CNG & LPG COMPONENTS

MULTI-OUTLETS INJECTORS
SINGLE-OUTLET INJECTORS
INJECTOR RAILS
PRESSURE CONTROL DEVICE
FILTERS

MATRIX
mechatronics

HS - UDM GAS INJECTORS HIGHLIGHTS

TOP-NOTCH PERFORMANCES IN ALTERNATIVE FUELS APPLICATIONS

- **Very high repeatability and precision**
- **Ultra-low mass (38 gr Flying version)**
- **Long operating life, over 500 millions of cycles**
- **Low consumption in holding mode**
- **Ultra linear shutter**
- **Response time 0,5 ms**
- **Opening time 0,9 ms**
- **Reduced noise**

- **Flying version**

HS Flying Series	
Coil	2 Ohms
Flow	55 - 73 - 81 - 95 Nlm @ 1 bar
Dimension	65 x 33 x 28 mm
Weight	38 gr

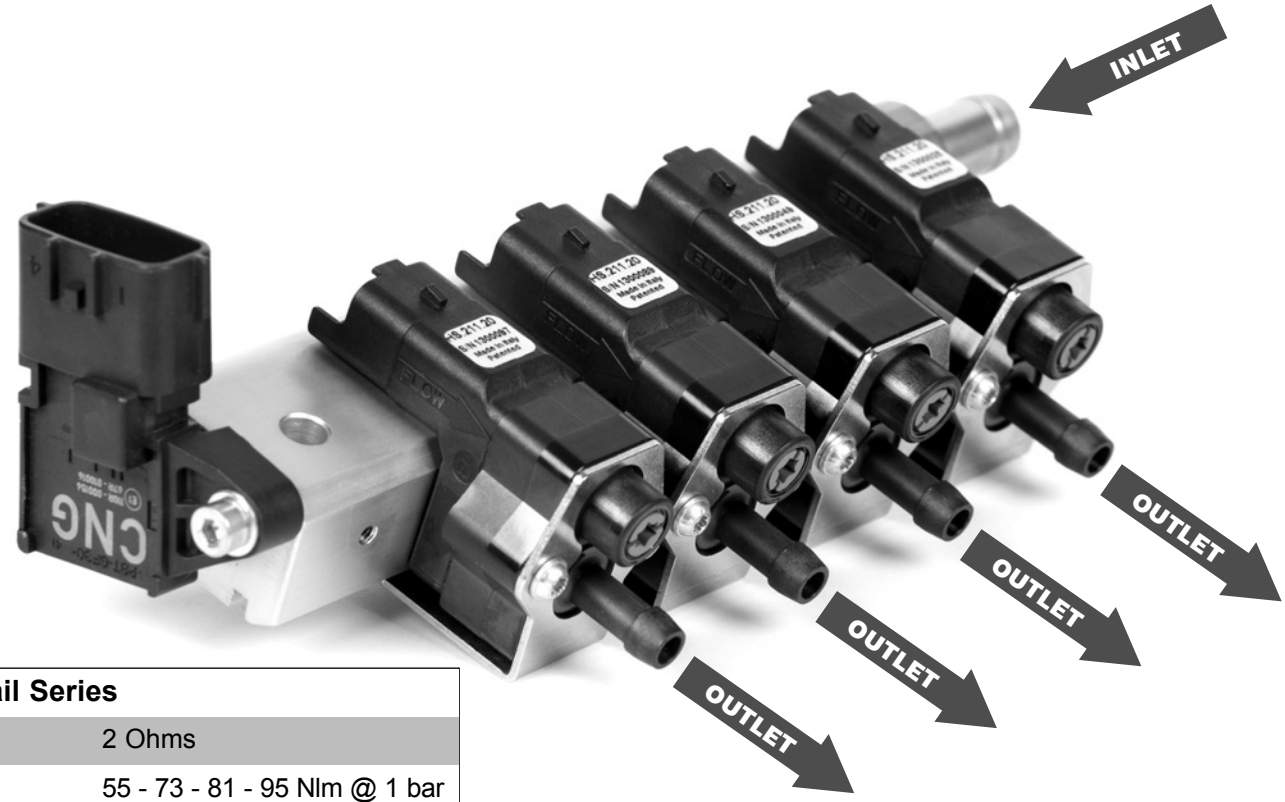
- **UDM version for intake manifold**

UDM Series	
Coil	2 Ohms
Flow	55 - 73 - 81 - 95 Nlm @ 1 bar
Dimension	On demand
Weight	min 60 gr - max 80 gr

- **Snap-in version for intake manifold**

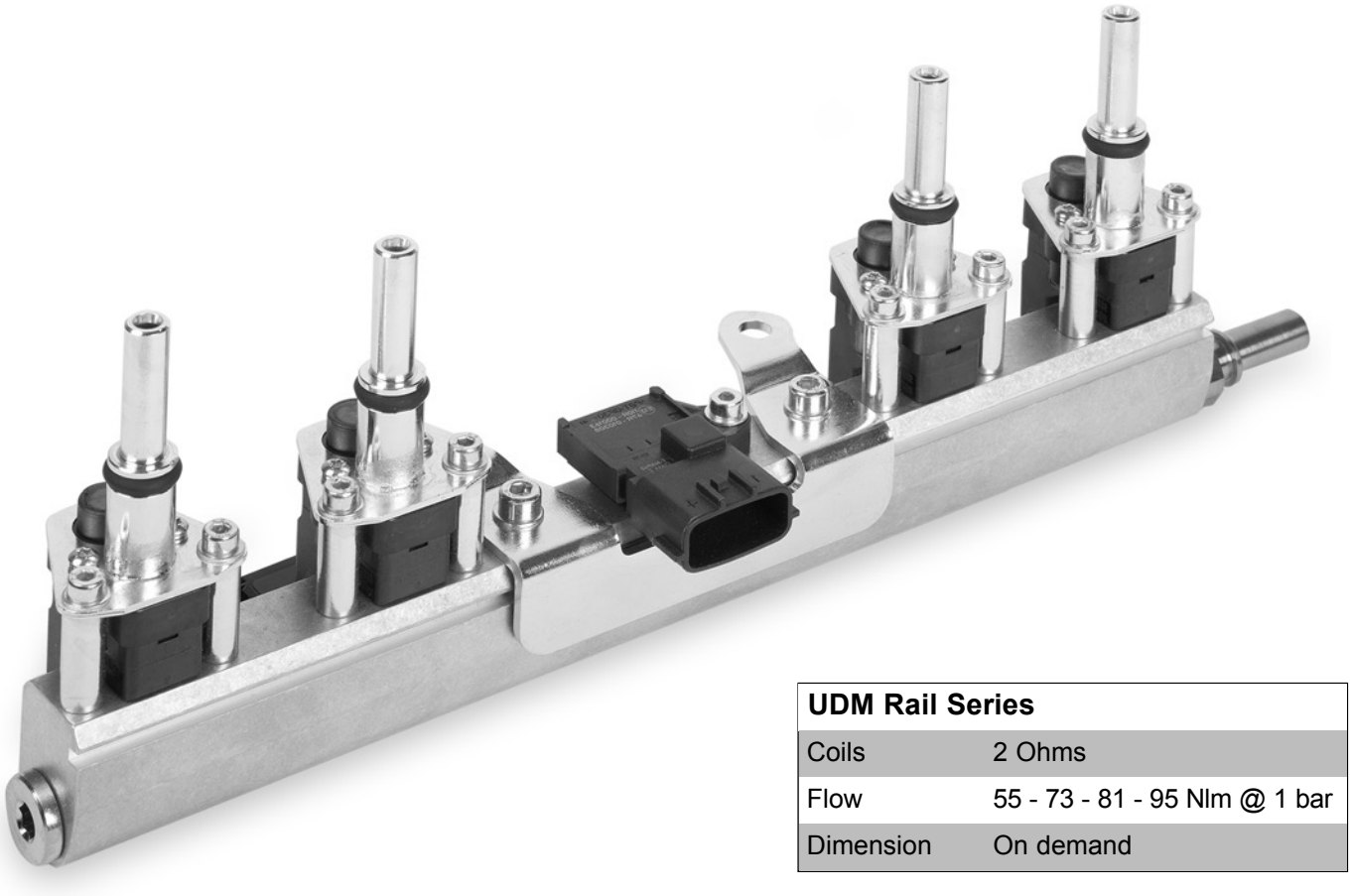
HS Snap-in	
Coil	2 Ohms
Flow	73 - 95 Nlm @ 1 bar
Dimension	57 x 41 x 28 mm
Weight	45 gr

