



**Stationary Tanks for the Storage &
Dispensing of AdBlue®**

Operating and Safety Manual

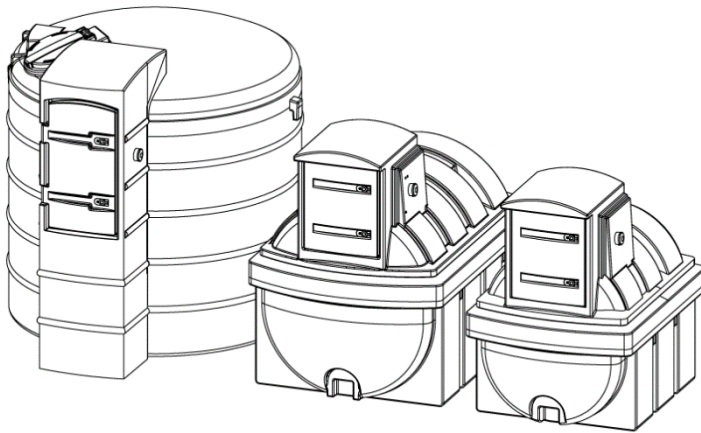


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1. THE PRODUCT

1.1. The Atlas tank has been designed for the storage and dispensing of AdBlue®.

AdBlue® is an aqueous solution of urea (32.5%) that meets the quality requirements specified in DINV 70070 and is used to reduce NOx emissions using SCR technology (Selective Catalytic Reduction) in diesel engines. BlueMaster® Standard range of tanks has been designed to answer the requirements of both public and private entities who have a need for the storage and distribution of AdBlue®. Storage of other fluids is prohibited.

The tank enables safe AdBlue® storage outdoors. The high standard of specification ensures optimum safety and functionality. Exhibit excellent mechanical strength due the "tank in tank" construction and protect the contents from extremes of hot and cold weather.

The construction, materials, components and workmanship are of the highest quality.

The product is not ATEX approved.

1.2. Storage of other fluids is prohibited.



1.3. The product has been designed and manufactured in accordance with ISO 22241 -3.

2. SAFETY INFORMATION

2.1. AdBlue® in the accordance with the applicable standards is not classified as a dangerous substance, it is nontoxic, odourless, safe to handle and environmentally friendly. Reference DIN V 70070 for details of specification of AdBlue®.

2.2. When handling AdBlue®, Kingspan recommends the following:

2.2.1. Avoid prolonged skin contact as this may cause skin irritation,



2.2.2. Wear safety glasses with side shields as eye contact may cause irritation. If contact occurs, rinse eyes immediately with an eye washing solution and seek medical attention if necessary,

2.2.3. Do not ingest AdBlue®. Large quantities will cause gastrointestinal problems.

2.2.4. It is not recommended to store AdBlue® longer than 6 months, because of crystallisation, decomposition (ammonia excretion), and bacterial and fungal degradation.

2.2.5. If the planned outage in operation is longer than 6 months, it is recommended to completely empty the tank and remove the AdBlue® from the distribution system. Then thoroughly rinse pipe and pump with clean water, using a

minimum of 50 l. Do not leave the water in the system during winter time.

2.2.6. AdBlue® temperature stored in an Atlas tank must be above -11°C and under +35°C.

2.2.7. Periodically monitor the tank and performance of the accessories. In the case of malfunctions, contact an authorized Kingspan service.

3. PRODUCT INSTALLATION

3.1. Transporting the Product

3.1.1. Ensure the product is **empty** before moving or transporting.



3.1.2. Installation of tanks displaying defects due to transport or storage, with visible signs of damages to ferrules, cracks to tank jacket, or with incomplete equipment, is strictly forbidden.

3.2. Installing the Product

3.2.1. Installation of tanks must follow all domestic regulations concerning installation and operation of this tank and refueling equipment, as well as recommendations by local fire-safety and environmental protection services.

