9990135500 required.
- For 6 cylinder application - 2 x 9990135500 + 1 x 9990146400 required.

Part Number	Product Description
9990135500	Cold Start Air Manifold (One End Closed)
9990146400	Cold Start Air Manifold (Straight Through)



Part Number:
9990200700



Part Number:
9990200800

GENERAL SPECIFICATION

Heated exhaust gas Zirconia oxygen sensor

Operating point: AFR = 14.6:1, sensor output 450mV.
 Maximum fuel lead content: 0.003g/l (unleaded fuel only).
 Heater: 14 Volt - 1 Amp.
 Exhaust gas temp. range: 200 - 850° Centigrade.
 (Required for representative output).
 Electrical connection: Sealed three wire type.
 Tightening torque: 41Nm \pm 4Nm.
 Thread: M18 x 1.5

Part Number	Product Description
WLS331	Lambda Sensor (OE fitment)
ALS331	Lambda Sensor (Alpha Wiring Harnesses)
9990200700	Lambda Sensor Mounting Boss
9990200800	Lambda Sensor Mounting Boss Blanking Plug



Part Number	Product Description	Dimns (mm)
9990249700	Medium Alpha 'Cut Out' Decal	230 x 40
9990249600	Medium Alpha Sticker	195 x 45
9990250300	Medium Alpha 'Cut Out' Decal (White)	231 x 38
9990255000	Small Alpha 'Cut Out' Decal	130 x 20
9990255100	Large Alpha 'Cut Out' Decal	608 x 100
9990261600	Medium Alpha 'Cut Out' Decal (White Reflective)	230 x 40
9990276700	Alpha Windscreen Banner	1500 x 200



GENERAL SPECIFICATION

The calibration console is compatible for use with the Alpha Plus and Plus 2 engine management systems and calibration development software.

The console makes 'real time' adjustments to the calibration values of the Alpha Plus & Plus 2 E.M.S. The AMC comes complete with a communications interface which enables communications between the Alpha Plus ECU and the PC for real time active engine data display. The interface is connected to the PC parallel port and the Alpha Plus wiring harness. Nominal current draw - 250mA.

Dimensions: 190mm x 138mm x 65mm

Part Number	Product Description
T100	Calibration Console

GENERAL SPECIFICATION

Communications Interface Cable T020

- Connects the communications interface to the Alpha Plus wiring harness.

Communications Interface Cable T024

- Connects the communications interface to the PC parallel port.

Ram Board T022

- Used to upgrade any Alpha Plus ECU to the development ECU specification level. This device contains 8K of temporary memory space and when fitted is sufficient to store a calibration for "real time" active mapping.

Part Number	Product Description
T020	Communications Interface Cable - 9-Way (4.5m)
T022	RAM Board
T024	Communications Interface Cable - 25-Way
9990220600	Communications Interface Cable - 9-Way (2.5m)
9990205600	Development ECU EPROM 27256
9990202800	Production ECU EPROM 27128

Synchrometer

The synchrometer is used to balance the air flow through the throttles of a multi-throttle inlet system. The scale reads from 1 to 30 or 2 to 50 kg/hour and permits a very high airflow without affecting the mixture strength.

The conical rubber end suits circular intakes from 30 to 50mm.



Part Number	Product Description	Flow Range (Kg/Hour)
9800099900	Synchrometer	2 - 50
9800100000	Synchrometer	1 - 30
9800100600	90° Adaptor	N/A

Spark Tester

The spark tester provides safe spark testing enclosed within a sealed clear plastic tube. High tension connection is by means of a standard coil type connector and a crocodile clip for grounding the other terminal.



Part Number	Product Description
9802215000	Spark Tester

Lambda Sensor Socket

The useful tool allows easy removal of Lambda sensors. A cut out down one side of the socket allows the lead to be moved out of the way. A must for any tool kit.

Part Number	Product Description
TE13710	Lambda Sensor Socket





Potentiometer Setting Tool

The potentiometer setting tool is used for setting the position of PF3B and PF4B potentiometers to ALPHA throttle bodies, without the need for wiring the system up to a computer and calibration equipment. This is very useful for on the spot checks and regular services of the system.

