

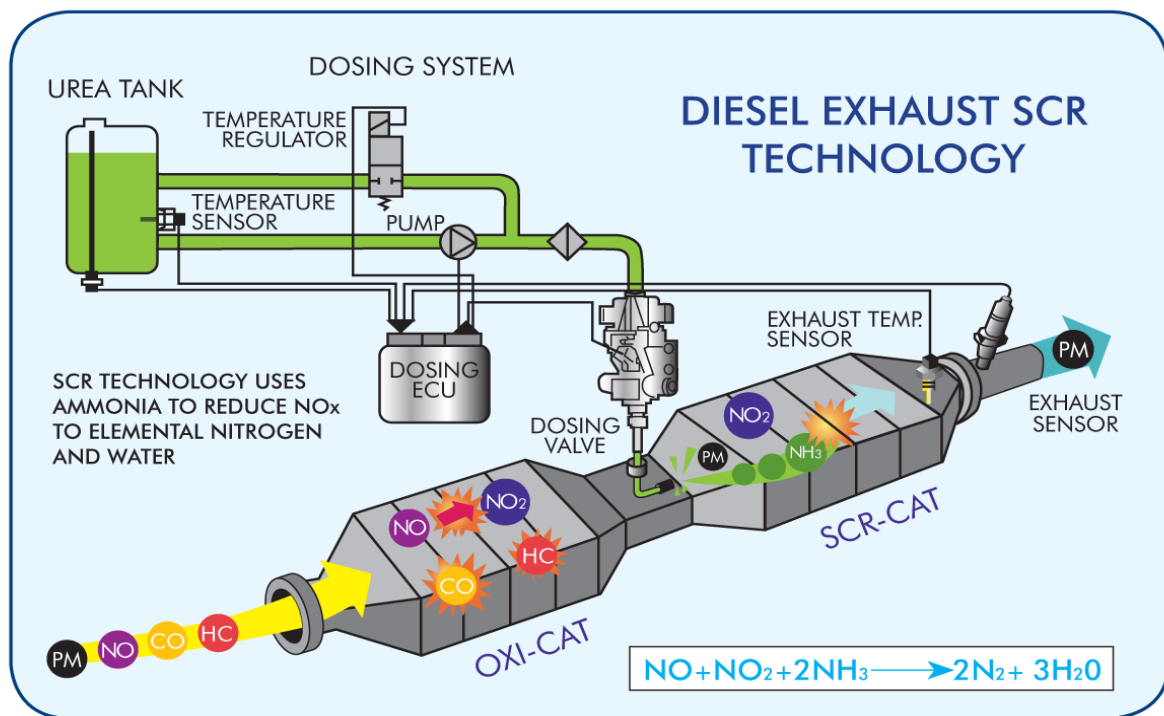


# Kalsul

## DEF Liquid

### Emissions Reduction

### Price List



#### UREA AND DEIONIZED WATER

DEF is a slurried solution made of 32.5% urea and 67.5% deionized water. It is used as a consumable in selective catalytic reduction (SCR) in order to lower NO<sub>x</sub> concentration in the diesel exhaust emissions from diesel engines. The byproducts of this catalytic reaction are nitrogen and water vapor.



# Kalsul DEF Fluid Production

## DIESEL EXHAUST FLUID



**Kalsul DEF Fluid Systems**

[www.n-p-k-46.com](http://www.n-p-k-46.com)

### ROI Typic Profit Yield

#### **Cost**

US \$3 to \$4 including water electricity per 1000 kg Def Fluid Made

#### **Retail**

**\$0.80 to \$2 per Liter**

#### **Margin**

**1000 Ltr , x \$0.80 \$800 Retail less \$4 = \$796 Per 1000 Liters. Or 0.79 cents per litre. profit**

#### **Canada Prices**

CAN 80 cents per litre – which roughly equates to \$3.16 per gallon in U.S. dollars.