3.2.2. Before installation, check tank condition and completeness of equipment. It is unacceptable to install a damaged tank. If tank is damaged, you must notify the supplier.

3.2.3. Tank is to be placed on a flat (levelled), even and stable surface such as B35 concrete. Base is to be at least 30 cm wider and longer than the tank itself. Base thickness is to be at least 10 cm. Loading space is to be smooth, with no sharp edges.

3.2.4. Electric wiring is to be carried out in accordance with all local regulations in force.

3.2.5. Do not place the product in explosion hazard areas, or on sidewalks or pedestrian passages.

3.2.6. Tank is to be placed by a suitable access road with required width, with enough space for U-turn, and suitable for the load from an AdBlue® supplier.

3.2.7. Kingspan recommends, if it is possible the tank is protected from direct sunlight- especially when temperatures exceed 35°C- as, well as snow and rain. It is also recommended that the tank is placed under suitable roofing. Roofing shall be of such height that it does not hamper the performance of service work. Around the tank there should be free space with a minimum width of 0.5 m and a minimum of 1 m above the tanks.

4. PRODUCT USE

4.1. Filling the Product

4.1.1. Tank filling can only be carried out by trained and authorised personnel. In a situation where the tank is located at a considerable distance from the tanker, one person should observe the tanker while a second person should observe the unit while filling is in progress.



4.1.2. In justified cases it is also required that the person supervising the refilling of the tank wear bright coloured clothing and a hardhat. Depending on the situation, the mobile tank driver is to wear personal protective equipment, such as boots, goggles, gloves, ear protection, raincoats, etc. as required for this type of activity.

4.1.3. The AdBlue® delivery location is to be secured for the period of refilling with safety signs, warning lights, etc.

4.1.4. Prior to refueling, check the condition of fill point, level of liquid in the tank and the cleanness of the tank interior. Check that the tank is on stable ground of adequate bearing capacity. Damage and other irregularities will make the tank unfit for refilling.

4.1.5. The Atlas tanks should only be refilled from delivery tankers specifically intended for the transport and delivery of AdBlue®.

4.1.6. The tank should only be filled by a tanker equipped with a female dry-break coupling.

4.1.7. Fit the delivery cistern hose to the 2-inch spill free male connection in the equipment housing of the tank. Turn the hose connection 15°clockwise until the connections lock.

4.1.8. To unlock the units, reverse the procedure. If the connection items are contaminated with crystallized AdBlue®, flush them with warm water.

4.1.9. Fill the tank with a flow no greater than 350 l/min and a pressure of no more than 0.8 bar.

4.1.10. The tank can be filled up only to its rated capacity, which is 95% of the maximum capacity. Never allow overfilling!



4.2. Dispensing from the Product

4.2.1. Never operate the tank at temperatures below -20°C and above +40°C, or in bad weather conditions such as strong wind, etc.

4.2.2. Perform a visual inspection of the tank condition before dispensing. Check that the delivery system is in good condition, without visible signs of external damage.

4.2.3. Before operation make sure that the tank contains the minimum necessary volume of AdBlue® as the pump does not have protection against dry running.

4.2.4. After long periods of non-operation, the nozzle may be blocked by crystallized AdBlue®. Rinse it with warm water (40°C), pouring it directly into nozzle or/and rubber delivery hose.

4.2.5. Lift the dispensing nozzle from the holster. If a flowmeter is fitted, press RESET to get “0” value on display.

4.2.6. Place the nozzle in vehicle tank inlet and press the pump switch to “ON” to start filling.

4.2.7. If the distribution system is partially filled with air (after a long period of non-operation) push nozzle clutch for about 50% of the maximum opening until venting is complete.

4.2.8. After refueling, switch the pump OFF at the pump. Remove the nozzle from the inlet of the vehicle and place back in the holster.

