



PRODUCT CATALOGUE / 2026

CLARITY UNDER PRESSURE.

X1 / X4

Diesel injector test systems

X1 / 01 CHANNEL X4 / 04 CHANNELS

Engineered and manufactured by KOMTEST

English edition
INJECTUNE.COM

INJECTUNE / X1 + X4 + CONTROL

The product range

Two common rail injector benches. Choose one channel for individual diagnosis or four channels for injector-set comparison. Both platforms connect testing, supported coding and reporting in Injectune Control.



X1

Individual diagnosis

Focused injector diagnosis and calibration



X4

Injector-set comparison

Complete injector-set testing and comparison

01 / Injector channel

04 →

04 / Injector channels

06 →

200–2,500 bar

3,000 μ s

±1 °C

Product presentation. Final equipment and fixtures follow the agreed configuration.

Contents

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X1 / X4

X1 / X4 technical comparison



X1

Individual diagnosis



X4

Injector-set comparison

Capability	Injectune X1	Injectune X4
Injector channels	1	4
Common rail pressure	200–2,500 bar	200–2,500 bar
Injector pulse control	Up to 3,000 µs	Up to 3,000 µs
Temperature tolerance	±1 °C	±1 °C
Automatic / manual testing	Included	Included
Graphical delivery / spill	Included	Included
Start Time	Included	Included
Electronic injector pairing	Supported	Supported
Injector coding	IMA · ISA · C2i · C3i · C4i · QR · IIC	IMA · ISA · C2i · C3i · C4i · QR · IIC
Report workflow	Save and print	Save and print
Drive	Speed-controlled AC motor	Speed-controlled AC motor
Control interface	PC, keyboard and mouse	PC, keyboard and mouse

Coding, application coverage and fixtures depend on the installed configuration. Confirm machine dimensions, utilities and final equipment with the technical team before installation.

COMMON RAIL / X1

X1

One injector. Complete attention.

Injectune X1 brings common rail injector testing and coding into a focused single-channel workstation. Guided setup, graphical delivery and spill measurement, application-specific routines and printable reports keep the operator connected to every result.



01

Injector channels

1

Common rail pressure

200–2,500 bar

Injector pulse control

Up to 3,000 µs

Test-fluid temperature

Adjustable, ±1°C tolerance

Built for

Focused injector diagnosis and
calibration

Workshops with deliberate single-
piece flow

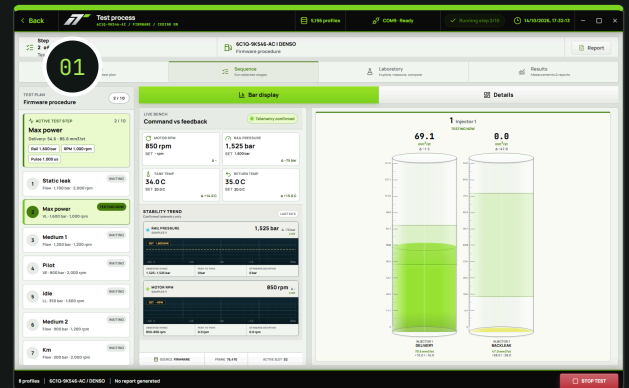
Compact floor plans that still
demand full CR capability

Product presentation. Final equipment and fixtures follow the agreed configuration.

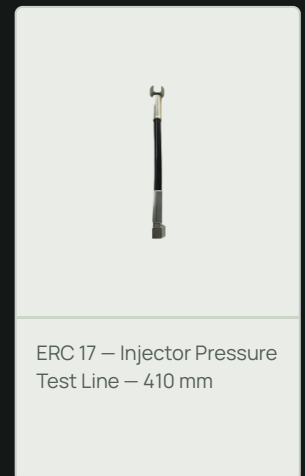
INJECTUNE X1 / COMMON RAIL

X1 / Workstation details

Focused single-piece flow



INJECTUNE CONTROL / SEQUENCE



01

PC control station

Select the injector profile, set the test conditions and follow the result from the PC, keyboard and mouse. Save or print the technical report from the same software environment.