Part Number	Product Description
9990140400	Potentiometer Setting Tool

Fuel Injection Test Kit

Packaged in a sturdy plastic case, this kit includes a selection of "Noid-Lites", the quickest and easiest way to check electronic fuel injection signals. Also supplied are the latest, Quick-Disconnect tools for fuel injection lines.

Part Number	Product Description
TE13716	Fuel Injection Test Kit



GENERAL SPECIFICATION

Compact and lightweight Lambda display systems finished in an attractive black textured plastic casing. The AF-1 display features 14 LED's, and the AFS-2 display features 20 LED's which are colour coded to assist quick and accurate fuel calibration.

The Lambda display units are supplied as part of a complete system which includes the following parts:

- 1 x AFS-1/AFS-2 Lambda display unit (requires +12 Volt supply).
- 1 x Oxygen sensor.
- 1 x Wiring harness with spade type fuse.
- 1 x Weldable sensor boss with plug and gasket.
- 4 x Velcro mounting strips.
- 3 x Crimp connectors.
- 1 x Instructions and wiring diagram leaflet.

Sizes: AFS-1 70mm x 40mm x 15mm.
AFS-2 130mm x 65mm x 25mm.

The Lambda sensor measures the free oxygen in the exhaust gas and ranges between 12:1 rich and 15.5:1 lean A.F.R. The operating temperature of the sensor is between 500° to 900° Celsius.

Part Number	Product Description
AFS-1	Lambda Display System
AFS-2	Lambda Display System
WLS330	Lambda Sensor For Lambda Display System
9990200700	Lambda Sensor Mounting Boss
9990200800	Lambda Sensor Mounting Boss Blanking Plug



GENERAL SPECIFICATION

A high performance RPM limiter designed for use with contact breaker or electronic ignition systems (excluding multiple firing and capacitive ignition systems). Easily adjustable by the user for ultimate engine protection.

The unit operates by counting the ignition sparking frequency which then determines the engine RPM, then a soft cut pre-determined ignition limit is enforced.

Features:

- Range 5,200-10,000RPM.
- Soft cut.
- Size 71mm x 49mm x 25mm.
- Basic wiring loom.

Part Number	Product Description
ARL1	Alpha RPM Limiter



GENERAL SPECIFICATION

A gear shift indicator incorporating six LED's that illuminate in sequence as you approach the optimum gear shift engine speed. The design features include the increasing size and brightness of the LED's and the final ultra-bright red LED that illuminates at the pre-set engine speed. The purpose of the sequential operation is to inform the driver of the approaching gear change point and takes into account the rate of engine acceleration in different gears. This method has been used to great effect in Formula 1, Super Touring, World Rally Championship and other top motorsport formulae.

Features:

- 6 Ultra-bright water clear light emitting diodes: 3 x 5mm green, 2 x 8mm green, 1 x 10mm red.
- All LEDs are clearly visible in bright sunlight.
- Display range 90-100% of set maximum engine speed, e.g. 5400-6000rpm.
- Simple 3 wire connection - 12V power supply, ground and ignition coil negative.
- Fully user programmable with half engine speed switch for easy setting.
- Instantaneous response.
- Suitable for 4, 6, 8 and 12 cylinder engines
- Suitable for distributor or distributorless ignition systems.
- Supplied with universal harness.
- Reverse polarity protected.
- Dimensions : H=25mm, W=73mm, D=51mm

Part Number	Product Description
T050	Sequential Gear Shift Display Unit



GENERAL SPECIFICATION

A gear change kit that incorporates everything to connect to the ALPHA systems shift lamp output. A mounting bracket is also supplied as well as comprehensive fitting instructions.

Features:

- 1 x 8mm Ultra-bright water clear light emitting diode available in red or green.
- Ultra-bright LEDs are clearly visible in bright sunlight.
- Suitable for use with the output from an ALPHA or ALPHA PLUS ECU.
- Simple 2 wire connection - 12V power supply and output from ECU.
- Complete with comprehensive fitting instructions.

