

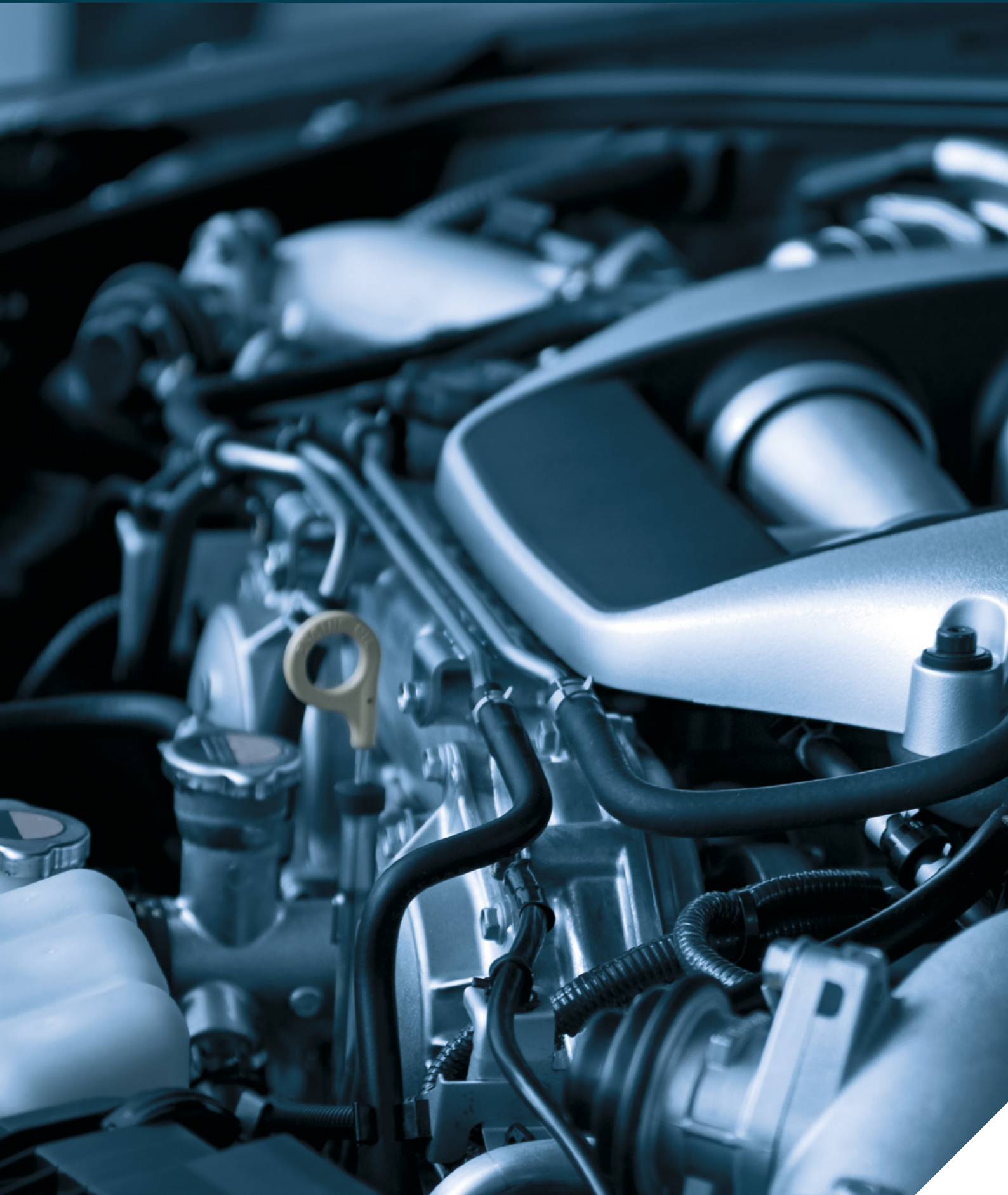


ELTA

SENSE & CONTROL

LX PRO

SENSE | CONTROL | POWER



Contents



4	Delivering Performance
6	VXPRO Engine Management
8	- Air Mass Meters
10	- Cam and Crankshaft Sensors
12	- EGR Valves
13	- Exhaust Sensors
14	VXPRO Drive Sense & Control
16	VXPRO Ignition
17	VXPRO Fuelling Components
18	VXPRO Window Lift Regulators



Delivering Performance

ELTA Automotive's VXPRO Sense and Control range delivers an unrivalled range of engine management, ignition, drive, fuelling and vehicle control components. The range has been designed and engineered to meet the specific demands of automotive aftermarket professionals for original equipment matching performance at sensible prices.