02

Injector mounting

Application-specific fixtures position the injector in the working area. Select the sleeve, connection and electrical harness by the complete injector reference.

03

Pressure & return connections

The injector uses separate pressure and return connections. The selected application determines the fittings, test conditions and measurement routine.

Final fixtures follow the agreed configuration. English application interface with recorded bench data for illustration. Profiles, functions and routines depend on the installed configuration.

COMMON RAIL / X4

X4

Four channels. One decisive view.

Injectune X4 brings common rail injector testing, coding and matching into a coordinated four-channel workflow. Simultaneous channel visibility, electronic pairing, graphical measurement and printable reports help workshops compare injector sets and document each result.



04

Injector channels

4

Common rail pressure

200–2,500 bar

Injector pulse control

Up to 3,000 µs

Test-fluid temperature

Adjustable, ±1°C tolerance

Built for

Complete injector-set testing and comparison

Higher-throughput common rail specialists

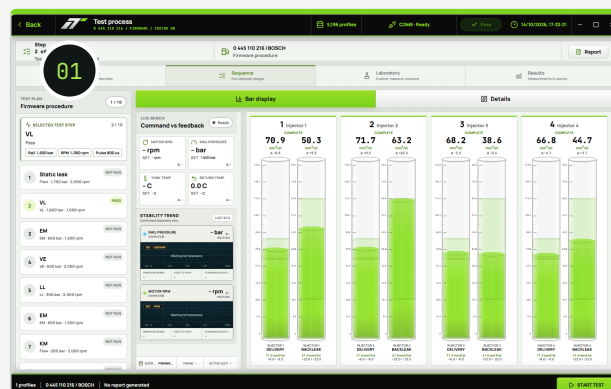
Operations where pairing and channel consistency matter

Product presentation. Final equipment and fixtures follow the agreed configuration.

INJECTUNE X4 / COMMON RAIL

X4 / Workstation details

Simultaneous channel visibility



INJECTUNE CONTROL / SEQUENCE



01

PC control station

Select the injector profile, set the test conditions and follow the result from the PC, keyboard and mouse. Save or print the technical report from the same software environment.

02

Injector mounting

Application-specific fixtures position the injector in the working area. Select the sleeve, connection and electrical harness by the complete injector reference.

03

Pressure & return connections

The injector uses separate pressure and return connections. The selected application determines the fittings, test conditions and measurement routine.

Final fixtures follow the agreed configuration. English application interface with recorded bench data for illustration. Profiles, functions and routines depend on the installed configuration.

INJECTUNE CONTROL / X1 + X4

Measurement & control

A meaningful result links the injector, test conditions, measured quantity and applicable limits.



01 Injection delivery

Fluid delivered through the nozzle during the test. Compare the displayed quantity and unit with the limits for that specific test point.

03 Start Time

Review the timing reported by the supported Start Time routine. Its definition and evaluation depend on the injector profile; it is distinct from commanded pulse width.

02 Return / back-leak

Fluid returned through the injector return circuit. Return flow is part of injector operation; interpret it against the plan rather than assuming every return is a fault.

04 Matching

Compare compatible injectors under the same plan and conditions. Similar readings alone do not establish that every injector is within specification.

English application interface with recorded bench data for illustration. Profiles, functions and routines depend on the installed configuration.

SOFTWARE / X1 + X4

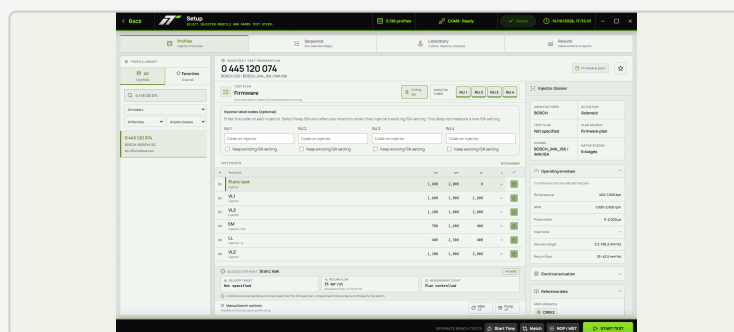
Injectune Control / Workflow

Each step makes the next decision clearer.

