



PRESENTATION

This test bench, designed for **development or production** benches, automatically analyzes gas or diesel injectors jets by means of image processing.

Compact and easy to install, it includes all the functions necessary for the feeding of filtered and thermo-regulated test oil and the mechanical driving of an injection pump coupled to a high-pressure rail. A mobile drawer allows **easy maintenance**. A test cabin, sealed behind two large glass doors, houses the injection and InjetVision systems.

The different systems (feed pumps, drive motor) can be switched on and off manually from the bench control panel. Fluid temperature and motor speeds can be adjusted and monitored via the same panel.

The bench features a second control panel, designed for **manual control of the INJETVISION system** (used essentially for maintenance of the Injetvision system).

An « external » mode enables the setpoints to be adjusted and the injection to be driven from the control PC of the **INJETVISION** system. The latter also handles the automatic control of certain devices as well as the management of all the measurement cycles of the InjetVision system.

TECHNICAL SPECIFICATIONS

GENERAL CHARACTERISTICS

Dimensions (cm) : 261 (L) x 121 (W) x 205 (H)
Minimum spatial requirements (cm) : 400 (L) x 350 (W) x 240 (H)

Tubular steel structure with doors and removable closing panels

Thermoset epoxy coating

Standard color : RAL7035 (light grey). Other RAL colors according to customer specifications

OPERATIONS CABIN

Working surface: 1.3m³

Working volume: 1.2m³

Adjustable according to customer requirements

Accessible via 2 removable glass doors

Protection when opening by means of security contactors

Stainless steel oil tank and pipes

Distribution of fluids through 5 openings M16x150

Cable-pass trap doors and ducts for the required operational cables

Neon lighting element with increased safety

PUMP HOLDER

Dimensions (cm) : 300 (L) x 300 (W)

Holder with T-groove for fastening, mounted on a vibration-resistant base

MOTORIZATION

High performance asynchronous motor, linked to a vector speed regulator

No inertial flywheel

Very good speed stability during revolutions

Motor power : 8KW to 28KW, depending on the operational requirements.

Maximum speed : up to 6000 rev/min

Motor torque : up to 140Nm (at 0 to 1500rev/min)

Coupled to two circular blade assemblies Ø 55mm with protective cover

FLUID FEED

One-piece unit installed on a removable drawer (better accessibility and easy maintenance)

Stainless steel assembly

Injection test oil :

Oil tank capacity : 60 litres

Maximum oil feed flow rate : 10 l/mn

Filtration : 3µm absolute, with blockage detection

As an option : 2 cascade filters

- β5=1000 compliant with ISO 16889
- β12=1000 compliant with ISO 16889

2 Feed circuits (selection via manual valve) :

- Pressurized circuit : 0.7 at 10 bars
- Feed circuit when drawing up directly

PID temperature regulation (hot/cold)

Fluid temperature : 20 °C* at 60 °C
(* dependent on cooling water temperature)

Heating power : 3 KW

Cooling power : 600 W/°K

CONTROL

Bench control

Manual control :

Control panel enabling the following functions :

- Bench systems on/off
- Motor speed and fluid temperature setpoints
- Alarm notification

External control :

Setpoint driving via a supervisor PC

INJETVISION system control

Manual control :

Dedicated control panel, bringing together the control and *InjetVision* system signalization functions

External control :

Fully automatic driving via the **SprayAnalyzer** software

CONNECTIONS

Connection to the electrical mains network

Voltage : three-phase 400VAC

Maximum power : 58.5 kVa

Neutrol mode : TT or TN

Connection to the water mains network

Input pressure : 3 bars max

Input/output pressure variation : 2 bars min

Flow rate : 0.4m³ /hour

Connection to a ventilation system

Operating flow : 150m³/h

Pipe diameter : 160mm

SAFETY

ACTIVE PROTECTION OF THE INSTALLATION

Cabin door locking

Pump drive motor monitoring

Test fluid temperature monitoring

Oil tank low-level detection

Retention tank high-level detection

Safety tank high-level detection

Two « punch-stop » emergency buttons

Automatic closure of water circuit (by EV)

Minimum flow-rate control in the injection pump feed circuit (in rotation)



YOUR PARTNER IN ELECTRONICS

BP 34 F - 69390 Millery
Tel. : +33 (0)4 72 49 27 72
Fax : +33 (0)4 72 49 27 77
E-mail : efs@efs.fr
Site : www.efs.fr

Order reference

ITB 234 v