HS SYSTEM GAS INJECTORS



HS Rail Series	
Coils	2 Ohms
Flow	55 - 73 - 81 - 95 Nlm @ 1 bar
Dimension	On demand

UDM SYSTEM GAS INJECTORS

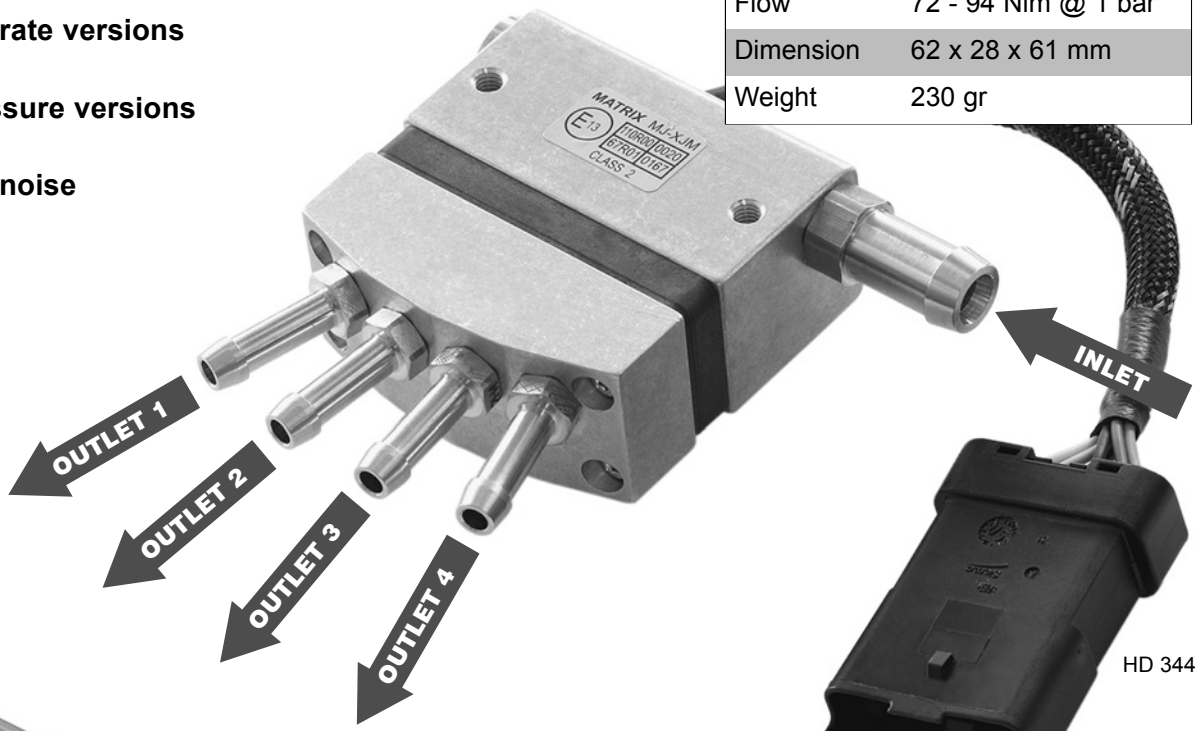


UDM Rail Series	
Coils	2 Ohms
Flow	55 - 73 - 81 - 95 Nlm @ 1 bar
Dimension	On demand