01

Select & prepare

Find the injector by reference, manufacturer or family.
Review the profile, connection and enabled test stages.

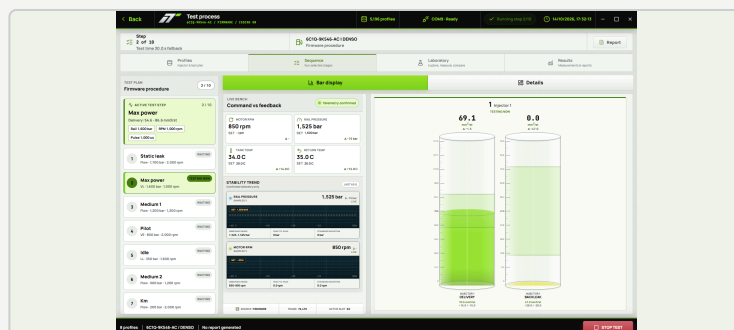


01 / INJECTUNE CONTROL / Profiles

02

Run & evaluate

Follow the active test stage, command versus feedback and delivery values. Use automatic or manual operation as required.

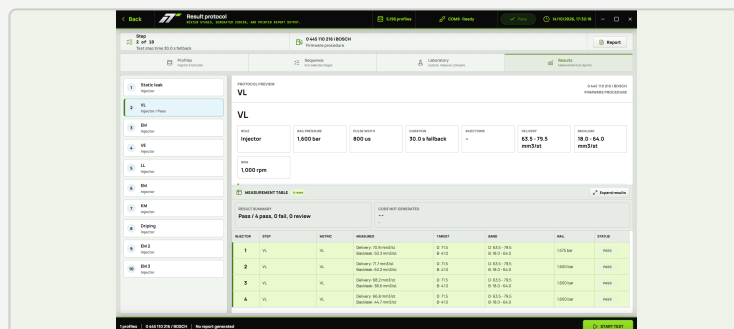


02 / INJECTUNE CONTROL / Sequence

03

Save & report

Review the result by test stage, then save or print the technical protocol for the workshop and customer record.



Injection	Flow	Pressure	Temperature	Time	Status	Error
VL	1.000 gpm	1.000 bar	30.0 °C	0.000 s	Pass	0.000
VL	1.000 gpm	1.000 bar	30.0 °C	0.000 s	Pass	0.000
VL	1.000 gpm	1.000 bar	30.0 °C	0.000 s	Pass	0.000
VL	1.000 gpm	1.000 bar	30.0 °C	0.000 s	Pass	0.000
VL	1.000 gpm	1.000 bar	30.0 °C	0.000 s	Pass	0.000

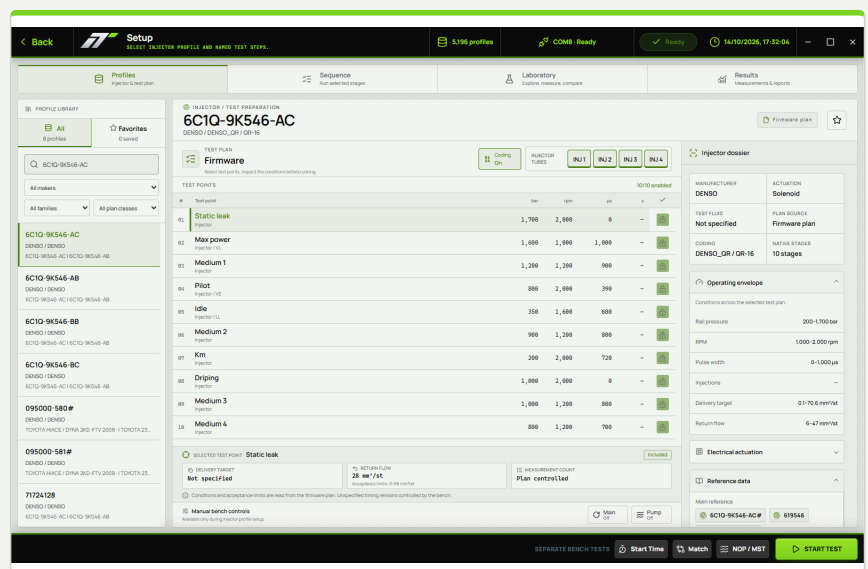
03 / INJECTUNE CONTROL / Results

English interface examples. Test and report views show recorded data for illustration; they are not a new live test.

