



Tower Industrial Estate, Eastleigh, Hampshire, SO50 6NZ, England
Tel: +44 (0) 23 8064 3388 Fax: +44 (0) 23 8064 3399

FLEX-FORCE 3000 ADR - DEMOUNTABLE

– STAINLESS STEEL –



The FLEXFORCE 3000ADR Unit offers:

- **Product Tank Capacity: 10m³ Polished Stainless Steel: 316L**
- **Based on a 20ft ISO Container Frame including Integrated Hook Lift System, Fork Lift Pockets & Crane Lifting Eyes**
- **Powerful V-FORCE 3000m³/hour; 90% Vacuum - Liquid Ring Pump**
- **HP Pump with 50Litres/min and 120bar, Stainless Steel Water Tank, Capacity: 1500Litres**
- **Compressor: 2bar with Nitrogen Connection for Unloading**
- **Continuous Earth Grounding Control Unit**
- **Stainless Steel Hose Racks & Tool Boxes**
- **Heavy Duty Paint Coating including a Clear Coat**

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What demands apply to the Development of a Modern Suction Machine?

It must comply with the Highest Industrial Standards. Important aspects are: Reliability, Ease of Operation, Long Life and Economical Efficiency. Not only taking into account the costs, but also the Environmental Issues to be expected. To Protect the Environment we have invested in systems which Reduce Harmful Emissions, Noise Levels and Fuel Consumption.

The Flex-Force 3000 ADR is a Suction and Pressure machine for Hazardous and Flammable Liquid Products. Suitable for use with up to 6”diameter hoses.

Application: The picture on the right shows the Cleaning of Fuel Tanks at a Petrol Station



Application: The picture on the left shows the Vacuuming of an Industrial Sewer

Application: Petrochemical Companies have a huge requirement for Vacuum Tankers for work all around the facility. The FlexForce can have a key role in handling this type of work (See picture below)

The Flex-Force 3000 ADR is also suitable for Pneumatic Suction and Discharging of many Hazardous and Flammable Liquid Products such as: Petrol, Oil Sludge, Chemical Liquids, etc



For more information on the possible applications of this machine please go to our website: www.doornbosequipment.co.uk.



SUCTION OF PRODUCT:

The Flex-Force 3000 ADR efficiently moves large quantities of Hazardous and Flammable Liquids and Slurries. All through maximum 6" diameter hoses over long distances. The machine is equipped with a traditional Liquid Ring 90% Vacuum Pump. Due to the High Air Flow at Deep Vacuum all liquid products which can travel through a hose will be transported. We suggest 4" or 5" diameter for ease of use.

V-FORCE 3000 VACUUM PUMP:

The V-FORCE 3000 Liquid Ring Vacuum Pump:

Max. Vacuum:	90%
Max. Air Volume at 3,000rpm.	3,000m³/hr
Required Drive Power Maximum:	85kW



BLOWING / DISCHARGING OF PRODUCTS:

Mounted in the Back Tank Door is a large 6" diameter Discharge Connection. To press out the Liquid Products you can set the Discharge Compressor at an Over Pressure of Max. 2.5bar. This High Over Pressure assures that discharge of the toughest liquids such as Oil Sludge are handled quickly and efficiently with the Flex-Force, even over a long distance and height. You can Discharge Liquids by either Overpressure (Max: 2.5bar) or by Gravity through a Max: 6" diameter hose.

DISCHARGE COMPRESSOR:

Rotary Vane Discharge Compressor:	
Maximum Over Pressure:	2bar
Maximum Air Volume at 3,000rpm:	165m³/hr
Required Drive Power (Maximum):	10kW

DISCHARGE OF THE TANK:

Self Tipping Tank can be discharged in the traditional manner at an angle of approx: 50°, for example at the dump site. To discharge the Flex-Force traditionally, the unit must be positioned on a Semi-Trailer, Chassis or any other Transporting Device.





The Pumps are driven by a 6 cylinder Caterpillar "Donkey" Diesel Engine. This engine drives the Pumps, Air Compressor and Hydraulic System. No truck mounted PTO's are necessary.