Part Number	Product Description
9990241500	Gear Shift Lamp Kit (Red)
9990274500	Gear Shift Lamp Kit (Green)

To compliment the product portfolio a comprehensive range of remanufactured ECU's, airflow meters and turbochargers are carried.

Part Number	Product Description
9500005400	Carburettor Tuning Manual
9555001900	A Simple Carburettor Tuning Instrument - Synchronometer Catalogue
9555500100	No.1 Direct Replacement Carburettor Catalogue
9555500200	Installation Components & Accessories Catalogue
9555519600	Carburettor Service Kit Catalogue
9555520900	No.2 Solex Carburettor Catalogue
9555523800	Weber Carburettors For Citroën & Peugeot Cars Catalogue
9555523900	Weber Carburettors For Fiat Cars Catalogue
9555524000	Weber Carburettors For Ford Cars Catalogue
9555524200	Weber Carburettors For Renault Cars Catalogue
9555524300	Weber Carburettors For Vauxhall/Opel Cars Catalogue
9555552200	Air Horns Catalogue
9990277700	Webcon Engine Management Components Catalogue on CD-ROM
9555530100	Engine Management Components Catalogue
9555540200	Engine Ignition Components Catalogue

Accessories

REQUITAL GEAR CHANGE DISPLAY (F550)

Gear change indicator incorporating 5 position LED barometer lamp as you approach the required gear change.

The display features include:

- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator

Full color programmable with high engine speed for easy setting.

LAMBO DISPLAY SYSTEM

5 position gear change indicator incorporating 5 position LED barometer lamp as you approach the required gear change.

The display features include:

- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator

Full color programmable with high engine speed for easy setting.

LINKAGE KITS

5 position gear change indicator incorporating 5 position LED barometer lamp as you approach the required gear change.

The display features include:

- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator

Full color programmable with high engine speed for easy setting.

PRODUCTION RANGE 200

5 position gear change indicator incorporating 5 position LED barometer lamp as you approach the required gear change.

The display features include:

- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator

Full color programmable with high engine speed for easy setting.

Performance Kits

ALPHA FULL ENGINE MANAGEMENT SYSTEMS

5 position gear change indicator incorporating 5 position LED barometer lamp as you approach the required gear change.

The display features include:

- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator
- 5 position gear change indicator

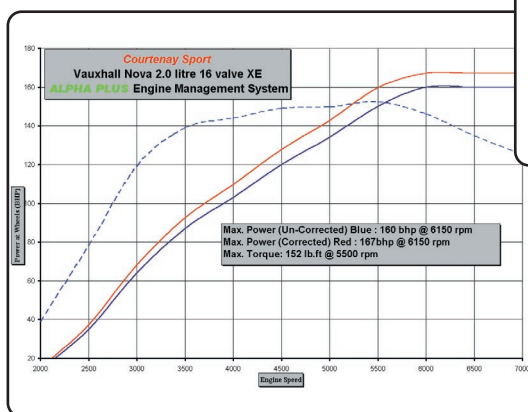
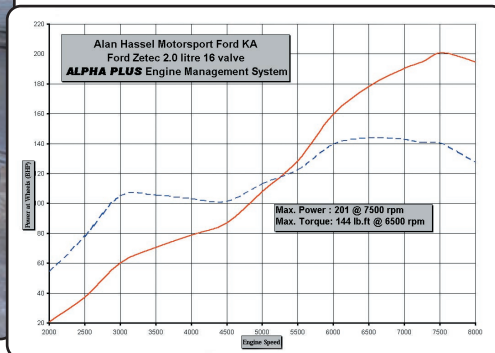
Full color programmable with high engine speed for easy setting.