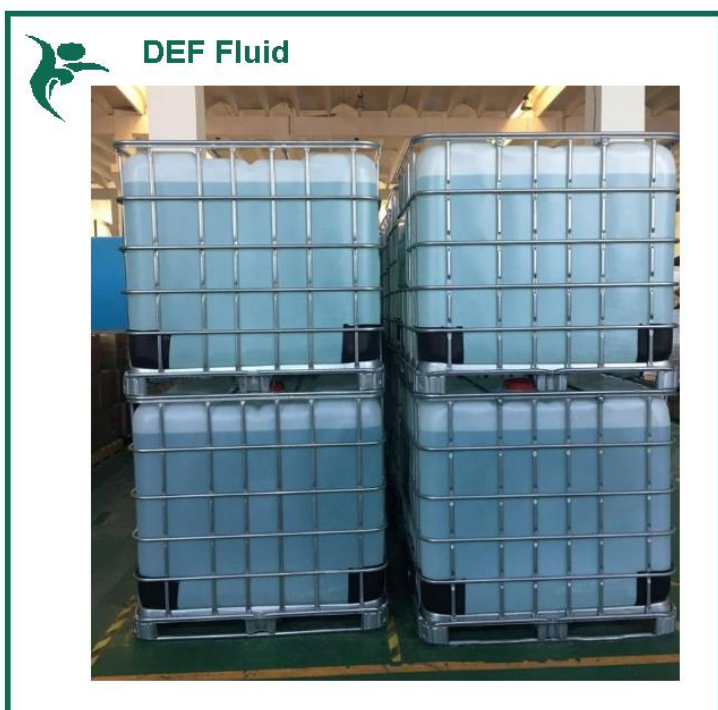
U.S. DEF pump price fell by a penny to \$2.74 per gallon





## Kalsul DEF Fluid Production

### DIESEL EXHAUST FLUID LIQUID BULK



**\$0.85 - \$0.95** / Liters | 20000  
Liter/Liters (Min. Order)

#### Packing:

Flexi bag

/10kg/15/kg barrel/

1 TON IBC



#### Shipping

20 chipping container

or

40 foot shipping container



## Kalsul DEF Fluid Production

### DIESEL EXHAUST FLUID LIQUID BULK

Marine AUS 40 Urea 40% Solution to reduce emissions

**Kalsul DEF Fluid Systems**

**Bulk Bladder DEF Fluid**

[www.n-p-k-46.com](http://www.n-p-k-46.com)

DEF FLUID Aqueous Urea Solution (AUS) 40 is the Maritime Grade Urea Solution for marine applications where Selective Catalytic Reduction (SCR) is used to meet emission requirements.

DEF Fluid AUS 40 Urea Solution is produced to the highest purity and quality. We pride ourselves for our speedy delivery and quality product where every batch is laboratory-tested.

You can be assured of a high quality AUS 40 Urea Solution suitable for your marine fleet.

**AUS 40 Bulk delivery solutions available:**

**1,000L Intermediate**

**Bulk Container (IBC) Tanks and 23,000Liters flexi tank in 20 GP Container**



# Kalsul DEF Fluid Production

## DIESEL EXHAUST FLUID

Diesel engine urea liquid production machine



### Diesel Engine Urea Liquid Production Machine



**UREA SOLUTION PRODUCTION EQUIPMENT, ONE KEY START, AUTOMATIC RUNNING**

Years of experience of developing and manufacturing in the Kalsul Def Fluid making machines industry, we have built our own brand- Kalsul Def Fluid. Our experienced engineers developed lots patents in our intelligent Kalsul Def Fluid making machine which is quit welcomed by market. The lower labor cost and high intelligent design will make the producing process much simple and happy.

High precision sensors in the control system can protect the whole machine, if there's any things wrong, the whole system will stop work immediately and will suggest you which parts is bad. In this way, machines will be easy operation for a long life. And the concentration sensors will make sure you will get standard Kalsul Def Fluid liquid ( $32.5 \pm 0.7\%$ )

If you are looking some kinds of diesel engine urea liquid production machine, we're your best choice, just contact us and share your request, we'll offer you a professional solution.

#### Advantages Compared with Traditional Production Unit

Reduce cost, small cover area, small investment, high return. distribute model from material to machine, far reduce the logistic cost compared with selling urea solution. Intelligent operation, one button start, high efficiency, one person operation, part time operation. Brand and certification coverage, simple management, rapid reproduction. Quality assurance, intelligent control production, modular, real-time online detect production process, Quality monitoring by internet cloud. Quick and easy installation, it has quick interface, no need engineer to install in the factory, reduce installation cost.