IMA / C2I / C3I / C4I / QR / IIC

Coding & applications

Supported coding routines stay connected to the injector profile and test result. Select the application first; confirm the required measurements before generating a code.



INJECTUNE CONTROL / QR

Coding availability depends on injector reference, database, software version and configuration. Generated codes require application-specific validation.

Application coverage

Bosch 110 CRI	Standard	Bosch 120 CRIN	Optional
Delphi standard, piezo and Smart injectors	Application dependent	Denso solenoid and piezo injectors	Application dependent
Continental / Siemens piezo injectors	Application dependent	Cummins QSK / ISX / ISL / ISG	Optional
L'Orange injectors	Optional	CAT / Perkins C4.2-C9.3	Optional

Confirm the exact injector number, coding requirement and necessary fixture set with the Injectune team.

[Explore injector profiles](#) ➔

INJECTUNE CONTROL / THE WORKSHOP RECORD

Test report

Keep the conditions and the outcome together. A technical protocol gives the workshop a clear reference for what was tested and what was measured.

PROTOCOL PREVIEW

VL

0 445 110 216 | BOSCH
FIRMWARE PROCEDURE

VL

ROLE
Injector

RAIL PRESSURE
1,600 bar

PULSE WIDTH
800 us

DURATION
30.0 s fallback

INJECTIONS
-

DELIVERY
63.5 - 79.5
mm3/st

BACKLEAK
18.0 - 64.0
mm3/st

RPM
1,000 rpm

MEASUREMENT TABLE 4 rows

Expand results

RESULT SUMMARY
Pass / 4 pass, 0 fail, 0 review

CODE NOT GENERATED
--
-

INJECTOR	STEP	METRIC	MEASURED	TARGET	BAND	RAIL	STATUS
1	VL	VL	Delivery: 70.9 mm3/st Backleak: 50.3 mm3/st	D: 71.5 B: 41.0	D: 63.5 - 79.5 B: 18.0 - 64.0	1,575 bar	PASS
2	VL	VL	Delivery: 71.7 mm3/st Backleak: 63.2 mm3/st	D: 71.5 B: 41.0	D: 63.5 - 79.5 B: 18.0 - 64.0	1,600 bar	PASS
3	VL	VL	Delivery: 68.2 mm3/st Backleak: 38.6 mm3/st	D: 71.5 B: 41.0	D: 63.5 - 79.5 B: 18.0 - 64.0	1,600 bar	PASS
4	VL	VL	Delivery: 66.8 mm3/st Backleak: 44.7 mm3/st	D: 71.5 B: 41.0	D: 63.5 - 79.5 B: 18.0 - 64.0	1,600 bar	PASS

SAVEABLE. / PRINTABLE. / TRACEABLE.

01

Identify the application.

Keep the injector reference and selected test plan with the result.

02

Review each stage.

Read the measurement, target band and reported status in context.

03

Keep the evidence.

Save or print the protocol for the job record and customer handover.

English report view from recorded bench data. The session shown is a stage result, not a completed full injector certification.

X1 / X4 / SUPPLIED EQUIPMENT / X1 & X4

Equipment & configuration

The standard working set covers pressure and return connections, electrical connections and injector handling.
Define the final quantities for your channel count and injector mix.