5. GENERAL USE & MAINTENANCE

5.1. When using this product, Kingspan recommends the following:

5.1.1. Maintain a safe environment around the product and provide suitable lighting.

5.1.2. Take appropriate safety measures outlined in the relevant local and national environmental regulations.

5.1.3. In the event of a leak or damage to the product, switch off all power and contact the relevant local authorities before contacting Kingspan. Contact details are shown at the end of this manual. Take reasonable steps to reduce any possible environmental impact. If possible, transfer the remaining contents of the product to another suitable vessel.

5.1.4. Ensure that any spills are kept away from water courses, sewers, drains and wells. In the event of a spill onto or near the equipment immediately remove the spill, and rinse with plenty of water before the equipment is restarted.

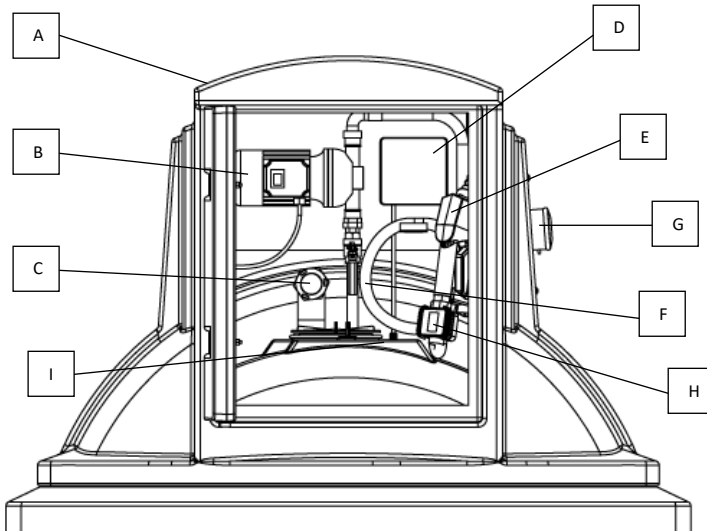
6. PRODUCT SPECIFICATION & LAYOUT

6.1. The Atlas Adblue Storage and Dispensing Tanks are available in three capacities: 1300L, 2500L & 5000L

6.2. There are 5 standard specifications available.

		Spec 1	Spec 2	Spec 3	Spec 4
A	Double Skinned Tank	•	•	•	•
B	Inline Pump	•	•	•	•
C	2" Stainless Steel Dry Coupling Fill Point	•	•	•	•
D	Hydrostatic Level Gauge	•	•	•	•
E	Stainless Steel Automatic Dispensing Nozzle	•	•	•	•
F	EPDM Delivery Hose	•	•	•	•
G	Bund Leak Detection	•	•	•	•
H	Digital Flowmeter	•	•	•	•
I	Prepared for Telemetry	•	•	•	•
J	Telemetry			•	•

2500L Specification 3 shown below as example



7. WARRANTY INFORMATION

7.1. Kingspan Water & Energy Ltd. (the Company) with its registered office in Portadown, Co.Armagh, Northern Ireland warrants that the Goods will be free from defects in material and workmanship for a period of 10 years for plastic mouldings and 2 years for equipment.

7.2. The above warranty does not extend to parts, materials and equipment not manufactured by Kingspan in respect of which the Buyer shall only be entitled to the benefit of any such warranty or guarantee as is given by the manufacturer to Kingspan.

7.3. The warranty is given by the Company subject to the following conditions:

7.3.1. The Company shall be under no liability in respect of any defect in the Goods arising from any information drawing design or specification supplied by the Buyer.

7.3.2. The Company shall be under no liability in respect of any defect arising from fair wear and tear, wilful damage, negligence, abnormal working conditions, failure to follow the Company's instructions (whether oral or in writing), misuse or alteration or repair of the Goods without the Company's approval.

7.3.3. The Company shall be under no liability under the above warranty (or any other warranty condition or guarantee) if the Price and value added tax for the Goods has not been paid by the due date for payment.