# Kalsul DEF Fluid Production

## DIESEL EXHAUST FLUID

### MIXING MACHINES.

WE HAVE TWO TYPES MIXING MACHINES, THAT RUN ON GRANUALTED PRODUCT

THE FIRST ONE HAS **550L/HOUR CAPACITY,**

AND THE SECOND ONE HAS **1500L/HOUR CAPACITY.**



### A) 550L/HOUR MACHINES

- THE MAIN PRODUCTION UNIT,
- THE FILLING MACHINE,
- CONVEYOR,
- PRETREATMENT EQUIPMENT,

(P.S. IF THE QUALITY OF RAW WATER IS GOOD, THIS DEVICE IS NOT NEEDED).

**PRICED CIF VANCOVER BRITISH COLUMBIA TOTAL US\$38,000**



## **B) 1500L/HOUR MACHINES**



## **B) 1500L/HOUR MACHINES**

- THE MAIN PRODUCTION UNIT,
- THE FILLING MACHINE,
- CONVEYOR,
- PRETREATMENT EQUIPMENT,

(P.S. IF THE QUALITY OF RAW WATER IS GOOD, THIS DEVICE IS NOT NEEDED).

**PRICED CIF VANCOVER BRITISH COLUMBIA**

**TOTAL US \$58,000**





## SMALL UNITS

**Diesel engine urea liquid production machine**

**Urea Solution Production Equipment, one key start, automatic running.**

### **1.SS-350 Intelligent Kalsul Def Fluid Production Unit**

Size: 1.4m (length) \* 1.6m (height) \* 1.1m (width) 1.1m (length)\*1.2m(height)\*1m (width)

Area: 2.8 square metres **Capacity: 4 tons/day**

### **2.SS-450 Intelligent Kalsul Def Fluid Production Unit**

Dimensions: 1.4mL \* 1.75m H \* 1.2m W

Area: 2.5 square metres **Capacity: 4 ton in 8 hours**

Application place: Large and medium sized gas stations, Kalsul Def Fluid filling stations, logistics parks, parking lots, high-speed service stations, fleet logistics companies, etc.

### **3.S-850 Intelligent Kalsul Def Fluid Production Unit**

Dimensions: 3.3mL \* 2.2m H \* 1.2m W

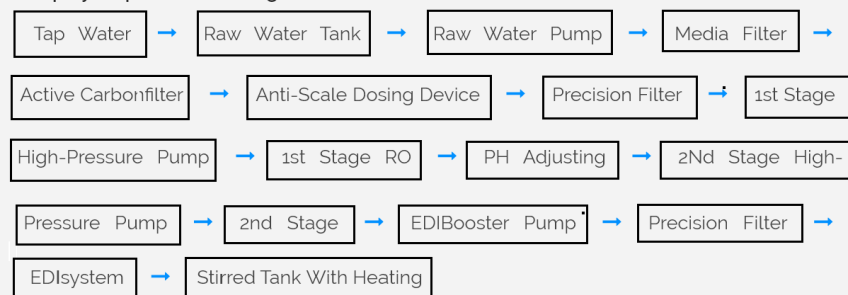
Area: 4 square metres **Capacity: 8 ton in 10 hours**

Application place: Large and medium sized gas stations, Kalsul Def Fluid filling stations, logistics parks, parking lots, high-speed service stations, fleet logistics companies, etc.



## **Diesel Engine Urea Liquid Production Machine**

### **Step by Step AdBlue Making Process**



**UREA SOLUTION PRODUCTION EQUIPMENT, ONE KEY START, AUTOMATIC RUNNING**



# Kalsul Production Sizes

## DIESEL EXHAUST FLUID



### Diesel Engine Urea Liquid Production Machine

MODEL	ADBLUE CAPACITY(T/H)	DI WATER PURIFYING DEVICE(T/H)	BLENDING SYSTEM	HEATING DEVICE(KW)	ULTRAFILTRATION SYSTEM	FILLING DEVICE MODEL	FILLING DEVICE CAPACITY (T/H)	LOADING DEVICE
SS-450	4-/8h	0.25	1 TON					
SS-850	0.75	0.5	2 TON	24	1	Semi-auto two heads	1	1
SS-1500	1.5	1	5 TON	54	2	Semi-auto four heads	2	2
SS-300K	3	2	5 TON'2	108	3	Auto ZLBG-6	3.5	4
SS-450K	4.5	3	10 TON'2		4	Auto ZLBG-8	4.8	6
SS-600K	6	4	10 TON'2		5	Auto ZLBG-10	6	6
SS-750K	7.5	5	10 TON'3		10	Auto cap screwing device		7
SS-1000K	10	7	10TON'3		10	Auto ink-jet printer		7
SS-1500K	15	10	10TON'4		15	Aluminum foil sealing device		