Up to 5 Year 'No Quibble' Warranty

VXPRO components are protected by a market leading warranty of up to five years (excluding labour.) This covers the majority of engine management components and all ignition and fuelling components as well as all window lift regulators for complete peace of mind and hassle-free returns.

Online Cataloguing

ELTA Automotive are a certified data provider to AutoCat+, Aldoc and TecDoc, ensuring accurate up-to-date application data for VXPRO components is available 24/7 throughout the world.

QR Coded Labelling

VXPRO components feature QR codes on the box label, providing a quick link to product specific fitting and technical advice before opening the box.

Marketing Support

The VXPRO range includes a host of marketing support including catalogues, leaflets, wall-charts and posters to make stocking and selling the range simple and rewarding.



Vehicle Performance Guarantee

All **VXPRO** components are tested to ensure operation within the manufacturer's original parameters, guaranteeing that there will be no change to the vehicles original performance.

Original Equipment Matching Performance

VXPRO components deliver original equipment matching performance combined with added value from sensible pricing and additional support services from ELTA Automotive.

Tech**ASSIST** Support

ELTA's Tech**ASSIST** program is available for **VXPRO** retailers and distributors looking to increase their product knowledge and improve their levels of customer support. ELTA are proud to support independent businesses **for a better aftermarket.**





VXPRO ENGINE MANAGEMENT

6

VXPRO ENGINE MANAGEMENT RANGE

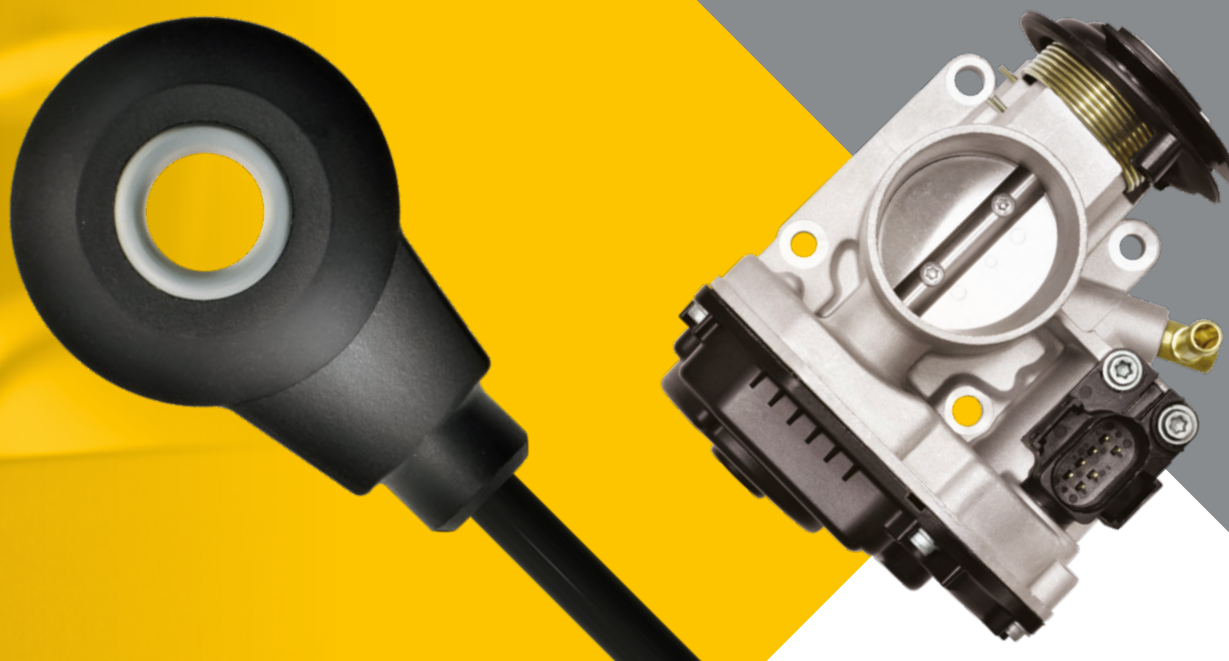
The fundamentals of the internal combustion engine may have remained unchanged since the first cars arrived on our roads in the late 1800's but the refinement and technology surrounding the engine has become increasingly sophisticated.

