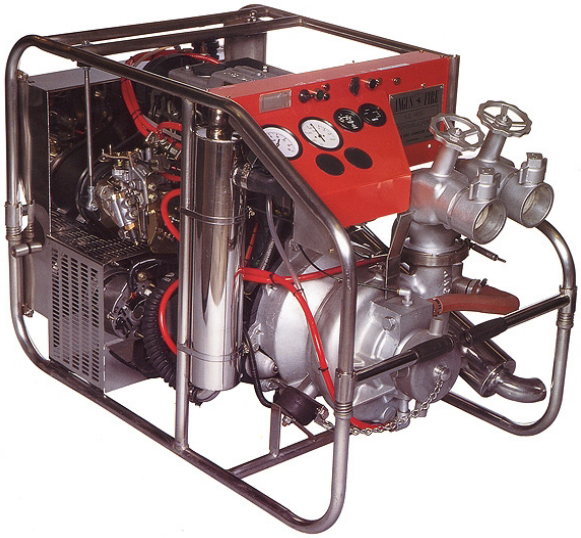
LD1800

Light Weight Portable Diesel Pump

The Angus LD1800 pump is a heavy duty portable fire or industrial pump that combines the benefits of high pressure fire fighting performance with the ability to move large volumes of water continuously.



The LD1800 design has been specifically developed over many years to meet the needs of the emergency services and incorporates features to ensure easy and reliable operation in fire and rescue situations.

Electric start and exhaust ejector priming mean the pump can be put into service quickly and easily in an emergency situation by one person. Typical flows range from 1,100 l/min at 10 bar delivery to over 2,600 l/min at 1 bar.

Power is provided by a reconditioned Ford in-line 4 cylinder water-cooled direct injection diesel engine developing 44 kW (60hp).

Angus fire pumps use robust pump casings which allow substantial input pressures from hydrants or relay pumping. This can be boosted to high output pressures without damaging the pump or exceeding its pressure rating, a feature generally not available with lower specification pumps. The LD1800 pump casing is designed to withstand 20 bar (maximum working pressure 13.3 bar), 1½ x the maximum recommended output pressure.

Applications

Municipal Fire Brigades

1,800 l/min at 7 bar provides a fire service with up to six 250 l/min hand lines with pressure to spare

Rural Fire Fighters

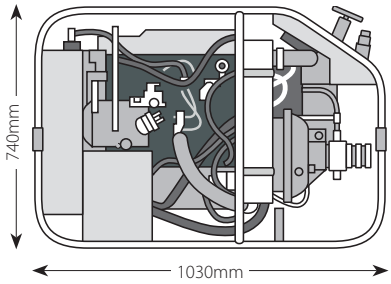
The 44 kW (60 hp) engine will pump 765 l/min over 1 km and still provide over 4 bar pressure at the branchpipe

Flood Relief

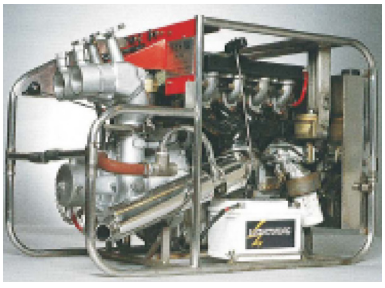
In situations where flow rather than pressure is critical the LD1800 will provide up to 2,600 l/min

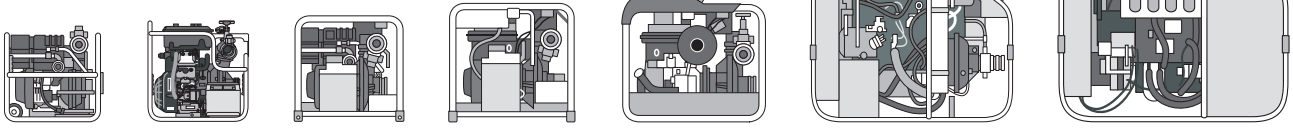
Standard Features

- 4 cylinder diesel combines reliability with fuel economy
- 12V electric start
- 31 litre fuel tank capacity (3 hours at 60% load)
- Fast and simple (one moving part) exhaust eject priming up to 7m lift
- Grade 304 stainless steel frame and fabricated components
- Light alloy, marine grade, corrosion-resistant pump body and impeller
- Glycerine filled compound and output pressure gauge
- Electrical power input/output point as standard



Dimensions	
Length	1030 mm (40½")
Width	610 mm (24")
Height	740 mm (29")
Weight	260 kg (252 kg dry with aluminium pump body)





LDA 400 LWA 500 LDA 600 LWA 800 LWA 1200 LD 1800 LW 2250

Engine
Ford reconditioned XLD 418, 4 cylinder in line overhead camshaft direct injection diesel engine.
Five bearing steel forged crankshaft with vibration damper.
Overhead valve, pressure lubricated via crankshaft driven pump
Alloy inlet manifold
44 kW (60 hp) at 4,800 rpm, 110 Nm torque (80 ft lbs) at 2,500 rpm.