# Kalsul Delivery System

## DIESEL EXHAUST FLUID





# Kalsul Dispenser System

## DEF BULK TRANSFER SKIDS AND CARTS

Kalsul has a wide variety of products that are used the bulk transfer of Diesel Exhaust Fluid. Skid systems and wheeled carts are among the most popular products we offer. This equipment is mounted to stainless steel or aluminum bases to provide a long lasting product that withstands the repeated exposure to DEF and the rigors of daily use. All units are constructed of wetted materials that meet ISO 22231-3 specifications.

Each of these units is equipped with the following...

- Weights and Measures Approved Meter
- Ticket Printer
- Electronic Display and Presets for common industry amounts (ie. common tote sizes)

## DEF 4050 CART (40-50 GPM)

- 110 V Electrically Powered
- Unit is shown with optional Honda Generator
- Aluminum Hose Reel with Stainless Steel components standard with 50' of 1.5" DEF delivery hose
- 25' x 1.5" DEF Suction Hose included
- Portable base (aluminum or stainless) with casters can be moved by hand





# Kalsul Dispenser System

## DEF BULK TRANSFER SKIDS AND CARTS

### DEF 6580 SKID (65-80 GPM)

Powered by your choice of Electric, Gas, or Hydraulic Motor

Aluminum Hose Reel with Stainless Steel components standard with 50' of 1.5" DEF Delivery Hose

25' of 2" DEF Suction Hose included

Sturdy base (aluminum or stainless) allows for securing to E-Track or other anchor points





# Kalsul Dispenser System

## DEF BULK TRANSFER SKIDS AND CARTS

DEF 6580 BASE (65-80 GPM)

Electrically Powered

Standard with 25' of 1.5" DEF Delivery Hose

Designed to be "hard piped" to a bulk tank on the suction side

Base is designed to be fastened to the floor

Specifically designed to fill multiple totes or drums using the meter presets







# Kalsul Dispenser System

## DIESEL EXHAUST FLUID/ RESERVOIR



The heart of the Kalsul Def System is the Multifunction Head Unit (MFHU). To simplify design, the MFHU contains integrated level and temperature, and fluid quality (concentration) sensors .

By using ultrasonic sensing technology the level sensor eliminates the problems normally associated with mechanical designs. Outputs from all sensors are fully compatible with major dosing units available today in analog or CANBUS output.

Included in the MFHU is an engine coolant powered heater to thaw or prevent freezing of DEF in conditions below 12 °F (-11 °C). The heater is designed for optimal performance to meet OEM and governmental regulations. Electrical heating is also available for special applications.

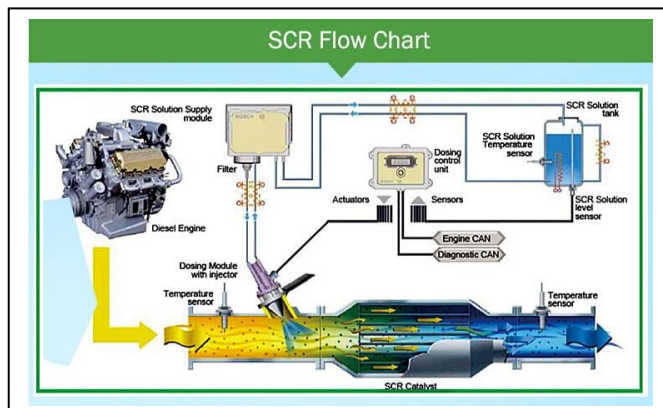
In order to meet reduced Nitrogen Oxides (NOx) emission levels, many diesel engine manufacturers have turned to Selective Catalytic Reduction (SCR) as the technology of choice. Storage , monitoring, and transfer of diesel exhaust fluid (DEF) is best handled with a single source system solution.

Optional items such as remote fill adapters and vents, lockable caps, coolant control valves, electrically heated suction, return, and pressure hoses, and mounting brackets are available to complete the DEF reservoir system.