HD GAS INJECTORS HIGHLIGHTS

- **Multi-outlet configuration, compact dimensions and low mass**
- **Proportional flowrate control (1 - 2 outlets version) with digital logic**
- **Long operating life, over 500 millions of cycles**
- **Very high repeatability, precision and linearity**
- **Response time 0,5 ms - Opening and closing time 1 ms**
- **Ultra-linear shutter technology**
- **High flowrate versions**
- **High pressure versions**
- **Reduced noise**

HD 344 Series	
Coil	2 Ohms
Flow	72 - 94 Nlm @ 1 bar
Dimension	62 x 28 x 61 mm
Weight	230 gr



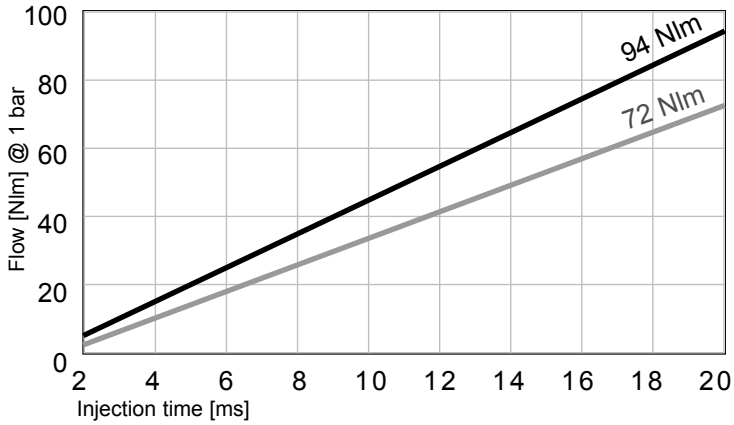
HD 344

Calibrated outlet nozzle

Sicma II connection

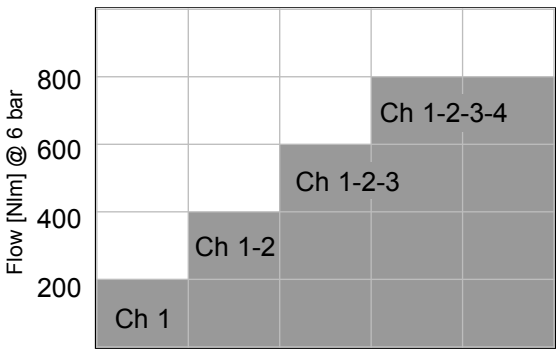
Dynamic flowrate

Ref. HD 344 Series



Proportional flowrate control

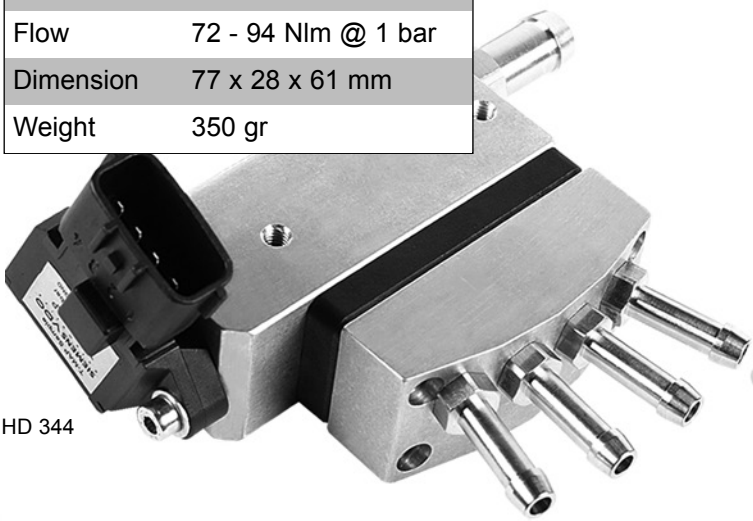
Ref. KJ 341 Series



Injector channels

HD SYSTEM GAS INJECTORS

HD 344 T-Map Series	
Coil	2 Ohms
Flow	72 - 94 Nlm @ 1 bar
Dimension	77 x 28 x 61 mm
Weight	350 gr



