



DIESEL DEFENCE MOBILE DDM SYSTEM

DIESEL DEFENCE DDM SYSTEMS – DDM4

The DDM Systems are a high-performance fuel polishing range that represents a major step forward in protecting diesel fuel from harmful contaminants in storage tanks. With a pump capacity of 250L/pm the DDM4 units are suitable for total tank capacities up to 50,000 Litres*

At the forefront of fuel cleanliness innovation, the DDM Fuel Polishing Buggies are a versatile fuel filtration system designed to deliver maximum performance within a compact footprint. Incorporating leading high-capacity particulate filtration principals, both solid and bacterial contaminants are removed from your fuels with ease.

Combine high throughput, great mobility & superb cleaning in a single unit.

High-performance, low-cost filter cells ensure cleanliness levels of ISO 18/16/13 or better.

Problems with water? At the cutting edge of water removal technology, Filtasorb2 cells not only facilitate removal of all free water, but also 99.9% of entrained water to an incredible 100ppm or less.

Should on-site verification of cleanliness levels be required, practical quick connect fittings allow for instant plug-in to an Inline Contamination Analyser, allowing real time results in ISO/NAS/SAE in a matter of minutes.



Experience the power of four-stage filtration with our DDM4 system, featuring four size-two stainless steel filter vessels arranged in parallel. Customize your filtration needs with options for water and particulate removal, ensuring optimal performance every time.

Our advanced HMI control panel offers unparalleled flexibility and system monitoring, complete with fault alarms and seamless operation.

*Tank Capacity sizes are dependent upon duty rate selected. Consult with IPU Group when sizing polisher.

**The DDM series have different sizes of filters to tackle specific application requirements.

Special arrangements available on request.

DDM4

FEATURES



Powerful pump with high flow rates up to 250 L/min

- Suitable for cleaning multiple tanks up to 50,000 Litres in a single working day

Dual Stage filtering solution for particulate or water removal

- 2 Parallel runs of two stage filtration:
 - Stage 1 – FiltaSolid - 1µm at 99.9% efficiency
 - Stage 2 – FiltaSorb - water removal, achieving 100ppm or less.
(Factory standard supplied media)
- Isolation valves for each run

High-Capacity Size 2 Filters

- Nominal Dimensions: 7.06 in. (17.93 cm) x 32.0 in. (81.28 cm)
- High Flow Rate Performance
- Differential Pressure Sensor monitoring clogged state
- Stainless Steel Construction

Lightweight and Portable

- Aluminium Frame Construction
- Rugged frame with integral drip tray, Bund alarm
- All terrain castor swivel wheels