Today, traditional mechanics and modern electronics work side by side in our vehicles to meet the demand for higher performance yet cleaner and more efficient engines. To achieve this, modern engines utilize an array of switches and sensors that communicate with the Engine Control Unit to constantly monitor and adjust a host of parameters including engine timing, air/fuel ratio, temperature and emissions to name just a few.

The ELTA VXPRO Engine Management range has been tuned to meet the demands of the independent automotive aftermarket. It delivers a full engine management programme from airflow sensors, through to engine and exhaust sensors to offer customers a complete range from a single source with consistent branding, trusted reliability, outstanding support and guaranteed performance.

Combined with the comprehensive ranges of Ignition Components, Drive Sensors and Fuelling Components, the VXPRO Sense and Control range provides a formidable offering for the automotive aftermarket.

All VXPRO components are 100% tested to ensure operation within the manufacturer's original parameters before being sealed into magnetically shielded bags for complete protection. A 5 year warranty covers all engine management components for complete peace of mind.



Engine Management Range Overview

Sub Product Group	Parts in Range	Number of Applications	Number of Vehicles Covered
Air Mass Meters	270+	5100+	16,000,000+
Air Temperature Sensor	40+	3800+	8,900,000+
Cam and Crank Sensors	520+	11,800+	43,700,000+
Coolant Temperature Sensor	140+	7400+	17,900,000+
EGR Valves	270+	4150+	15,800,000+
Exhaust Gas Temperature Sensors	100+	1200+	4,250,000+
Gearbox Sensors	25+	2100+	7,600,000+
Idle Control Valves	70+	750+	4,350,000+
Knock Sensors	120+	2350+	9,000,000+
Lambda Sensors	400+	3750+	12,650,000+
MAP Sensors	140+	4100+	14,000,000+
Oil Level Sensors	20+	1600+	2,600,000+
Oil Pressure Switch	110+	7350+	14,900,000+
Throttle Bodies	70+	1300+	3,650,000+
Throttle Position Sensors	50+	1350+	4,000,000+
Water Temperature Sensor	130+	3850+	4,300,000+
Radiator Fan Switch	140+	6250+	16,800,000+

Supporting ranges of **Drive**, **Ignition** and **Fuelling** sense and control components are also available to deliver a complete vehicle management solution. (See pages 14-17.)



VXPRO AIR MASS METERS

AIR MASS METERS

Air Mass Meters have been installed in vehicles for more than a decade and are now one of the most important components in engine management. Typically, if the Air Mass Meter fails, the vehicle will not function. An air mass meter measures the amount of air being supplied to the engine to ensure smooth and fuel efficient operation.

Due to increasingly demanding requirements of environmental regulation, Air Mass Meters have become very precise and extremely sensitive. A faulty or soiled Air Mass Meter may supply incorrect signals to the ECU resulting in a multitude of errors.

The demands put on Air Mass Meters have also increased in recent years, particularly with turbo diesel applications where air pressure and speed is significantly higher.

THE ELTA VXPRO AIR MASS METER RANGE

The comprehensive range of VXPRO Air Mass Meters (also known as Mass Airflow Sensors) includes **over 270 parts**, covering in excess of **5100 applications** for over **16 million vehicles** on the road. All are manufactured to the highest standards to deliver premium quality and original equipment matching performance at outstanding value.





AIR MASS METER TESTING

VXPRO Air Mass Meters are 100% tested and matched against the vehicle manufacturer's original parameters at ELTA's test facility based in the UK headquarters.

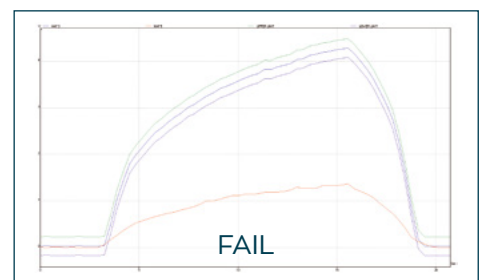
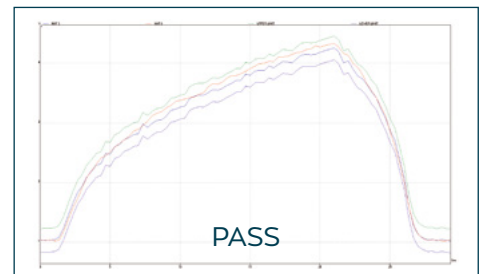
Air is blown through the sensors to replicate the RPM range of a vehicle. Both digital and analogue Air Mass Meters undergo rigorous testing before being sealed and boxed.