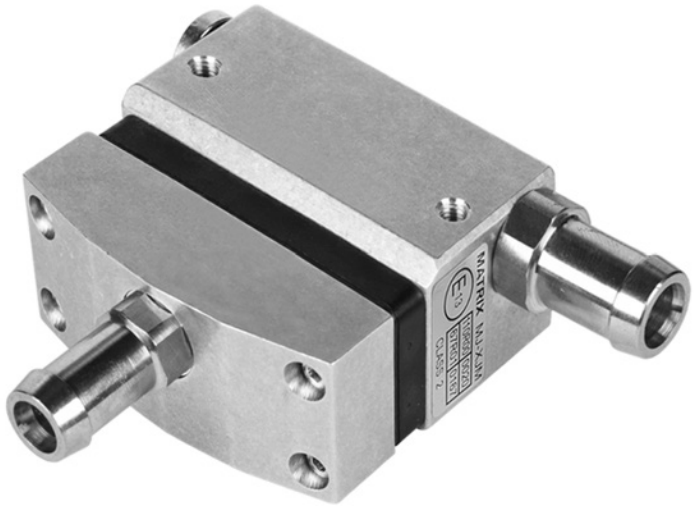
HD 344

HD 322 Series	
Coil	2 - 2,5 Ohms
Flow	100 - 160 Nlm @ 1 bar
Dimension	62 x 28 x 61 mm
Weight	230 gr

HD 322

HD 544

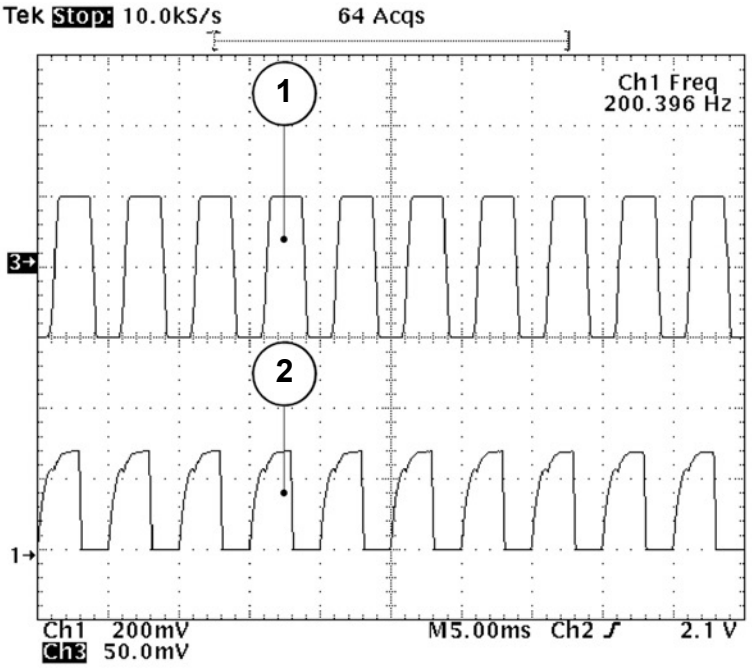
HD 544 Series	
Coil	2 - 2,5 Ohms
Flow	100 - 160 Nlm @ 1 bar
Dimension	100 x 31 x 56 mm
Weight	470 gr