CE 390

optional



CRL 032 / M14

standard



CG 14-B

standard



EB 104

standard



ERC 17

standard

15

core equipment families

29

standard references

25

optional references

01 Pressure & return

Injector connection adapters

Pressure test hose

Return back-leak hose and adapter

12 mm / 14 mm L coupling

02 Electrical connections

Bosch injector cable

Delphi injector cable — Euro 4 / Euro 5

Denso injector cable

Continental / Siemens injector cable

Bosch piezo injector cable

Continental / Siemens piezo injector cable

Injector fork cable

DRV valve cable

03 Fixtures & tools

Bosch piezo valve

Injector return fixture

Injector opening tools

The following standard and optional lists follow the existing CR injector set record. Reference quantities are not a per-machine packing list; final contents and quantities are confirmed in the approved quotation.

STANDARD / X1 + X4

Standard adapters & setup accessories

08

Injector Test Adapters & Fixtures / Setup Accessories

Provides the application-specific injector interface for the test bench. Select it by the complete injector part number and required test connection arrangement.

**CE 306****Injector Test Adapter**

Example injector part number
0445120007

Reference quantity 1

**CE 308****Injector Test Adapter**

Example injector part number
0445120020

Reference quantity 1

**CE 310****Injector Test Adapter**

Example injector part number
0445120024

Reference quantity 1

**CE 312****Injector Test Adapter**

Example injector part number
0445120025

Reference quantity 1

**CE 314****Injector Test Adapter**

Example injector part number
0445120030

Reference quantity 1

**CE 316****Injector Test Adapter**

Example injector part number
0445120070

Reference quantity 1

**CE 318****Injector Test Adapter**

Example injector part number
0445120074

Reference quantity 1



Source photo
unavailable

EA 236**Injector Setup Accessory**

Variant information
E.B.S.A.

Reference quantity 1

Accessory included in the standard equipment reference set. Confirm its function and injector fitment with technical sales using reference EA 236.

This injector number is provided as an application example. Confirm the complete compatible range and required test connections for this adapter.

Quantities shown are source reference quantities. The supplied quantities for X1 or X4 follow the agreed configuration.

STANDARD / X1 + X4

Standard rail & pressure connections

04

Rail & Pressure-Line Connections

CR 432, CRL 032 and ERC 17 identify the rail T-piece, L couplings and pressure line. Thread size, sealing geometry and pressure rating all matter.



CR 432

M14 Rail T-Connector

Connection specification

M14

Reference quantity 4



CRL 032 / M14

M14 Pressure-Line Elbow Coupling

Connection specification

M14

Reference quantity 4



CRL 032 / M12

M12 Pressure-Line Elbow Coupling

Connection specification

M12

Reference quantity 4



ERC 17

Injector Pressure Test Line – 410 mm

Connection specification

14 × 14 · 410 mm

Reference quantity 4

Match the mating connection and sealing interface to the approved test setup.

CRL 032 appears as M12, M14 and M16 in the source set. Specify both the code and the size. Matching thread diameter alone does not establish a compatible seal or pressure rating.

Quantities shown are source reference quantities. The supplied quantities for X1 or X4 follow the agreed configuration.

STANDARD / X1 + X4

Standard injector connection fittings

08

Injector Connection Fittings

Injector connection fitting for the listed application. Match the injector connection geometry and specified fluid-circuit interface before selecting this reference.



CG 4-D

Threaded Injector Connection Fitting – 8 × 1

Application reference

Denso · 8 × 1

Reference quantity 4



CG 6-D

Threaded Injector Connection Fitting – 8 × 1.25

Application reference

Denso · 8 × 1.25

Reference quantity 4



CG 8-D

Piezo Injector Connection Fitting – 8 × 1

Application reference

Denso · piezo · 8 × 1

Reference quantity 4



CG 10-D

Threaded Injector Connection Fitting – 6 × 1

Application reference

Denso · 6 × 1

Reference quantity 4



CG 12-D

Injector Connection Fitting

Application reference

Delphi

Reference quantity 4



CG 14-B

Injector Connection Fitting

Application reference

Bosch

Reference quantity 4



CG 16-S

Injector Connection Fitting

Application reference

Continental / Siemens

Reference quantity 4



CG 18-P

Piezo Injector Connection Fitting

Application reference

Bosch / Denso · piezo

Reference quantity 4

Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment. Quantities shown are source reference quantities. The supplied quantities for X1 or X4 follow the agreed configuration.