REPLACING AIR MASS METERS

It is highly recommended to change the air filter before replacing the AMM.

Most Air Mass Meters have an arrow on the outer case to indicate the correct direction of air flow through the AMM to the engine. Ensure the arrow points in the correct direction when mounting.

In most cases the ECU does not have to be manually reset but it may take up to 60 miles for the ECU to recalibrate and reset the error code. If a manual reset is required please follow manufacturer's instructions.

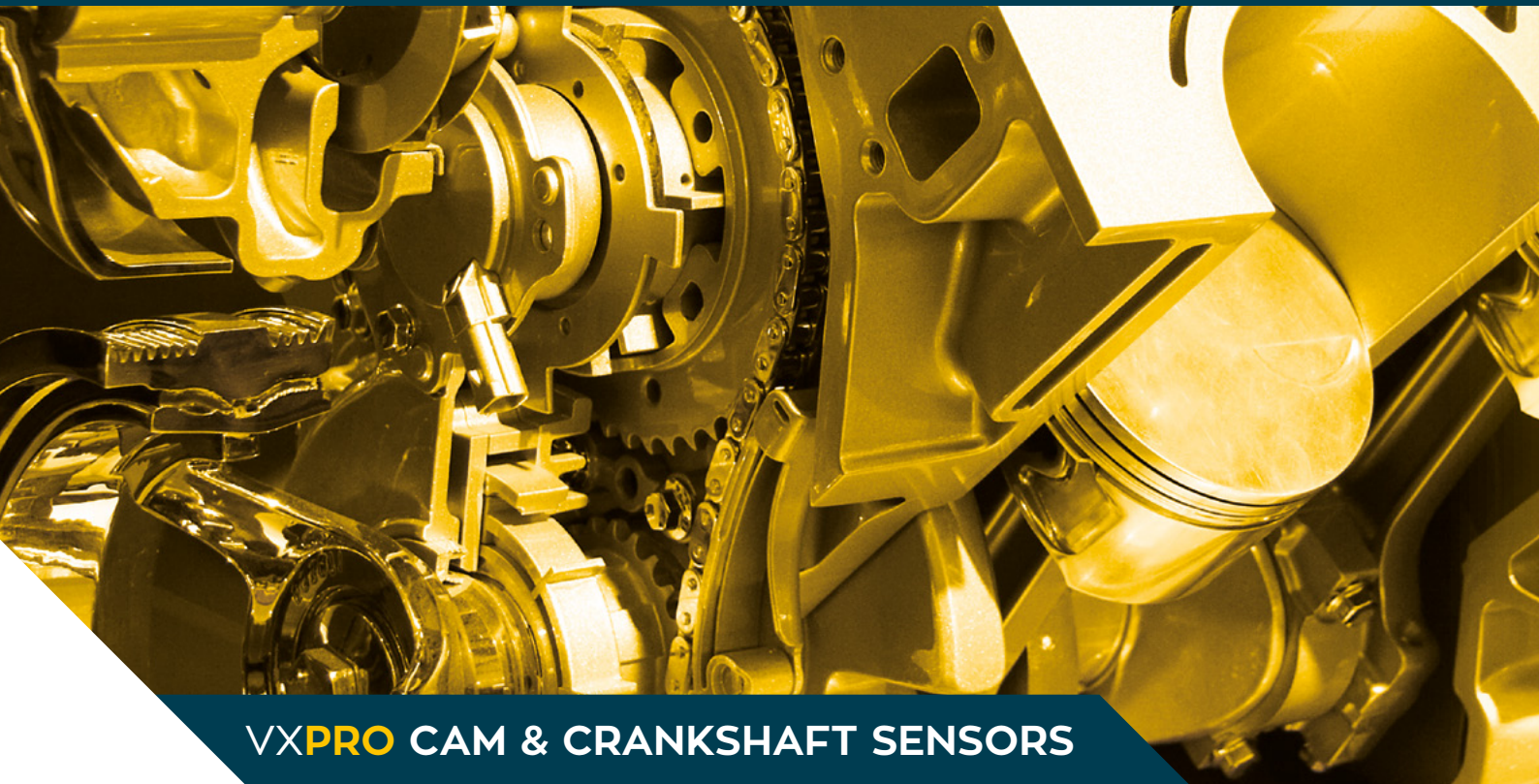


VXPRO test results showing performance matched to Original Equipment.