KJ 341

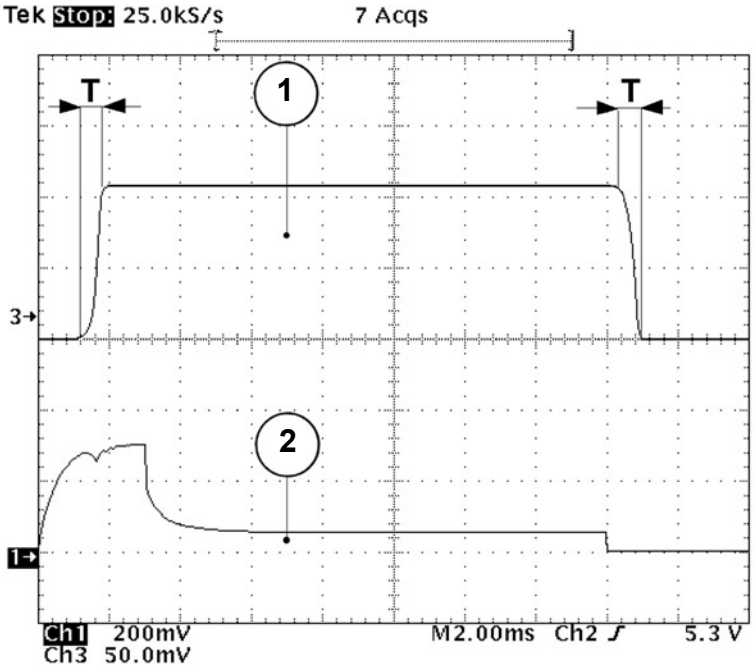
KJ 341 Series 24 VDC	
Coil	5 Ohms
Flow	188 - 754 Nlm @ 6 bar
Dimension	62 x 31 x 63 mm
Weight	230 gr

INJECTION MATRIX TECHNOLOGY



FREQUENCY. The maximum frequency reached by Matrix injectors express the top-notch performance levels and the wide range of applications that this technology has to offer.
This means extreme reliability, combined with new and innovative application possibilities in the gas injection industry that until today were unthinkable of.
The graph illustrates the pressure wave in the outlet fitting when associated to a 200 Hz electronic control frequency.

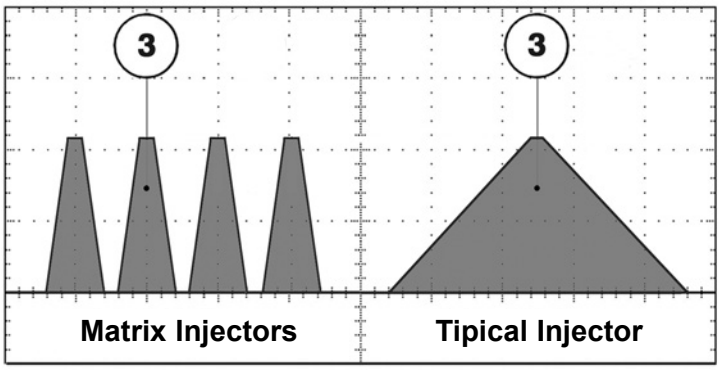
REPEATABILITY AND PRECISION. The graph also shows the high level of precision and of repeatability guaranteed by Matrix injectors. Fluctuation of response times are lower than measurable levels; such values, due to a functional principle which is void of friction, remain constantly unaltered in all environment conditions featured by product specifications.



RESPONSE TIMES. The extremely reduced value of 0,5 ms (500 microseconds) is the norm for HD and HS injectors no matter which version and relative flowrate is featured.
This ensures high quality performances and a simplification of the management software to which no corrections are required during the entire power curve even when applied to models with different flowrates.

LOW CONSUMPTION. The innovative functional principle that characterizes Matrix injectors allows a consistent energetic saving during functional phases. Typical current values during maintenance phases is of 0,5 Ampère (1,25 Watt) in HD models, and of 0,6 Ampère (1,44 Watt) in HS models. The graph illustrates the current wave that after the speed-up signal establishes itself on a very low level.