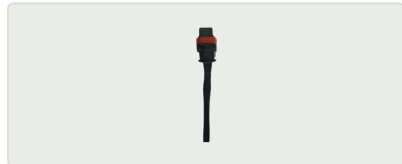
STANDARD / X1 + X4

Standard injector cables

09

Electrical Test Cables

Connects the listed injector application to the test bench drive channel. Match the injector connector geometry and documented pin assignment before selecting this cable.



EB 102

Multi-Application Injector Test Cable

Variant information

Injector fitment to confirm

Reference quantity 4



EB 104

Injector Electrical Test Cable

Application reference

Bosch

Reference quantity 4



ED 110

Injector Electrical Test Cable – Type 1

Application reference

Delphi · Type 1

Reference quantity 4



ED 112

Injector Electrical Test Cable – Type 2

Application reference

Delphi · Type 2

Reference quantity 4



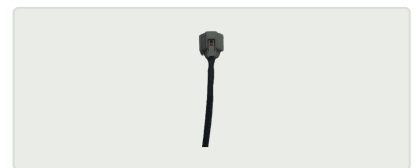
ES 114

Injector Electrical Test Cable

Application reference

Continental / Siemens

Reference quantity 4



CD 116

Injector Electrical Test Cable – Type 1

Application reference

Denso · Type 1

Reference quantity 4



ED 118

Injector Electrical Test Cable – Type 2

Application reference

Denso · Type 2

Reference quantity 4



ED 120

Injector Electrical Test Cable – Type 3

Application reference

Denso · Type 3

Reference quantity 4



EU 122

Multi-Application Injector Test Cable

Variant information

Injector fitment to confirm

Reference quantity 4

Confirm the injector fitment and required adapter or connector geometry when selecting this variant. Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment.

Quantities shown are source reference quantities. The supplied quantities for X1 or X4 follow the agreed configuration.

OPTIONAL / X1 + X4 / 1 – 3

Optional injector adapters / 1

07

Injector Test Adapters & Fixtures

Provides the application-specific injector interface for the test bench. Select it by the complete injector part number and required test connection arrangement.


CE 320
Injector Test Adapter

Example injector part number
0445120078


CE 330
Injector Test Adapter

Example injector part number
0445120086


CE 334
Injector Test Adapter

Application reference
Bosch · John Deere


CE 338
Injector Test Adapter

Application reference
Bosch · Volvo


CE 342
Injector Test Adapter

Application reference
Bosch · CAT


CE 344
Injector Test Adapter

Application reference
Bosch · Cummins ISX


CE 350
Injector Test Adapter

Application reference
Bosch · DAF · Euro 5–6

This injector number is provided as an application example. Confirm the complete compatible range and required test connections for this adapter. Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment.

Optional items are not included in the standard set. Availability, quantities, fixtures and related software support are confirmed with the final configuration.

OPTIONAL / X1 + X4 / 2 – 3

Optional injector adapters / 2

06

Injector Test Adapters & Fixtures

Provides the application-specific injector interface for the test bench. Select it by the complete injector part number and required test connection arrangement.



CE 354

Injector Test Adapter

Application reference
Bosch · DAF · Euro 6



CE 358

Injector Test Adapter

Application reference
Bosch / Delphi · Mercedes-Benz · Euro 5



CE 364

Injector Test Adapter

Application reference
Bosch · Mercedes-Benz · Euro 6



CE 366

Injector Test Adapter

Application reference
Delphi · Volvo · Euro 6



CE 368

Injector Test Adapter

Application reference
CAT / Perkins



CE 372

Injector Test Adapter

Application reference
Denso · Type 1

Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment.

Optional items are not included in the standard set. Availability, quantities, fixtures and related software support are confirmed with the final configuration.