### New Diesel Exhaust Fluid Heater

Many Models Available as well as generic Tank Heaters **\$250**





## Kalsul Dispenser System

### DIESEL EXHAUST FLUID ACCESSORIES



Electrically Heated DEF Lines (12 & 24 volt)  
with J2044 connectors

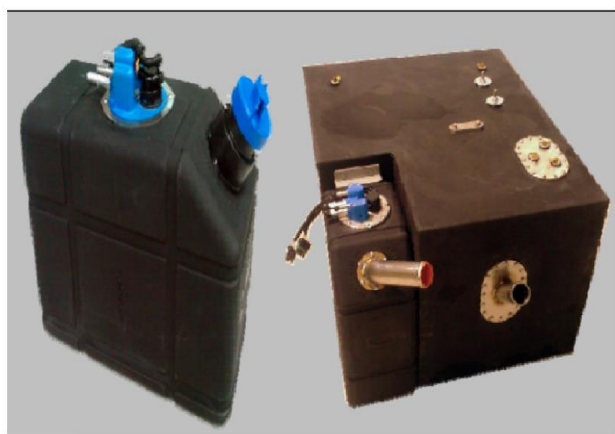
Varying Lengths Available



Coolant Control Valves (12 & 24 volt)



### Tanks



**Tanks Custom**

**Made to size with Heaters**

**And heated lines**



# Kalsul Dispenser System

## DIESEL EXHAUST FLUID TEST KIT

*Subject to availability as in high demand*

**\$90 per set**



### OTC UREA Diesel Exhaust Fluid (DEF) Refractometer with Truck Fault Codes License

#### Product Description

The Refractometer is a portable, precision, optical instrument used for measuring the Diesel Exhaust Fluid (DEF) concentration.

When a liquid UREA sample is placed on the prism, the light passing through it is bent. The more concentrated the liquid, the more the light will bend. The Refractometer contains a reticle, or scale, that is enlarged through the eyepiece to measure this light. The values on the scale have been established to evaluate the DEF condition.

EPA regulations require all diesel engines manufactured on or after January 1, 2010 to meet lowered NOx emissions standards. Most heavy duty engine (Class 7-8 trucks) manufacturers, have been chosen to utilize SCR.

## Video Here

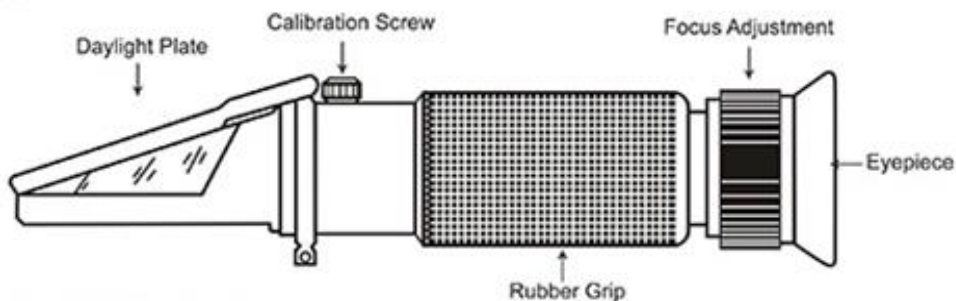
<https://youtu.be/OSNXfvTast8>



# OPERATION MANUAL

## For Hand Held Refractometer

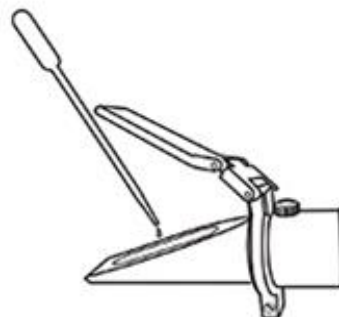
### PARTS:



### CALIBRATION PROCESS

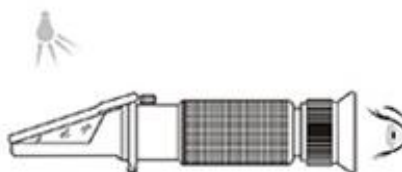
#### Step 1

Open daylight plate, make sure no dust on the main prism, and place 2-3 drops of distilled water on the main prism. Close the daylight plate so the water spreads across the entire surface of the prism without air bubbles or dry spots. Allow the sample to remain on the prism for approximately 30 seconds before going to step 2. (This allows the sample to adjust to the ambient temperature of the refractometer)



#### Step 2

Aim the front end of the refractometer to the direction of light and look into the eyepiece. You will see a circular field with graduations down the center (you may have to twist the focus adjustment to see the graduation clearly). The upper portion of the field should be blue, while the lower portion should be white.