TECHASSIST

Scan here to see our TECHASSIST guide to fitting air mass meters.



VXPRO CAM & CRANKSHAFT SENSORS

CAMSHAFT AND CRANKSHAFT SENSORS

The Camshaft Sensor monitors the positions of the camshaft to allow for correct ignition timing. The Crankshaft Sensor detects the position of the crankshaft allowing the ECU to calculate its position in relation to the pistons in the engine. There are two main types of sensor:

Inductive Sensor

Inductive sensors use a magnet and coil to detect the teeth of the camshaft gear. As the teeth pass the magnetic field changes and the coil voltage is induced. This is output as a waveform signal (~AC voltage)

Hall Effect Sensor

Hall effect sensors do not use a coil and instead of an analogue AC signal they create a digital signal. Either on or off, as the teeth pass the sensor.

THE VXPRO CAMSHAFT AND CRANKSHAFT SENSOR RANGE

The comprehensive range of VXPRO Camshaft and Crankshaft Sensors (Also known as Engine Speed Sensors) includes **over 520 parts**, covering in excess of **11,800 applications** for over **43 million vehicles** on the road.

All are manufactured to the highest standards and are 100% tested to ensure operation within the manufacturer's original parameters before being sealed into magnetically shielded bags for complete protection.

A 5 year warranty covers all Camshaft and Crankshaft Sensors for complete peace of mind.

VXPRO Camshaft and Crankshaft Sensors feature QR codes on the box label, providing a quick link to product specific fitting and technical advice before opening the box.



REPLACING CAM AND CRANKSHAFT SENSORS

Failure is commonly caused by damage from oil contamination. Ensure any oil leaks are addressed before replacing the sensor.

Carefully remove the old sensor.

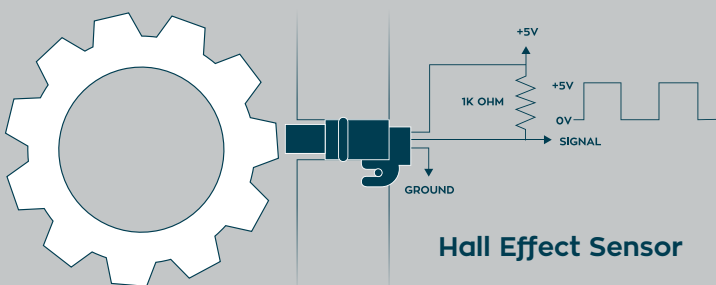
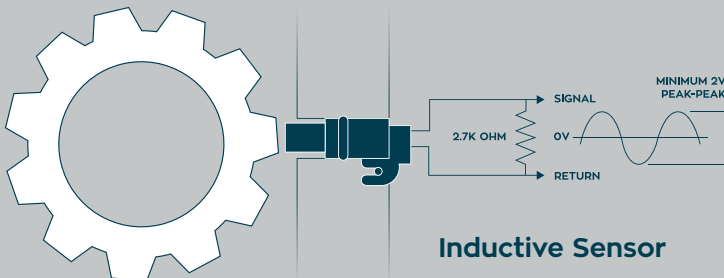
Oil the 'O' ring of the new sensor.

Correct positioning of the new sensor is critical. Ensure that any locating pins are correctly seated before fully slotting into place. Failure to do so can shear off the locating pin causing misalignment of the sensor and incorrect readings.



TECHASSIST

Scan here to see our TECHASSIST cam and crank sensor guide.





VXPRO EXHAUST GAS RECIRCULATION VALVES

EGR VALVES

Fundamentally the EGR valve reduces harmful nitrogen oxides (NOX) emissions from our exhausts.

NOX is produced when combustion temperatures exceed 2500°F and nitrogen begins to react with oxygen.

The EGR valve helps keep temperatures below the NOX threshold by recirculating a small amount of exhaust gas back through the combustion process.

This dilutes the incoming air/fuel mixture and cools combustion temperatures resulting in reduced NOX emissions.

THE VXPRO EGR VALVE AND COMPONENT RANGE

The VXPRO Exhaust Gas Recirculation range includes valves, coolers and solenoids to deliver a complete EGR package. It includes over **270 references**, covering in excess of **4000 applications** for over **15 million vehicles** on the road.

All are manufactured to meticulous standards and are 100% tested to ensure operation within the manufacturer's original parameters. A 5 year warranty covers all EGR components for complete peace of mind.