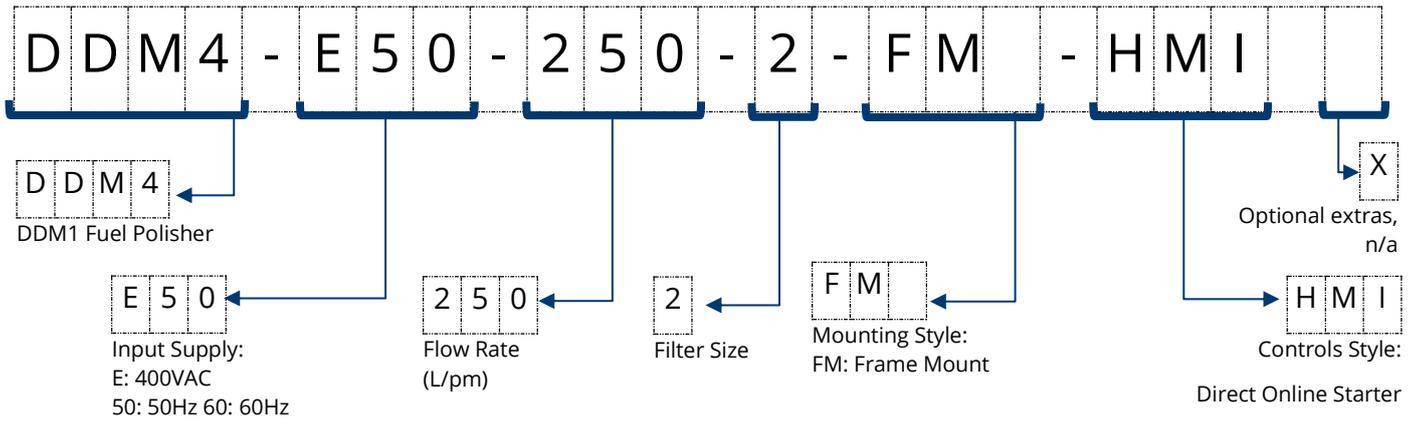
Visual Alert to System Alarms

Programmable Run Timer



DIESEL DEFENCE DDF SYSTEM

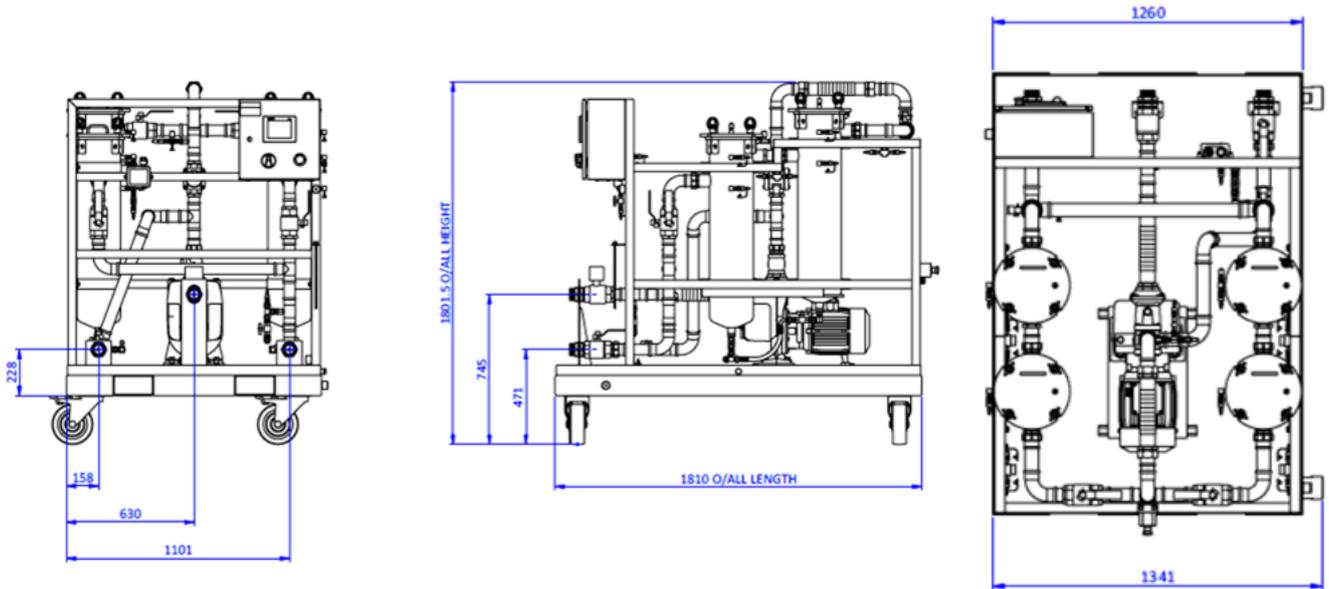
HOW TO ORDER



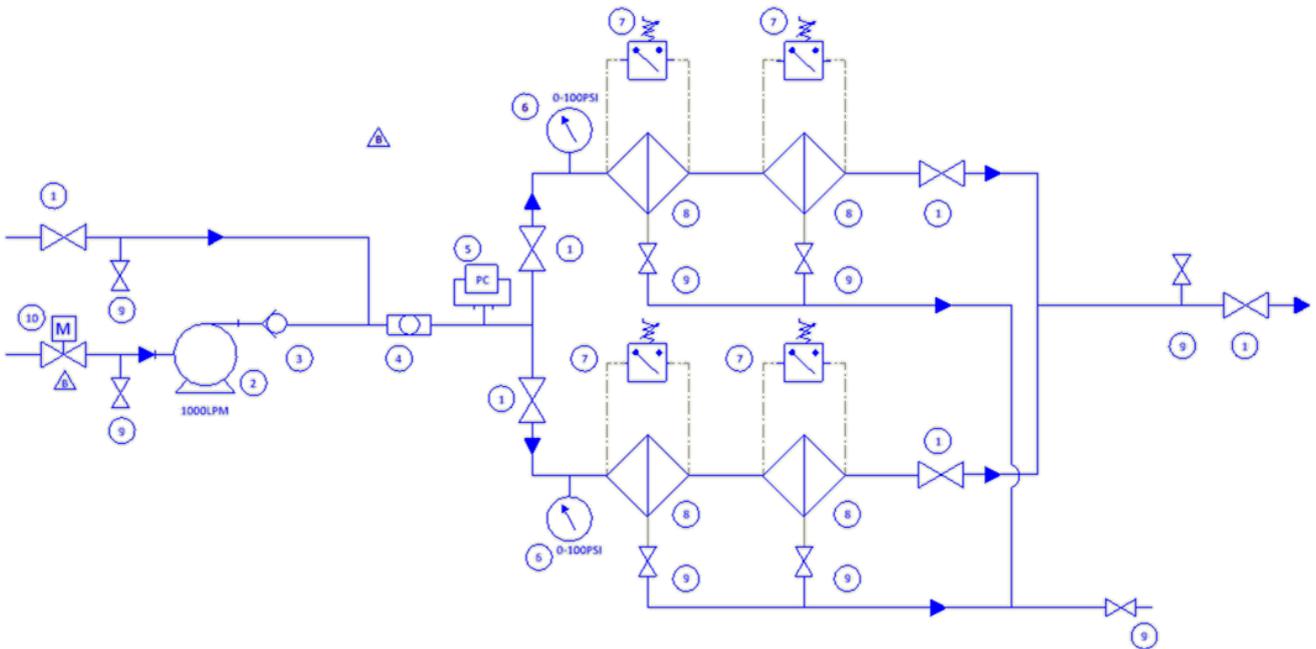
SYSTEM							
Model Number	DDM4-E50-250-2-FM-HMI						
Dimensions (H) x (W) x (D)	1800mm x 1810mm x 1341mm						
Weight	515Kg						
Finish	Power Coated: RAL5004 Blue Black						
Operating	-20°C - +60°C						
Conditions	<90% RH						
Environment	HMI Control Panel – IP65						
Connections	Inlet: 2" BSPP Male						
	Filter Bypass; 2" BSPP Male						
	Outlet: 2" BSPP Male						
FILTRATION							
Fluid Compatibility	Diesel & mineral oils						
Media	Stage 1 – 10 micron* Stage 2 – Water* (*Factory sard)						
<p>Beta Ratio* per Micron Size $\alpha_{m(e)}$</p> <p>The graph plots Beta Ratio (log scale, 10 to 10000) against Micron Size (per ISO16889, 2.5 to 25). Curves are shown for 1M, 3M, 6M, 10M, 16M, and 25M filter grades.</p>							
Dirt Holding Capacity (grams)	<table border="1"> <tr> <td>1 μm</td> <td>488</td> <td>3 μm</td> <td>610</td> <td>$\geq 5 \mu$m</td> <td>910</td> </tr> </table>	1 μ m	488	3 μ m	610	$\geq 5 \mu$ m	910
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Filter Clogged Indicator	Electronic via Control Panel
ELECTRICAL	
Voltage/Frequency	400V ($\pm 10\%$) / 50Hz supplied with 5-Pin Red Industrial Plug (3M)
Motor Current	4.5A
Motor Protection	Monitored Overload Protection
PUMP	
Flow	Max 250L/pm
Type	Self-priming Centrifugal
Duty Cycle	Continuous
Noise Level	<85dB @ 1M
<p>The graph shows efficiency ($\eta\%$), power (kW), and NPSH (m) versus flow rate (m³/h and l/min). The efficiency curve peaks at approximately 40% at 15 m³/h. Power increases from 2.2 kW at 5 m³/h to 4.5 kW at 25 m³/h. NPSH increases from 2 m at 5 m³/h to 6 m at 25 m³/h. A noise level of 80 dB(A) is indicated at 25 m³/h.</p>	
ALARMS	
Filter Clogged	4 off Differential Pressure Gauge
Flow Detection	N/A
Leak Detection	1 off bund float switch
Motor Overload	1 off N/O switch, internally resettable