Performance Kits

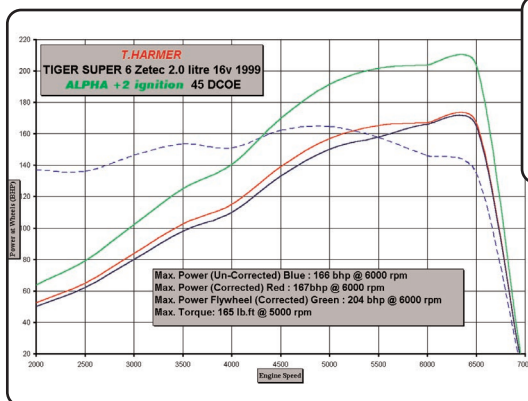
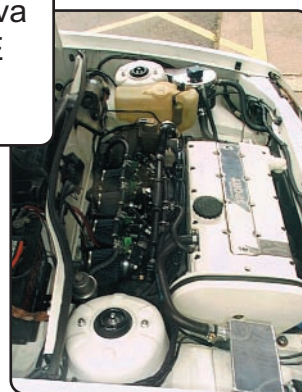
	GOLD KIT	SILVER KIT	BRONZE KIT
General	3 K8000	K8001	K8002
Ford Escort 1.5 V6	K3000	K3001	K3002
Ford Escort 2.0 V6	K3003	K3004	K3005
Ford Escort 2.5 V6	K3006	K3007	K3008
Ford Escort 3.0 V6	K3009	K3010	K3011
Ford Escort 4.0 V6	K3012	K3013	K3014
Ford Escort 5.0 V6	K3015	K3016	K3017
Ford Escort 6.0 V6	K3018	K3019	K3020
Ford Escort 7.0 V6	K3021	K3022	K3023
Ford Escort 8.0 V6	K3024	K3025	K3026
Ford Escort 9.0 V6	K3027	K3028	K3029
Ford Escort 10.0 V6	K3030	K3031	K3032
Ford Escort 11.0 V6	K3033	K3034	K3035
Ford Escort 12.0 V6	K3036	K3037	K3038
Ford Escort 13.0 V6	K3039	K3040	K3041
Ford Escort 14.0 V6	K3042	K3043	K3044
Ford Escort 15.0 V6	K3045	K3046	K3047
Ford Escort 16.0 V6	K3048	K3049	K3050
Ford Escort 17.0 V6	K3051	K3052	K3053
Ford Escort 18.0 V6	K3054	K3055	K3056
Ford Escort 19.0 V6	K3057	K3058	K3059
Ford Escort 20.0 V6	K3060	K3061	K3062
Ford Escort 21.0 V6	K3063	K3064	K3065
Ford Escort 22.0 V6	K3066	K3067	K3068
Ford Escort 23.0 V6	K3069	K3070	K3071
Ford Escort 24.0 V6	K3072	K3073	K3074
Ford Escort 25.0 V6	K3075	K3076	K3077
Ford Escort 26.0 V6	K3078	K3079	K3080
Ford Escort 27.0 V6	K3081	K3082	K3083
Ford Escort 28.0 V6	K3084	K3085	K3086
Ford Escort 29.0 V6	K3087	K3088	K3089
Ford Escort 30.0 V6	K3090	K3091	K3092
Ford Escort 31.0 V6	K3093	K3094	K3095
Ford Escort 32.0 V6	K3096	K3097	K3098
Ford Escort 33.0 V6	K3099	K3100	K3101
Ford Escort 34.0 V6	K3102	K3103	K3104
Ford Escort 35.0 V6	K3105	K3106	K3107
Ford Escort 36.0 V6	K3108	K3109	K3110
Ford Escort 37.0 V6	K3111	K3112	K3113
Ford Escort 38.0 V6	K3114	K3115	K3116
Ford Escort 39.0 V6	K3117	K3118	K3119
Ford Escort 40.0 V6	K3120	K3121	K3122
Ford Escort 41.0 V6	K3123	K3124	K3125
Ford Escort 42.0 V6	K3126	K3127	K3128
Ford Escort 43.0 V6	K3129	K3130	K3131
Ford Escort 44.0 V6	K3132	K3133	K3134
Ford Escort 45.0 V6	K3135	K3136	K3137
Ford Escort 46.0 V6	K3138	K3139	K3140
Ford Escort 47.0 V6	K3141	K3142	K3143
Ford Escort 48.0 V6	K3144	K3145	K3146
Ford Escort 49.0 V6	K3147	K3148	K3149
Ford Escort 50.0 V6	K3150	K3151	K3152
Ford Escort 51.0 V6	K3153	K3154	K3155
Ford Escort 52.0 V6	K3156	K3157	K3158
Ford Escort 53.0 V6	K3159	K3160	K3161
Ford Escort 54.0 V6	K3162	K3163	K3164
Ford Escort 55.0 V6	K3165	K3166	K3167
Ford Escort 56.0 V6	K3168	K3169	K3170
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Ford Escort 58.0 V6	K3174	K3175	