TECHASSIST

Before replacing the EGR valve ensure that the system is cleaned. Existing carbon deposits quickly re-contaminate the valve causing premature failure.



Scan the QR code to see our TECHASSIST EGR guide.



VXPRO EXHAUST SENSORS

VXPRO LAMBDA (O₂/OXYGEN) SENSORS

Lambda sensors operate by measuring the amount of oxygen in the exhaust. An efficient engine requires a specific amount of air and fuel in its cylinders at combustion. The perfect ratio being 14.7:1 (14.7 parts air to 1 part fuel.)

This perfect mixture is called Lambda. The levels calculated by the Lambda are sent to the ECU which then determines how best to achieve the ideal ratio.

VXPRO offer a huge range of over **400 Lambda Sensors** for more than **3750 applications** and covering **12.6 million vehicles** on the road.

All are manufactured to the highest standards and are 100% tested to ensure operation within the manufacturer's original parameters for clean efficient combustion.

VXPRO EXHAUST GAS TEMPERATURE SENSORS (EGTS)

Exhaust Gas Temperature Sensors monitor selective catalytic reduction (SCR), turbo boost, exhaust gas recirculation and the diesel particulate filter (DPF.) The data from the Air Mass Meter (AMM) and the Exhaust Temperature Sensors prompt the ECU to regenerate the DPF in order to prevent and clear blockages, as well as monitoring temperature levels during regeneration.

The VXPRO range consists of over **100 part numbers** for **over 1200 applications**.





VXPRO DRIVE SENSE AND CONTROL

DRIVE SENSE AND CONTROL

Today's vehicles employ a host of switches and sensors to improve the driver's comfort and safety.

As vehicles become increasingly autonomous, the VXPRO range of electronic switches and sensors grows to reflect technology in use on our roads.

VXPRO ABS SENSORS (WHEEL SPEED SENSORS)

The anti-lock braking system (ABS) prevents skidding and loss of control under harsh braking. The Anti-lock braking system uses ABS (Wheel Speed) Sensors that sense conditions in the wheel which could result in a skid. The rapid and accurate feedback from the Wheel Speed Sensor is vital to an effective Anti-lock Braking System.

This is why every VXPRO ABS/Wheel Speed Sensor is engineered to exacting standards and rigorously tested before being sealed into magnetically shielded packaging.

The range includes over **510 ABS Sensors**, covering over **5750 applications** and more that **19 million vehicles** on the road.

VXPRO BRAKE PAD WEAR INDICATORS / SENSORS

VXPRO brake pad wear sensors are another safety critical product from ELTA. The sensors monitor brake pad conditions and alert the driver once they wear below a predetermined level. VXPRO offers over **75 types of brake pad wear sensor**, catering for more than **3 million vehicles** on the road.

VXPRO PARKING SENSORS

VXPRO parking sensors are ultrasonic proximity detectors that measure the distances to nearby objects. Over **30 replacement part numbers** are available in the range



