

**Industry's most advanced additive injection system for load racks with multiple injection points.**

The PCM3 electronic control module combines all the features and flexibility of six individual Mini-Pak modules into one, and then adds even more advanced functionality. It is the injector of choice when there are multiple injection points on each load rack. Its compact size takes up less room on the load rack, and with its PCM3 controller, reduces costs by controlling up to six MonoBlock III's with one electronics module.

## Benefits

- Proven technology
- Extremely Accurate
- Proven Reliability
- Compact Footprint
- Seamless Integration

## Painless Injection

The diversification of automotive fuels in today's downstream market has never been greater. This diversification is driven by a number of factors, which have all led to an increased complexity in the handling and distribution of these products. Base product modifications include:

- Performance enhancing additives
- Bio Diesel
- Dyes & Markers
- Ethanol
- Lubricity enhancers
- Anti Icing additives
- Detergent additives
- NoX reduction additives
- Anti Static additives
- Lead replacement
- Cold Flow Enhancers
- Anti-Foaming Agents

To maximise operational flexibility and to reduce product storage requirements, the majority of product recipes are created at or around the load rack. With over 35 years experience and over 60,000 additive injectors installed worldwide, Honeywell Enraf is able to offer systems expertise second to none. Having been at the forefront of every major technical development in the history of additive injection, Honeywell Enraf has, and continues to, develop custom solutions for every conceivable additive injection application. That knowledge base has facilitated the engineering of a range of standard solutions for the vast majority of additive injection requirements.

These solutions have been developed to maximise the accuracy, reliability and functionality, and minimise the technicalities and cost of implementing such a system. Although these solutions are labelled as 'standard products', each of these solutions are infinitely customisable to meet the specific needs of the proposed application.

## Seamless Integration

Regardless of whether the road loading facility is a single arm, mechanical top loading gantry, or multiple, six arm,

TAS controlled, electronic loading bays, the requirement for seamless integration of an additive injection or blending system is paramount.

The design philosophy behind all Honeywell Enraf additive injection and blending systems is to ensure that the needs of every application can be met. This means being able to interface with a multitude of third-party equipment at the load rack. From being able to receive a flow-meter pulse from an obsolete mechanical counter, to being able to communicate with the latest terminal automation systems, Honeywell Enraf's additive and blending solutions have the capability to interface with all current terminal equipment, and are thoroughly tested, through partnerships, with all new developments from third-party manufacturers.

This seamless integration capability is further enhanced by Honeywell Enraf's provision of all injection and blending system peripheral equipment. This offering includes, additive off-loading pump skids, additive storage tanks, additive boost pump pressure skids, containerised additive units and portable injection equipment.

## Features

### Arrangements

The Mini-Pak 6 is available in either a SS back-plate mounted arrangement or in a SS cabinet mounted arrangement. The standard back-plate mounted option is without inlet & outlet isolation valves and flushing connections. The standard cabinet mounted arrangement is complete with pre-installed pipe-work from the manifold inlet & outlets, through the cabinet walls, QRC flushing connections and terminated with 90° ball valves (non-lockable). Cabinet arrangement also includes pre-mounted and pre-cabled junction box to accept all field connections.

### MonoBlocks

From 1 to 6 MonoBlocks can be integrated into the Mini-Pak 6 unit. If less than six blocks are requested then 'default positioning' shall be used, whereby they will be mounted from the top position down, unless otherwise stated.

### Gear Material

Ryton (polymer) gears are fitted as standard. For applications where Ryton is deemed to be chemically incompatible, stainless steel gears are available.

### Flow

Based on typical loading flow rates of 2400 L/min the standard flow injector is suitable for all applications between 100 & 3000 ppm (parts per million), with a typical shot size of between 15cc & 200cc. The low flow injector will accommodate applications between 20 & 600 ppm, with a typical shot size of between 3cc & 40cc.

### Additive Supply

The MP6 requires a pressurised additive supply. Typical additive supply pressure 10 Bar. A minimum 3 Bar differential required between additive supply pressure & main product flow pressure.

### Isolation & Flushing

Optional inlet and outlet isolation ball valves are available pre-installed either side of the MonoBlock. These are available in either lockable or non-lockable options.

Also available are 'quick release' flushing connections which are fitted between the isolation ball valves and the block, and allow the decontamination of the MonoBlock prior to maintenance.

### Handheld IR Controller

The handheld Infra-red remote controller is an obligatory tool used to interface with the MP6, allowing tasks such as the adjustment of parameters, resetting of alarms and calibration of the injector. The handheld is capable of communicating with all EFT additive and blend controllers, therefore it is not absolutely necessary to have a controller for each injection unit.

### Calibration Kit

To aid calibration of the MP6, a calibration kit complete with 500ml calibration jar is available. The stainless steel kit incorporates a quick release connector, adjustable back pressure valve, gauge, and isolation valve, allowing clean, accurate calibration of the MonoBlock.

### Processor

The MP6 is supplied as standard with the "Multi-language" processor version, which includes English, French and Spanish. Alternatively, for those requiring even more advanced features, a "Clean Arm" version is also available, which includes clean arm flushing and communications functionality. This is available in English only.

## Technical specification

### Flow

Nominal K-Factor	:	740 Pulses/Litre
Meter Accuracy	:	0.50%
Meter Repeatability	:	0.25%
Max Flow Rate	:	11 Litres/Min
Min Flow Rate	:	0.05 Litres/Min
Max Pressure	:	16 Bar
Max Viscosity	:	300 cst.