7.4. Subject to the provisions of this warranty, Kingspan Water & Energy Ltd, at its sole choice, will repair the product if a defect classified as a warranty defect is revealed and reported within the warranty period (hereinafter referred to as the defect). If a defect occurs, please contact Kingspan Water & Energy at the following to initiate the warranty process: **Service Department, Tel no. +44 333 240 6868 or e-mail: service@kingspanenv.com.**

7.5. The First Purchaser has the right to report a complaint regarding mechanical damage, missing parts or incomplete delivery. Such complaints must be reported within **3 business days after the date of product delivery**, otherwise, the right to report such complaints will be lost. Provision of relevant documentation in which accurate description of non-conformities is outlined on the delivery docket is a condition under which the complaint will be accepted.

7.6. If it is found that a defect revealed within the warranty period resulted from improper use or installation of the product (see below) or if the defect occurred after the warranty period or if during the verification of the complaint, no defect of the part/product is found, Kingspan Environmental Limited will have no liability and the reporting party will be charged with the costs of service and parts used to eliminate the defect.

7.7. Warranty claims are not accepted if the defect occurred as a result of:

7.7.1. The Purchaser or any third party not being Service Partner of Kingspan Environmental Ltd performed repairs or

maintenance work on the given product or in any other way tampered with the product.

7.7.2. The product not being used in accordance with its intended use, in particular, when the guidelines described in the product manual relating to the product exploitation, maintenance and repair have not been followed.

7.7.3. External force or force majeure (such as: an accident, hail, flood, acts of vandalism).

7.7.4. An unauthorized entity has made changes to the product structure, which were not accepted in writing by the manufacturer, Kingspan Water & Energy Ltd.

7.7.5. The instructions for product use were not followed or the intended use of the product was changed.

7.7.6. The Purchaser not reporting the complaint immediately after it was revealed or the Purchaser, despite being requested to do so, did not make the product available for an immediate repair or carried out a repair in which unsuitable consumables were used.

7.7.7. The Purchaser did not properly transport the product to/from the place of repair.

7.8. The warranty does not cover the cost of regular maintenance of the tank, such as filter cleaning/replacement, replacement of batteries, calibration (accuracy adjustment) of flow meters. If inaccuracies are found in flow meter indications, it is necessary to perform calibration in accordance with the enclosed guidelines.

7.9. The list of activities which are not covered by the warranty includes but is not restricted to the following:

7.9.1. Periodic inspection (recommended: every six months or after dispensing 50,000 litres of AdBlue or as needed),

7.9.2. Calibration of flow meter,

7.9.3. Filter cleaning/replacement (recommended: every six months or as needed),

7.9.4. Cleaning the pump chamber (recommended: every six months or as needed),

7.9.5. Replacement of mechanically damaged/worn blades in pumps,

7.9.6. Cleaning/replacement of the by-pass valve in pumps,

7.9.7. Replacement of the impeller damaged by its seizure in the pump,

7.9.8. O-ring replacement in the event of leaking pumps,

7.9.9. Repair/replacement of a pump damaged because of its seizure,

7.9.10. Elimination of defects caused by rust in pumps, flow meters and other elements of the tank equipment,

7.9.11. Repair of mechanical damage - cracked housing, broken handle, grip etc., which indicate improper use,

7.9.12. Cleaning of a nozzle switch off/on sensor,

7.10. The Company shall not be liable to the Buyer by reason of any representation (unless fraudulent) or any implied warranty condition or other term or any duty at common law (including but without limitation the negligence of the Company its employees agents or otherwise) or under the express terms of the Contract, for any loss of production loss of profits or anticipated profits, loss of contracts, operation time or anticipated savings, loss of business or of expected further loss of business or corruption to data, damage to the Buyer's reputation or goodwill damages costs or expenses payable by the Buyer to any third party or any other indirect special or consequential loss or damage or claim (whether caused by the negligence of the Company its employees agents or otherwise) which arise out of or in connection with the supply of the Goods or their use or resale by the Buyer

7.11. The entire liability of the Buyer under or in connection with the Contract for the purchase of product shall not exceed the Price of the Goods as noted on the purchase invoice.