HIGH PRESSURE WATER PUMP:

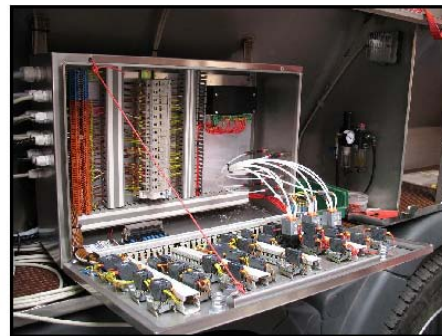
High Pressure Pump including Hose Reel:

Flow:	Maximum: ± 48Litres/min
Pressure:	Maximum: ± 120bar
Power Requirement:	Maximum: ± 10 kW
Water Tank Capacity:	Maximum: ± 1,500Litres (Stainless Steel)
Hose Reel Capacity:	20M Stainless Steel (Spring Return Hose Reel)



OPERATING AND CONTROL SYSTEM:

Unique Ease of Operation from a Simple Control Panel. Furthermore the panel shows all relevant information i.e. Vacuum, Air Pressure, and Engine Speed. Also Instruments for Intake Filter, Oil Pressure, Battery, Fuel and Temperature, Main Switch and Start Stop with Key. The Control Box contains the Electro Pneumatic Valves, Relays, Main Switch, Oil Water Separator etc.



TRANSPORT SYSTEMS:

The Flex-Force 3000 ADR is very compact and built according to the ISO 20' Container Standard. The frame is based on a 20ft Container System and has an Integrated Hook Lift System, Fork Lift Pockets and also Crane Lifting Eyes. All these items give you as a customer the most flexible and easy transportable vacuum machine available on the market. The unit can be positioned on a Truck Chassis with 20' Container Frame or Hook Lift Arrangement, on a Semi-Trailer suitable for 20' Containers, Trailer etc.



Flex-Force on 3Axle Trailer:



Flex-Force on the ground:



Flex-Force on 3Axle Chassis:



Technical Specification:

1	CE Marking:	Yes
2	Int. ADR2005 certified:	§6.10 – Tank Code: L4AH & S4AH
3	Tank Product Capacity:	10m ³ Approx
4	Maximum Vacuum:	100%;
5	Diameter:	1,900mm (Hydraulic Rear Door Locks)
6	Tipping Weight (Tank):	20tonnes - Minimum Approx
7	Length:	7,200mm Approx
8	Width:	2,500mm Approx
9	Height:	2,750mm Approx
10	Empty Weight (Body Unit):	11,000kg Approx
11	Rear Door Opening Angle:	90°
12	Tipping Angle:	45° Approx
13	Suction Connection:	DN 150
14	Blowing Connection:	DN 150

Standard Specification:

Stainless Steel 316L Cylindrical ADR Tank with Reinforcement Rings and Manhole on top of the Tank. Equipped with a Hydraulic Fully Opening Rear Door with Hydraulic Locks. Support Frame equipped with 20ft Container Locks, Integrated Hook Lift Frame, Fork Lift Pockets, Lifting Eyes, the Pump Installation, Tipping System, Hydraulic Unit with Return Filter, Lockable Tool Box Storage, and various other parts. Pump, Compressor and High Pressure Water Pump built in a Sound Insulated Enclosure. Pump driven by a separate 6Cylinder Liquid Cooled Diesel Engine. Control System and Operating Panel built in a Water Tight Box.

Pneumatic Butterfly Valve in the Suction Line Free Air Connection. Hydraulic Tank with Filling, Discharge, Level Indication and Return Filter. Hand Operated / Automatic Return Hydraulic operating handles. Suction Connection with Coupling of your choice. Hose Storage Box mounted on one side, over the full length. Air and Electric Lines in p Protective Sleeve. Safety for Under Pressure, Over Pressure. 24Volt Connection, Warning Light, Work Light, Tank Support for Maintenance. Over Pressure Safety Valve, set @ 2bar. Over Pressure Safety Valve set @ 1bar for the discharge of Flammable Products with Flashpoint < 23°C. Nitrogen Connection 1" with Manually Operated Valve 1". Grounding Device including Earthing Reel.



The Flex-Force 3000 ADR is delivered according to the ADR Regulations; all ADR construction requirements are included.



Technical Specification:

Material and Coating Specification:

The following parts are Stainless Steel:

The Complete Tank including End Caps is in Stainless Steel 316L, Storage Boxes, Water Tanks, Hose Storage, Chute, Manhole, Rings and Piping in Stainless Steel 304. Other components are from Mild Steel, The Tipping Cylinder is Hard Chrome Coated. Finish: Steel and Stainless Steel parts blasted, coated in 2Pack Epoxy Primer and finished in 2Pack Paint. Colour in Clients choice. Separate colour's possible for Front Power Unit and Tank. Cylindrical Tank Section in Brushed Stainless Steel finish. Alternatively sprayed