OPTIONAL / X1 + X4 / 3 – 3

Optional injector adapters / 3

06

Injector Test Adapters & Fixtures

Provides the application-specific injector interface for the test bench. Select it by the complete injector part number and required test connection arrangement.


CE 378
Injector Test Adapter

Application reference
Denso · Type 2


CE 382
Injector Test Adapter

Application reference
Denso · Type 3


CE 384
Injector Test Adapter

Application reference
Mercedes-Benz Axor · Euro 5


CE 390
Multi-Application Injector Test Adapter – Type 1

Variant information
Injector fitment to confirm · Type 1


CE 392
Multi-Application Injector Test Adapter – Type 2

Variant information
Injector fitment to confirm · Type 2


CE 394
Multi-Application Injector Test Adapter – Type TA

Variant information
Injector fitment to confirm · Type TA

Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment. Confirm the injector fitment and required adapter or connector geometry when selecting this variant.

Optional items are not included in the standard set. Availability, quantities, fixtures and related software support are confirmed with the final configuration.

OPTIONAL / X1 + X4

Optional pressure connections & cables

06

Rail & Pressure-Line Connections / Electrical Test Cables

Build an application around the injector part number. Mechanical fit, fluid connections and electrical drive must work together.

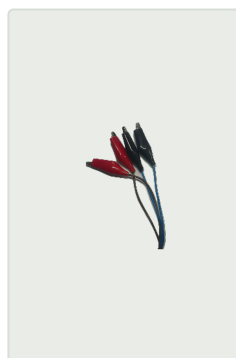


CRL 032 / M16

M16 Pressure-Line Elbow Coupling

Connection specification

M16

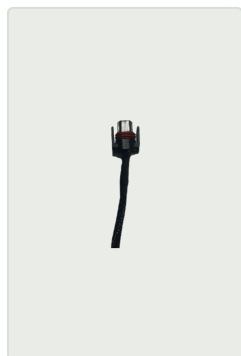


EB 106

Euro 6 Injector Electrical Test Cable

Application reference

Bosch · Euro 6

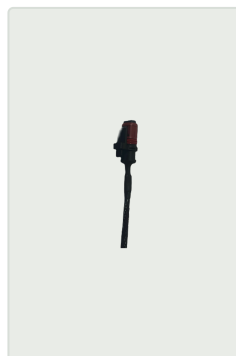


EC 108

Injector Electrical Test Cable

Application reference

CAT

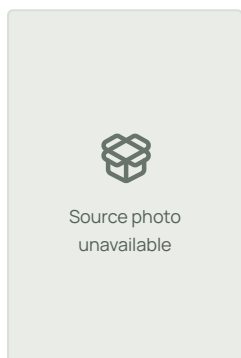


UV 168

2-Pin Injector Test Cable

Application reference

Volvo · Euro 6

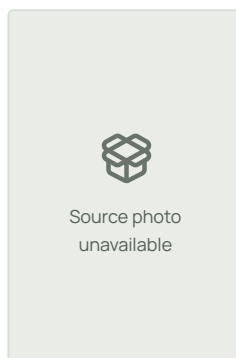


ED 152

6-Pin Solenoid Injector Test Cable

Application reference

Denso · solenoid



EB 148

3-Pin Solenoid Injector Test Cable

Application reference

Bosch · solenoid

Match the mating connection and sealing interface to the approved test setup. Use this reference to identify the connection variant. Confirm the exact injector and required bench connections when selecting equipment.

CRL 032 appears as M12, M14 and M16 in the source set. Specify both the code and the size. Matching thread diameter alone does not establish a compatible seal or pressure rating.

Optional items are not included in the standard set. Availability, quantities, fixtures and related software support are confirmed with the final configuration.

X1 / X4 / 29 + 25

Equipment code index

54

Turn a brand or engine-family enquiry into a defined test configuration.