LAYOUT DRAWINGS



P & ID



TRUSTED KNOWLEDGE. TAILORED SOLUTIONS.

How well you understand a problem defines how well you solve it. Speak to an IPU technical specialist about fuel polishing and, after asking some astute questions, they'll provide a tailored solution you can trust - backed by years of industry experience and engine know-how.

DIESEL DEFENCE AND OIL FILTRATION MOBILE SYSTEMS

SYSTEM ADD-ONS

Inline Contamination Monitor (ICM).

The ICM automatically measures particulate contamination, moisture, and temperature levels in various hydraulic fluids. It is designed specifically to be mounted directly to systems, where ongoing measurement or analysis is required, and where space and costs are limited. The device is calibrated to relevant ISO standards.



INLINE CONTAMINATION MONITOR	
Technology	Precision LED Based Light Extinction Automatic Optical Particle Analyser
Particle Sizing	>4,6,14,21,25,38,50,70 µm(c) to ISO 4406:1999 Standard
Reporting Formats	ISO 4406:1999 (ICM Default) NAS1638 AS4059E Table 2 AS4059E Table 1 ISO 11218
Accuracy	±½ ISO code for 4,6,14µm(c) ±1 code for 21,25,38,50,70 µm(c)
Moisture & Temperature Measurement	% saturation (RH) and fluid temperature(°C)
Viscosity Range	<1000 cSt
Data Storage	Up to 4000 timestamped tests in the integral ICM memory. Up to 20,000 timestamped

Single Configuration



option code

A single ICM is installed at the inlet side of the system, providing information on the quality of media pre filtration.

Flow Transmitter

The Turbine Digital Flow Transmitter is designed to be installed inline to the system. These turbine flow meters have rugged housing, and a sealed electronic board make it a durable meter for use in many conditions.

- Accuracy: +/-3%
- Repeatability: 0.5%
- Nylon turbine measuring system
- Aluminium/plastic body
- +24Vdc Operated, powered from control panel



option code



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More details at www.ipu.co.uk

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