As seen when looking into the instrument

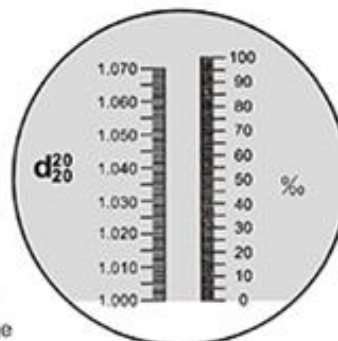
(The Scales in Step 2 & 3 are for references only, please refer to your product for the specific scale.)



### Step 3

Look into the eyepiece and turn the Calibration screw by using a screwdriver until the boundary between the upper blue field and the lower white field meet exactly on the zero scale, such as shown in the image. This is the end of the calibration process.

**Note:** Make sure the ambient temperature at the time of reading is 20°C/ 68°F. When working temperature of the room or environment (not the sample) changes by more than 5°F, we recommend recalibrating to maintain accuracy. If the instrument is equipped with Automatic Temperature Compensation system, the ambient working temperature of the room must be 20°C (68 °F) whenever the instrument is re-calibrated. Once calibrated, shifts in ambient temperature within the acceptable range (10°C-30°C) should not affect accuracy



Calibrate to "0"

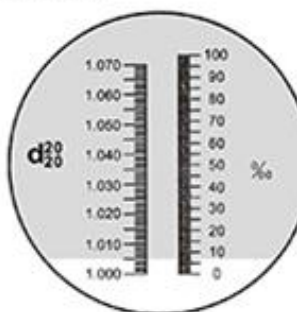
### OPERATION

Place few drops of the sample to be tested on the main prism, and close the daylight plate. Make sure the sample is evenly distributed and air bubbles are eliminated on prism. Aim the front end of the refractometer to the direction of light. Take the reading where the boundary line of blue and white cross the graduated scale. The scale will provide a direct reading of the concentration."



Good and evenly distributed sample

Sample is not evenly distributed, and air bubbles are not eliminated.



Reading of Sample

(for reference only please refer to your product for the specific scale.)

### WARNING - MAINTENANCE

1. Accurate measurement depends on careful calibration. The prism and sample must be at the same temperature for accurate results.
2. Do not expose the instrument to damp working conditions, and do not immerse the instrument in water. If the instrument becomes foggy, water has entered the body. Call a qualified service technician or contact your dealer.
3. Do not measure abrasive or corrosive chemicals with this instrument. They can damage the prism's coating.
4. Clean the instrument between each measurement using a soft, damp cloth. Failure to clean the prism on a regular basis will lead to inaccurate results and damage to the prism's coating.
5. This is an optical instrument, it requires careful handling and storage. Failure to do so can result in damage to the optical components and its basic structure. With care, this instrument will provide years of reliable service.





# Kalsul Dispenser System

## DIESEL EXHAUST FLUID DISPENSER



### Def Fluid filling

Machine Name :Kalsul filling machine  
470\*320\*1550. Main configuration:

- ★PLC control system, human - machine interface.
- ★Optional storage function
- ★Elliptic gear flowmeter.
- ★Filter cartridge.
- ★Flow range: 5-30L/min .
- ★Minimum measured: 5L.
- ★Maximum allowable error:  $\pm 0.3\%$ . Main...



Units Can Be Self Contains Tank Systems  
To allow Moveable portable filling.

### To Order

Daniel Donatelli

Whatsapp + 1 520 848 1659

Dnaieldonatelli1@gmail.com





# Kalsul Dispenser System

## DIESEL EXHAUST FLUID DISPENSER



### Kalsul DEF Fluid Systems



[www.n-p-k-46.com](http://www.n-p-k-46.com)

#### Filling Machine

Name : Kalsul Def Filling machine 470\*320\*1550.

#### Main configuration:

- ★PLC control system, human - machine interface.
- ★Optional storage function
- ★Elliptic gear flowmeter.
- ★Filter cartridge.
- ★Flow range: 5-30L/min .
- ★Minimum measured: 5L.
- ★Maximum allowable error:  $\pm 0.3\%$ .