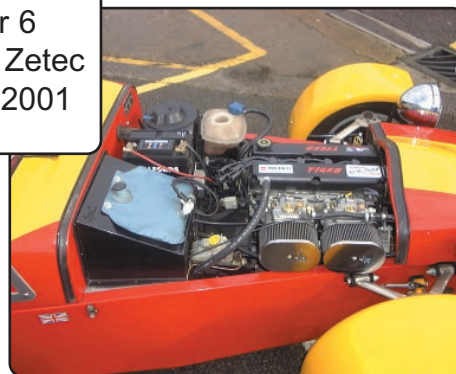
Ford Ka
2.0 16v Zetec
July 2000



Vauxhall Nova
2.0 16v XE
July 2000



Tiger 6
2.0 16v Zetec
March 2001



VW Golf 1.8 16v
167 bhp (124kW) @ Flywheel
As featured in "Performance VW"
August 2000

A

Air Horn

40 DCOE

- Length 16: 24
- Length 26: 24
- Length 39: 24

40mm & 45mm T/Bodies

- Length 40: 24
- Length 52: 24

45 DCOE

- Length 16: 24
- Length 26: 24
- Length 39: 24
- Length 62: 24

48 DCO/SP

- Length 95: 24

48 DCOE & T/Bodies

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- Ford Zetec 1.8 16v: 9
- Ford Zetec 2.0 16v: 9
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- Renault Clio Sport 172 2.0 16v (Static): 9
- Renault Clio/19 1.8 16v (Distributor): 9
- Vauxhall Ecotec 2.0 16v: 9
- Vauxhall/Opel XE 2.0 16v (Distributor): 9
- Vauxhall/Opel XE 2.0 16v (Static): 9
- VW 1.8 16v (Static): 9

Silver

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- Ford Pinto 2.0 8v (45 DCOE/Static): 10
- Ford Zetec 1.8 16v (40 DCOE & Small Air Filters): 10
- Ford Zetec 1.8 16v (40 DCOE): 10
- Ford Zetec 1.8 16v (45 DCOE): 10
- Ford Zetec 2.0 16v (45 DCOE): 10
- Peugeot/Citroën XU9 1.9 8v (40 DCOE/Distributor): 10
- Peugeot/Citroën XU9 1.9 8v (40 DCOE/Static): 10
- Vauxhall/Opel XE 2.0 16v (45

DCOE/Distributor): 10

Vauxhall/Opel XE 2.0 16v (45

DCOE/Static): 10

C

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- No.2 Solex Carburettor Catalogue: 85
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- Weber Carburettors For Citroën & Peugeot Cars Catalogue: 85
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D

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40mm

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45mm

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R/H Slave: 19

42mm

L/H Potentiometer: 19
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40mm

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L/H Slave: 18
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R/H Slave: 18

45mm

L/H Potentiometer: 18
L/H Slave: 18
R/H Potentiometer: 18
R/H Slave: 18

48mm

L/H Potentiometer: 18
L/H Slave: 18
R/H Potentiometer: 18
R/H Slave: 18

50mm

L/H Potentiometer: 18
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R/H Slave: 18

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40mm

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L/H Slave: 20
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L/H Potentiometer: 20
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