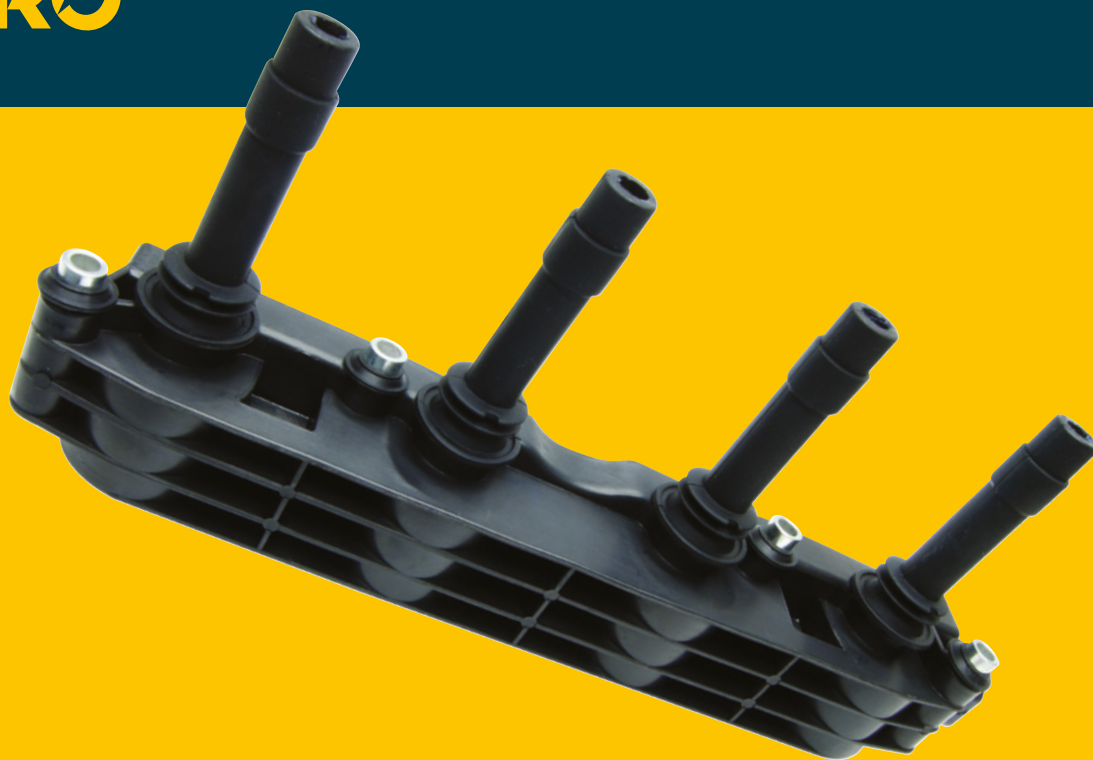
VXPRO POWER STEERING SENSORS

VXPRO Power Steering Sensors not only monitor oil levels in the power steering system, they can also relay information about the demand on the power steering system to the ECU, which can then manage engine speed during slower manoeuvres.



Drive Sense and Control Range Overview

Sub Product Group	Parts in Range	Number of Applications	Number of Vehicles Covered
ABS Sensors	510+	5750+	19,000,000+
Brake Light Switches	130+	10500+	22,000,000+
Brake Wear Sensors	75+	1650+	3,000,000
Parking Sensors	30+	2200+	4,300,000
Power Steering Sensors	5+	230+	1,900,000
Reverse Light Switches	130+	3800+	16,000,000+



VXPRO IGNITION COMPONENTS

IGNITING PERFORMANCE

ELTA has worked extensively to develop one of the UK's leading ranges of ignition coils, which includes over **390 references** for over **7600 applications** and upwards of **19 million vehicles** on the road.

Traditionally ignition systems consisted of a distributor, mechanical contact breaker points, and a capacitor (condenser.) In modern systems, the distributor is omitted and ignition is instead electronically controlled. Vehicles commonly use one ignition coil for each engine cylinder (or pair of cylinders.)

The Elta VXPRO ignition range covers both modern and traditional systems including:

Wet Coils
Ignition Modules
Pencil Coils
Block Coils
Rail Coils

Condensers
Contact Sets
Distributor Caps
HT Leads
Rotor Arms

All VXPRO ignition components are 100% tested to ensure operation within the manufacturer's original parameters. Coils are tested for continuity and spark at three vital points during manufacture. Samples from batches are then picked to undergo further tests, such as shock, thermal and vibration tests.

All VXPRO ignition components are covered by our 5 year warranty for complete peace of mind and hassle-free returns.

Full application data is available online from MAM, Aldoc and TecDoc to help you source the coil you need.





VXPRO FUELLING

FUELLING PERFORMANCE

The VXPRO Sense and Control range is supported by a comprehensive fuel pump offering including:

In-line Pumps
In-tank Pumps
Swirl Pots
Fuel Delivery Modules
Tank Sender Units
Universal Fuel Pumps

The comprehensive programme delivers over **220 fuelling components** covering **561 applications** for **3.25 million vehicles** on the road.

All VXPRO fuelling components are covered by a 5 year warranty for complete peace of mind and hassle-free returns.

Full application data is available online from MAM, Aldoc and TecDoc to help you source the component you need.

Ignition and Fuelling Range Overview

Sub Product Group	Parts in Range	Number of Applications	Number of Vehicles Covered
Traditional Ignition Coils	30+	1000+	825,500+
Modern Ignition Coils	6500+	6500+	18,465,268+
Swirl Pots	250+	250+	1,100,000+
In-Line Pumps	57+	55+	350,000+
Fuel Pump Assemblies	230+	230+	1,650,000+



VXPRO WINDOW REGULATORS

POWER UP WITH VXPRO

VXPRO Window Lift Regulators have been developed in conjunction with selected car manufacturers to provide the highest quality components combined with outstanding value for money.