#### Main function:

1. Based on the requirements of market and customers, Kalsul Def develops a intelligent vertical dispenser which combined with the performance and requirements of Kalsul Def
2. The tank body is made of Kalsul Def special materials, and the corresponding accessories are selected strictly according to the material requirements of Kalsul Def
3. It has the functions of quantitative filling, automatic measurement, automatic settlement and self-sealing.
4. Applicable objects:  
Automobile production plant, large fleet, bus company, transportation company, gas station etc.



## Kalsul Dispenser System

### DIESEL EXHAUST FLUID DISPENSER



**TANK AND PUMPS \$458 FOB**

**PUMP INCLUDED WITH METER**

**EACH AS SHOWN ON RIGHT ABOVE**

**CAN FIT APROX 18 IN A CONTAINER**



# Kalsul Dispenser System

## DIESEL EXHAUST FLUID PUMP KIT

9 GPM Diesel Exhaust Fluid DEF Transfer System

\$394.19



### Specifications:

Pump Type: Rotary Diaphragm

Pump Req.: 120V AC Flow Rate: 9 GPM

Diameter intake: 3/4" Length hose: 6' Diameter output: 3/4"

Length hose: 8' Nozzle Type: Manual non-automatic shutoff

Hanging Bracket: Steel Construction Weight: 15 lb

### Features:

A complete, DEF-rated, turnkey solution for transferring DEF Diesel Exhaust Fluid

Highly accurate flow meter for precise measurement

Corrosion-resistant fittings

Conveniently mounts to DEF tote containers

Warranty: 2 year Warranty: 2-Year Limited

Delivers a perfect blend of functionality and dependability

Designed using advanced technology to ensure exceptional performance

Made from high-strength materials for unmatched quality and durability

Meets the highest standards of safety and reliability

Proudly made in the USA

**Includes:** High Quality Pump Digital Flow Meter

6' Intake and 8' Output DEF-Rated Hoses DEF-Rated Manual Nozzle and Holster Tote-Hanging Bracket



# Kalsul Dispenser System

## DIESEL EXHAUST FLUID TANKS

### 25 Gallon Portable DEF Storage Tank

Weight: 125 lbs

Price: **Call**

Dimensions: 31" L x 27" W x 19" H



Rotationally molded polyethylene tanks for diesel exhaust fluid.

Easy to use design all you need to do is add the DEF and connect the battery cable to start pumping.

- This def tank dispenser comes standard with a high quality stainless steel 12V pump (9 Gallons Per Minute) and auto shut off handle.
- Fully enclosed lockable pump compartment for security and protection.
- All poly and stainless steel construction for DEF compatibility.
- Molded in handles for easy lifting
- 20 Foot 3/4 I.D. long reach hose with auto shutoff nozzle
- 18 Foot battery cables with alligator clips, fittings, and hose clamps, along with a inside suction hose with filter screen.
- Lightweight robust design



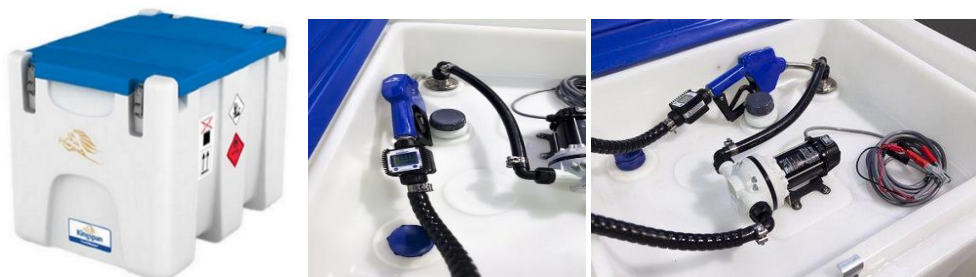
# Kalsul Dispenser System

## HEAVY DUTY DIESEL EXHAUST FLUID TANKS

### 53 Gallon Portable DEF Storage Tank

Weight: 71 lbs.

Price: **Call**



This range of portable DEF tanks has been specifically designed for safe transportation of DEF.

Take them anywhere – they range are built from high-quality polyethylene and are resistant to structural damage, changing weather conditions and UV radiation. Available from 53 to 238 gallons, with a number of specification and dispensing options, the range suits a variety of applications including agricultural, construction and forestry.

Backed up by excellent customer service support and a 5 year tank guarantee.

Has been specifically designed for the safe transportation of Diesel Exhaust Fluid (DEF).

This robust, portable solution offers users the ultimate convenience by allowing them to re-fill remotely on-site.