Standard 29	
Code	Application reference
CE 306	0445120007 13
CE 308	0445120020 13
CE 310	0445120024 13
CE 312	0445120025 13
CE 314	0445120030 13
CE 316	0445120070 13
CE 318	0445120074 13
EA 236	E.B.S.A. 13
CR 432	M14 14
CG 4-D	Denso · 8 × 1 15
CG 6-D	Denso · 8 × 1.25 15
CG 8-D	Denso · piezo · 8 × 1 15
CG 10-D	Denso · 6 × 1 15
CG 12-D	Delphi 15
CG 14-B	Bosch 15
CG 16-S	Continental / Siemens 15
CG 18-P	Bosch / Denso · piezo 15
CRL 032 M14	M14 14
CRL 032 M12	M12 14
ERC 17	14 × 14 · 410 mm 14
EB 102	Injector fitment to confirm 16
EB 104	Bosch 16
ED 110	Delphi · Type 1 16
ED 112	Delphi · Type 2 16
ES 114	Continental / Siemens 16
CD 116	Denso · Type 1 16
ED 118	Denso · Type 2 16
ED 120	Denso · Type 3 16
EU 122	Injector fitment to confirm 16

Optional 25	
Code	Application reference
CE 320	0445120078 17
CE 330	0445120086 17
CE 334	Bosch · John Deere 17
CE 338	Bosch · Volvo 17
CE 342	Bosch · CAT 17
CE 344	Bosch · Cummins ISX 17
CE 350	Bosch · DAF · Euro 5–6 17
CE 354	Bosch · DAF · Euro 6 18
CE 358	Bosch / Delphi · Mercedes-Benz · Euro 5 18
CE 364	Bosch · Mercedes-Benz · Euro 6 18
CE 366	Delphi · Volvo · Euro 6 18
CE 368	CAT / Perkins 18
CE 372	Denso · Type 1 18
CE 378	Denso · Type 2 19
CE 382	Denso · Type 3 19
CE 384	Mercedes-Benz Axor · Euro 5 19
CE 390	Injector fitment to confirm · Type 1 19
CE 392	Injector fitment to confirm · Type 2 19
CE 394	Injector fitment to confirm · Type TA 19
CRL 032 M16	M16 20
EB 106	Bosch · Euro 6 20
EC 108	CAT 20
UV 168	Volvo · Euro 6 20
ED 152	Denso · solenoid 20
EB 148	Bosch · solenoid 20

List each included and optional reference, its variant and its quantity. Reference-set quantities in this catalogue are not a separate delivery commitment.

Confirm the installed profile, operating conditions and evaluation limits for that part number. A family listing is not a complete compatibility matrix.

KOMTEST / KONYA / TÜRKİYE

Engineering & manufacturing

Injectune is engineered and manufactured by KOMTEST in Konya, Türkiye. The machine, connection set and software scope are configured around the injector applications serviced by your workshop.



Konya, Türkiye / Engineering & manufacturing

KOMTEST

Injectune product identity.

KOMTEST engineering and manufacturing.

Begin with the injectors you service and the way your workshop works. Build the machine, connection set and software scope around that application.



KONYA / TÜRKİYE

X1 / X4 / CONTROL / EQUIPMENT

Configuration & handover

Agree the machine, equipment and software scope around the work your workshop actually performs.

01

Your injector mix.

Share injector references, manufacturers, coding requirements and your typical daily workflow.

02

Your connection set.

Confirm pressure and return connections, injector adapters, solenoid and piezo cables, and application-specific fixtures.

03

Your installation.

Review the final specification, workshop layout, utilities, delivery and commissioning requirements with the team.

Site & utilities

Confirm the installation drawing, electrical supply, test fluid, environmental conditions and service clearances in the machine-specific installation documentation.

Supply schedule

List each included and optional reference, its variant and its quantity. Reference-set quantities in this catalogue are not a separate delivery commitment.

Application demonstration

Use representative injector part numbers to demonstrate setup, test stages, measurements, supported coding and report output.

Operator handover

Include operation, approved connection procedures, routine maintenance and the agreed training and support terms in the handover.

Discuss your configuration ↗

Coding, application coverage and fixtures depend on the installed configuration. Confirm machine dimensions, utilities and final equipment with the technical team before installation.



INJECTUNE X1 / X4

Bring clarity to your workshop.

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