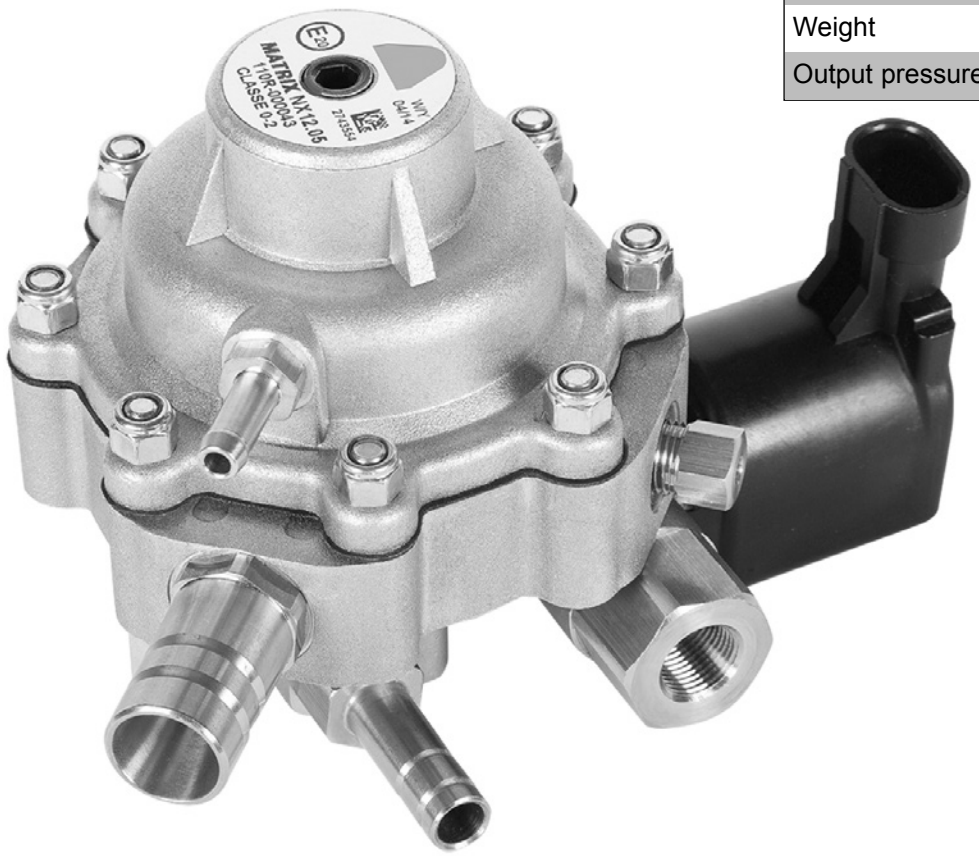
1 Outlet pressure wave **2** Current wave **3** Minimum injection time **T** = Opening - Closing response time



HIGH LINEARITY and NEW APPLICATIONS. The remarkable injection time reduction typical of Matrix's injectors grants an engine output linearity enhancement, currently not available with any other injector or technology. For this reason Matrix's injectors have been chosen for the development and implementation of new and innovative gas injection strategies in gasoline and diesel applications such as micro-injections and multi-injections, focused on performance improvements both in terms of fuel consumption and emissions reduction.

NX CNG - PRESSURE CONTROL DEVICE

NX 12 Series	
Filtration degree	60 microns
Flow	650 Nlm @ 2 bar
Dimension	130 x 94 x 95 mm
Weight	1050 gr
Output pressure	1 - 2,5 bar



XF FILTERS

XF 301 Series	
Filtration degree	10 microns
Flow	800 - 1200 Nlm @ 2 bar
Diameter dimension	66 x 88 mm
Weight	187 gr

XF 301 Cartridges	
Filtration degree	10 microns
Diameter dimension	66 x 88 mm
Weight	46 gr