#### BTM114 Equipment Specification

1. Tank
2. Pump
3. Automatic nozzle (with optional flowmeter if required)
4. Pressure Relief Vent
5. Delivery hose
6. Lockable lid
7. Shackles
8. Filling offset

#### Standard Equipment

- Semi-transparent PE tank with internal partition
- Locked lid
- Gas cylinders to facilitate the opening of the lid
- Suction tube equipped with a filter to ensure the cleanliness of the liquid
- Self-priming pump 12V DC
- Dispensing hose with automatic nozzle
- Automatic pressure relief valve
- Threaded inlet connection



# Kalsul Dispenser System

## HEAVY DUTY DIESEL EXHAUST FLUID TANKS

### 53 Gallon Portable DEF Storage Tank

Weight: 71 lbs.

Price: **Call**



**The Kalsul Bulk Tank Kit** is a complete bulk storage and dispense system that arrives fully assembled and ready to use. It is a complete bulk storage and dispense system used for the safe storage and dispensing of Diesel Exhaust Fluid. This complete and fully assembled DEF system includes the diesel exhaust fluid tank, DEF pump, flow meter and automatic nozzle.

DEF Tank Capacity (Gallons)	DEF Tank Diameter	DEF Tank Height
205	32"	63"
325	36"	81"
500	46"	77"
850	54"	94"
1000	64"	81"
1100	60"	97"
1200	64"	97"
1500	64"	115"
2100	85"	100"





# Kalsul DEF Knowledge

## User & Safety Information

To ensure users of Kalsul DEF Fluid AUS 40 are equipped with the full knowledge on the usage, we have compiled a list of guidelines to help you achieve optimal productivity.

### a) Dos

- ☐ Refill your Kalsul DEF Fluid AUS 40 before it runs low
- ☐ Ensure you buy from trusted manufacturers who are able to provide a quality product
- ☐ Prevent fuel, oil, water, dust, dirt, etc from entering the Kalsul DEF Fluid AUS 40 storage tank
- ☐ Use dedicated equipment for the storage and transfer of Kalsul DEF Fluid AUS 40
- ☐ Store Kalsul DEF Fluid AUS 40 between 30 degrees Celsius and -11 degrees Celsius

### b) Don'ts

- ☐ Don't buy from manufacturers you don't trust
- ☐ Don't add water or any other compounds into Kalsul DEF Fluid AUS 40
- ☐ Don't add water directly into the SCR system, it will damage the SCR system
- ☐ Don't store Kalsul DEF Fluid AUS 40 in areas of direct sunlight or rain

### Maintenance

- ☐ Clean the pump nozzle regularly and make sure no foreign material gets in
- ☐ Ensure proper winding of the pump hose and replace if nicked

### Shelf Life

Kalsul DEF Fluid AUS 40 has a typical shelf life of 12 months if stored under proper storage conditions. Always store AUS 40 away from direct sunlight and rain

### Safety Information

As Kalsul DEF Fluid AUS 40 is not-hazardous and non-toxic, it will not harm the user or environment. In any case where Kalsul DEF Fluid AUS 40 comes into contact with the skin, wash with soap and rinse with plenty of water.

If ingested, do not induce vomiting and drink plenty of water. If inhaled, move away to a place with fresh air. If Kalsul DEF Fluid AUS 40 gets into your eyes, remove any contact lenses and flush your eyes under running water. For all these cases, if you continue to feel unwell, get medical attention immediately.

For more information on the safe handling to Kalsul DEF Fluid AUS 40, please refer to the Material Safety Data Sheet (MSDS) provided by Kalsul DEF Fluid Chemicals



## Kalsul DEF Nitrogen and Ammonia Products

Daniel Donatelli first hand experience.

20 Years Exporting Ammonia Urea N45 N21 Def and AN



## SGS TUV ISO Prior to Export





## ORDERING

Terms are TT Full Prior shipment

Contact Dan Discuss the Items and quantity you need

We issue invoice and firm offer based on selections

Than payment and shipment is immediate within 10 days.

All in Stock ready

### Thailand Account

Bank of Ayudhya: Branch of Central Phuket

ACCOUNT NAME: Mr. Daniel Thomas Donatelli

ACCOUNT NUMBER: 465 -1 -030 879

SWIFT CODE: AYUDTHBKXXX

ADDRESS: Central Festival Shopping centre Phuket 83000

TEL : 076 367 005-6