The range includes mechanisms, motors and complete kits, so whatever the diagnosis, VXPRO has the perfect solution.

An impressive **1950+ part numbers** covering in excess of **50,000 applications** for **over 30,000,000 vehicles on the road**, specifically tailored to the UK automotive aftermarket.

VXPRO delivers a complete range of Cable, Scissor, Bowden and Double Bowden systems available for both cars and light commercial vehicles.

QUALITY WITHOUT COMPROMISE

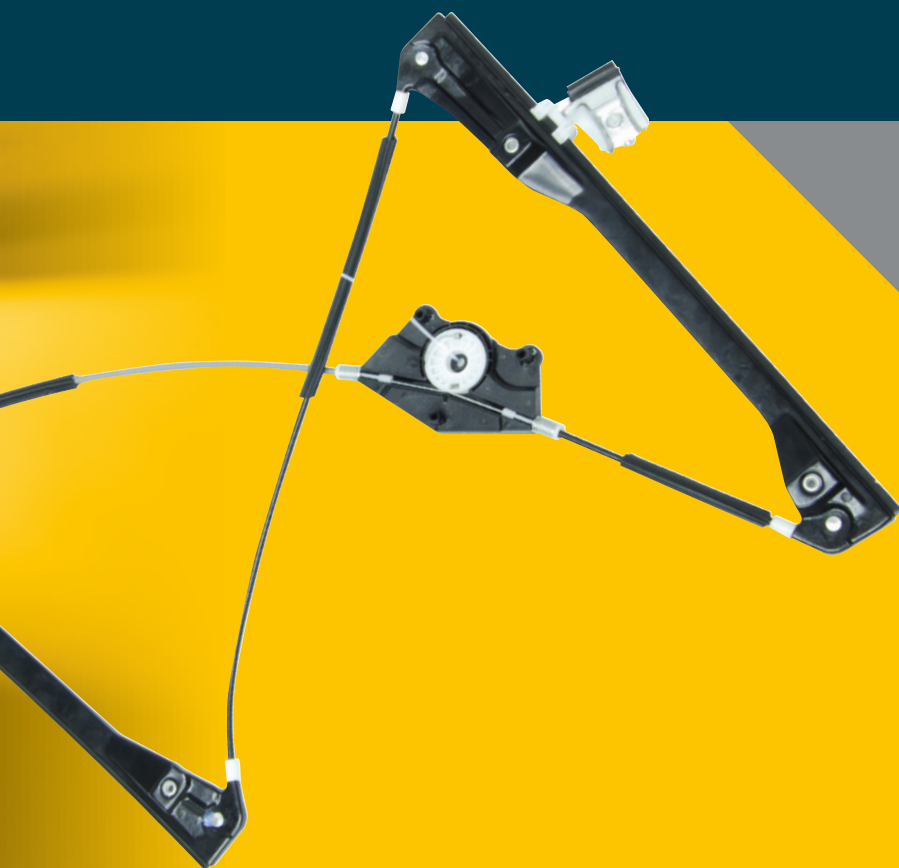
All VXPRO Window Regulators are manufactured using OE quality materials to 9001:2000 standards and conform to E1 Regulations.

TRIED AND TESTED

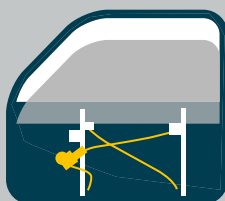
ELTA VXPRO Window Regulators are life tested to ensure the maximum longevity and reliability.

SUPERIOR TECHNICAL SUPPORT AND ONLINE DATA

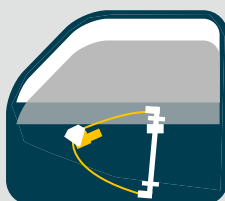
Help from our expert technical department is only a call away. Plus, accurate and up-to-date application data is available 24/7 online via MAM, Aldoc and TecDoc.



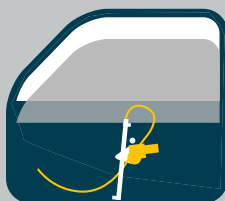
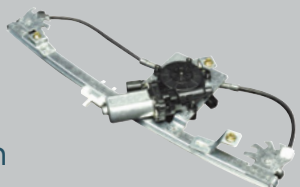
Cable System



Scissor System



Bowden System



Double Bowden System



ELTA | VXPRO

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