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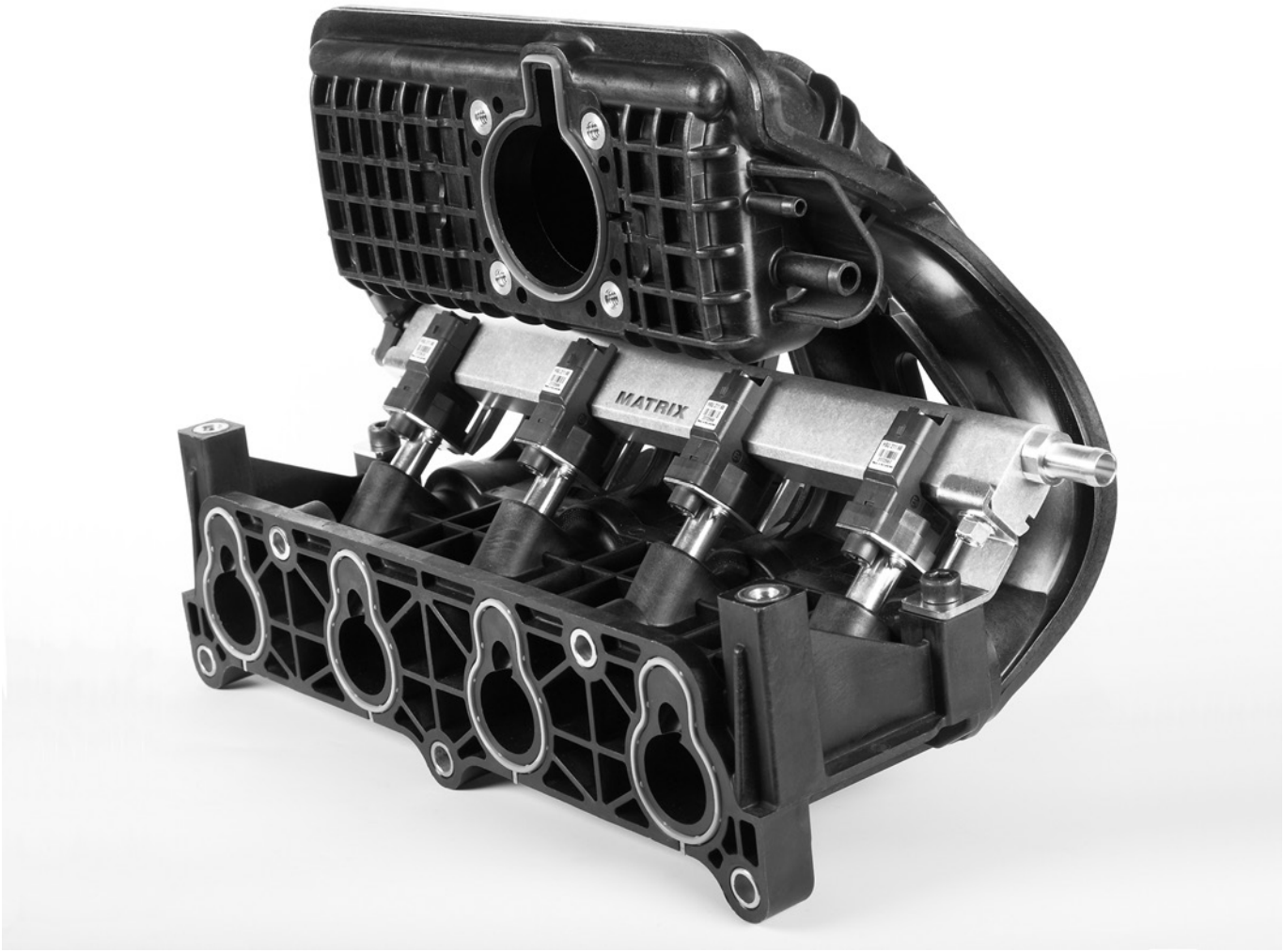

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