Speed Control
Factory set injection pump governor

Cooling
Indirect water cooling via heat exchanger utilising pumped water supply. Heat exchanger allows the use of anti-freeze in the engine jacket

Electromagnetic Compatibility
Low voltage only – no high tension

Electrical
12V negative earth system with 55 amp engine driven alternator 2 pin power output (max current 55 amps continuous, less engine ignition requirement) and battery charging socket

Battery
Sealed "No Maintenance" 30 A/hr lead acid battery

Starting
12V permanently engaged starter

Angle of Operation
15° from horizontal in any plane

Exhaust
Stainless steel silencer arranged to direct exhaust gas away from the operator's position

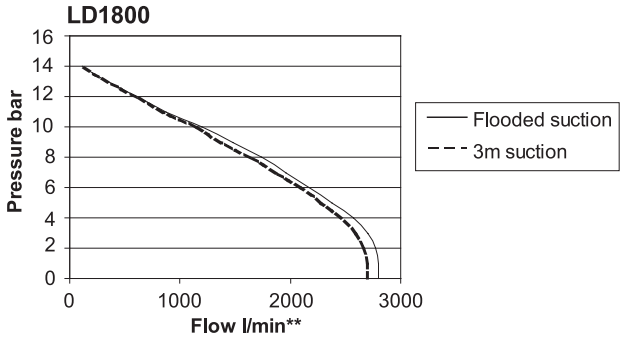
Ambient Temperature Range
Full power continuous operation -30°C† (-22°F†) to +38°C (100°F)

Security
Stop / start switch

Safety
Engine overheat cut out switch
Diesel tank located for filling during operation
All controls and gauges in one easy to use location
Panel light for night-time operation

CE marking
The LD1800 portable pump is CE marked for sale and use within the EEC
Sound Level 108 dB at 7 bar pressure

Frame
Corrosion-resistant 304 grade stainless steel outer frame and fabricated components
4 x Stainless steel fold away carrying handles lockable into position



Performance

Outlet Pressure*	Flow**
4 bar	2,445 l/min
5bar	2,280 l/min
6 bar	2,015 l/min
7 bar	1,800 l/min
8 bar	1,640 l/min
9 bar	1,375 l/min
10 bar	1,100 l/min
11 bar	765 l/min
12 bar	590 l/min

Pump
Two bearing stainless steel shaft design.
Corrosion-resistant light alloy body and impeller cast from LM25 to BS1490 with TF heat treatment
Maintenance-free, spring-loaded, carbon-faced/ceramic shaft seal
Drain point

Pump Clearances

Centrifugal pumps will allow small solids to pass through the impeller and pump without causing damage. All Angus pumps are fitted with an inlet mesh filter which is smaller than the minimum clearance size of the impeller
Inlet filter screen size 8 mm
Impeller clearance 16 mm

Pump Pressure Rating

Pump housing rated to 20 bar
LD1800 pump can accept input pressures up to 10 bar (provided output pressure does not exceed recommended maximum)

All pump housings are designed to 1½ x the nominal rated maximum output pressure (13.3 bar) to allow for high input pressures when operating in relay

Priming
Manually actuated exhaust ejector system – single moving part design
7m lift

Fuel Tank
31 litre (7 imperial gallon) – 3 hours running at 60% load
Stainless steel tank with top filling cap and inspection point

Inlet
Standard – 101.6mm (4") British Standard (to BS366) Round Thread male connection (with blank cap)

Outlet
Standard - twin rotatable manual globe valves, 2½" BS366 instantaneous female couplings (to BS366 with plugs and chains)

Instrumentation
Inlet - glycerine filled compound gauge, 100mm Ø, scale –1 to +9 bar
Outlet - glycerine filled pressure gauge, 100mm Ø, scale 0 to 25 bar
Engine hours run meter
Water temperature gauge
Night time instrument light

Options
Marine grade Gunmetal pump and impeller
Alternative inlet/outlet, Storz, US fire thread, BSP
Detachable wheels
Battery state meter and oil pressure gauge
Gauges in alternative units
Exhaust spark arrester
Lighting mast
Suction and discharge hoses, suction strainers and accessories
Trailer mounted pumps
2 year spare parts kit

Angus Fire is assessed by BSI and operates ISO 9001 Quality Management Systems and ISO 14001 Environmental Management Systems.

† Special oil may be required.
†† Readings taken at position 1m horizontally from the controls and 1.7m vertically to represent the typical position of the operators head.
** Based on 3m suction lift.*
*** All flow data is subject to a +/- 5% manufacturing and testing tolerance.*

Angus Fire has over 30 years experience of manufacturing portable pumps for use world wide in fire and industrial applications.

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