### Environmental

Temperature	:	-20°C to +40°C
Humidity	:	5 to 95% without condensation.
Temperature Class	:	T3 - (T5 optional)
Protection Class	:	IP66
Approvals	:	ATEX, CE Marked for Zone 1

### Materials

Backplate/Cabinet	:	304 Stainless Steel
Manifold	:	303 Stainless Steel
Enclosure	:	Cast Aluminium
Meter Gears	:	538 Ryton
Solenoid Seals	:	Isolast

### Electrical

Voltage	:	230 VAC or 110 VAC
Additional Inputs	:	6 x AC Status Inputs (reset, enable, pacng), 6 x DC Status Inputs,
Additional Outputs	:	6 x AC Multi-functional Outputs, 6 x DC Multi-functional Outputs
Comms	:	2 x RS 485 2 wire.
Display	:	4 Line 20 Position backlit LCD
Cable Entries (vacant)	:	9 x M20, 2 x M25

### Mechanical

Manifold Components	:	Outlet flow control & diverter valve, Inlet strainer, Outlet check valve, QRC calibration point.
Manifold Connections	:	3/8" NPT
Iso Valve Connections	:	1/2" NPT

### Weight

Backplate Mount	:	Approx 75 kg (6 MonoBlocks)
Cabinet Mount	:	Approx 95 kg (6 MonoBlocks)

### Options

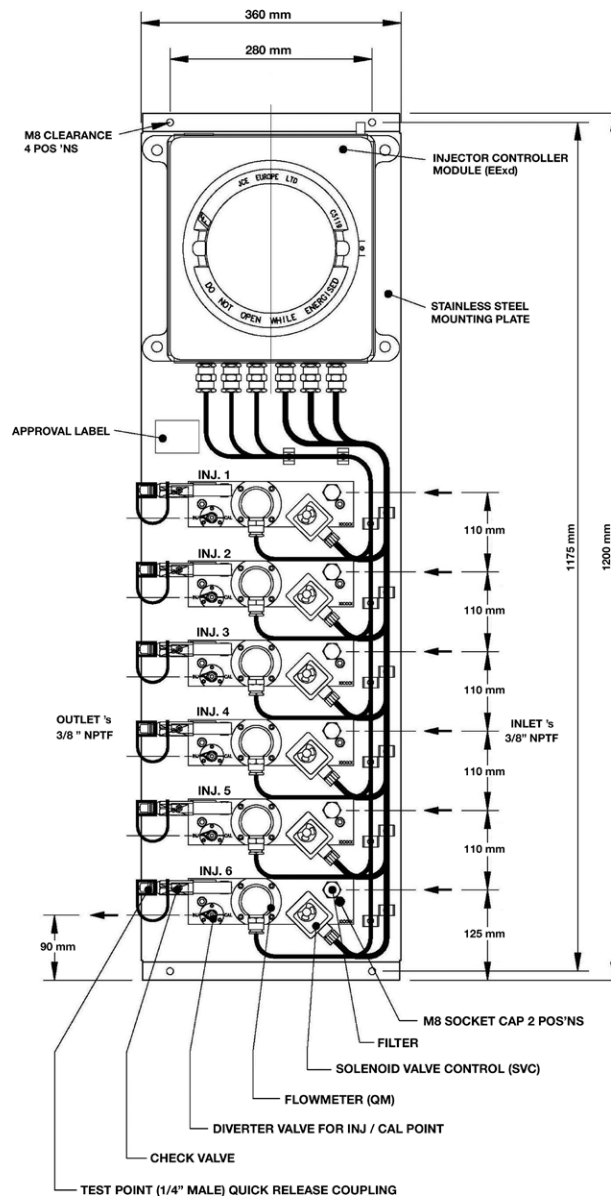
Interfaces	:	Handheld IR Controller (P/N 10-31052-EU)
Calibration	:	Mono-Block Calibration Kit (P/N 30-00-002)

**Identification Code**

<b>Pos 1, 2 Manufactured Product</b>														
6	9													
<b>Pos 3, 4 Product Family</b>														
3	0	Mini-Pak Injectors												
<b>Pos 5, 6 Injector Model</b>														
3	2	Mini-Pak 6												
<b>Pos 7 Mounting</b>														
B	Standard SS Backplate													
<b>Pos 8 No. of Injectors</b>														
1	One													
2	Two													
3	Three													
4	Four													
5	Five													
6	Six													
<b>Pos 9 Flowmeter Gear Material</b>														
0	Ryton													
1	Stainless Steel													
<b>Pos 10 Flow</b>														
0	Standard Flow - 8 L/min Max													
1	Low Flow - Up to 1 L/min													
<b>Pos 11 Solenoid Voltage &amp; Temp Rating</b>														
0	230 Volt AC - T3													
1	230 Volt AC - T5													
2	110 Volt AC - T3													
3	110 Volt AC - T5													
<b>Pos 12 Isolation Valves</b>														
0	Not Required													
1	1/2" NPT Inlet & Outlet Iso Ball Valves													
<b>Pos 13 Flushing</b>														
0	Not Required													
1	Inlet/Outlet Flushing Connections													
<b>Pos 14 Processor</b>														
0	Standard - Multi-language													
1	Clean Arm functionality													
6	9	3	0	3	2	B	6	0	0	0	0	0	0	Typical identification code
6	9	3	0	3	2	B								Your identification code



## General Arrangement



**ATEX Compliant**

### For More Information

To learn more about Honeywell Enraf's solutions, contact your Honeywell Enraf account manager or visit [www.honeywellenraf.com](http://www.honeywellenraf.com).

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