7.12. This warranty does not affect Statutory Rights.



Kingspan Water & Energy is not liable for any damage resulting from product use not complying with the supplier's instruction or with applicable legal regulations.

8. DISPOSAL INFORMATION

8.1. To protect the environment, the Atlas Tank must not be disposed of together with unsorted household waste. After the operation period is ceased the Atlas Tank must be disposed of in accordance with European Directive 2002/96/EC.

8.2. Recycling should be carried out by a specialist company. The product must be cleaned of any residual contents, cut up and divided into different component groups such as plastic, rubber, metal and electronic components. Each of the materials should be recycled or disposed of in accordance with current regulations. The resulting waste cannot be mixed with other waste, if it endangers the environment.



9. MODIFICATIONS & SPARE PARTS

9.1. The product must not be modified without the permission of the manufacturer.



9.2. When repairing the tank, use only the spare parts available from the manufacturer or distributor. Failure to observe this requirement will result in the loss of warranty rights.

9.3. All defects should be reported to Kingspan during normal working hours and will be addressed starting from 08:00 A.M. on the following business day.

9.4. The manufacturer is not liable for damages and losses caused by the modification of equipment or use of parts other than spare parts.

9.5. Important points to note:

9.5.1. Products must not be drilled into or otherwise perforated (unless stated by manufacturer) as this will both invalidate warranty and render them no longer compliant with local guidelines.

9.5.2. Do not install any extra components or equipment that will rest unsupported on the top of the product.

9.5.3. For information and ordering of spare parts for this product please contact Kingspan.

10. TROUBLESHOOTING

No.	Problem	Cause	Advice
1	Leaking connections	Damage to seals.	Using a hand-operated hot air blower, heat the connection carefully and dismantle it. Thoroughly clean threads and put connection together. If damaged, replace the faulty component
2.	Not enough precision in flow measurement	Flowmeter miscalibration Contaminated flowmeter chamber. Air content in AdBlue®.	Perform flowmeter calibration Dismantle and clean flow meter chamber. Find and remedy leak in pump/suction line.
3.	Not enough precision in level measurement	Broken probe	Check manual of gauge for maintenance instructions.
4.	Reduced flow rate or no flow	Pump impellers or filter, hose, nozzle or flowmeter are blocked. e.g. with crystallized AdBlue®. Air in pump, air in AdBlue®. The fluid level is too low. On starting. Incorrect pump power supply.	Check and unblock all dispensing system elements. Rinse with warm water. Check tightness of suction line and all connections. Check level in tank Ensure proper power supply.
5.	Increase in noise level during pump operation	Air content in AdBlue®. Pump broken.	Find and remove leaks. Check and fix the pump.

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6.	Pump motor not working	No power or wrong power supplied. Rotor jammed. Fuse burned out. Pump thermal protection working.	Ensure proper power supply. Dismount and check for damage and obstructions than remount. Check fuses in control box. Switch OFF the pump and wait until engine cools down.
7.	Leakage alarm	Tank was overfilled, rain water in bund, inner tank leak. Leaking probe not install properly.	Remove liquid from bund. If leakage alarm sounds again, check leaking probe installation.
8.	Leakage sensor alarm error	Leakage probe broken, or sensor cable connection broken.	Check leakage sensor and cable connection.
10.	Spilling AdBlue®	Inaccurate liquid pouring.	Remove the spill and rinse with plenty of warm water.

11. MANUFACTURER INFORMATION

11.1. Atlas AdBlue Storage & Dispensing Tanks are manufactured at the below address:

Kingspan Water & Energy Ltd.
180 Gilford Road,
Portadown,
Co. Armagh.
BT63 5LF

11.2. Individual product manufacturing information can be found on the product label found on the front of the product.

11.3. For full product servicing and maintenance information visit www.kingspan.com



Kingspan Water & Energy Ltd

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