

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 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.

Angus Fire has over 25 years experience of manufacturing portable pumps for use world wide in fire and industrial applications.

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

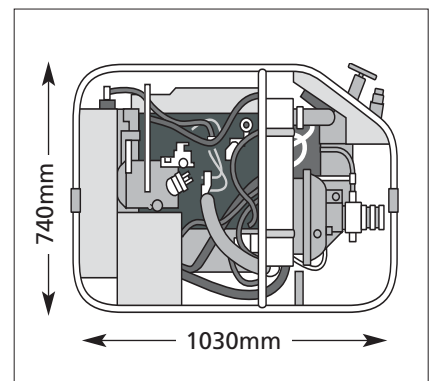
Flood Relief

In situations where flow rather than pressure is critical the LD1800 will provide over 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 – 7.3m (24') in under 24 seconds
- 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

Technical Specification



Dimensions

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

Engine

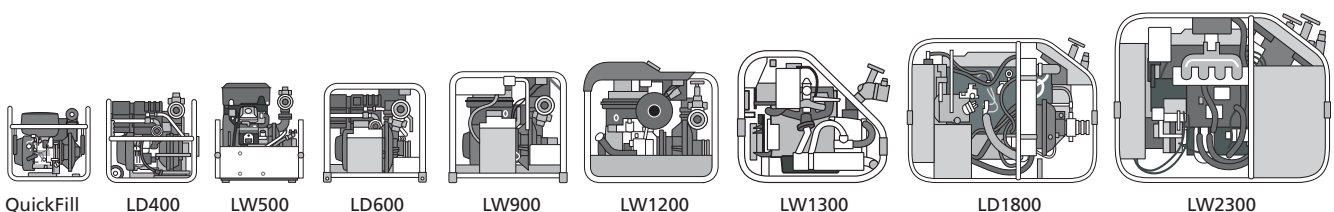
Ford XLD 418, 4 cylinder in line overhead camshaft direct injection diesel engine.

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.



* Based on 3m suction lift.

** Based on 64mm Ø x 23m Angus Duraline fire hose, outlet at same height as pump outlet and 3m suction lift.

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

Power outlet socket for auxiliaries (max current 55 amps continuous, less engine ignition requirement)

Battery

"Freedom" no maintenance battery

30 A/hr lead acid sealed unit

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

DIN exhaust extension connection available on request

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

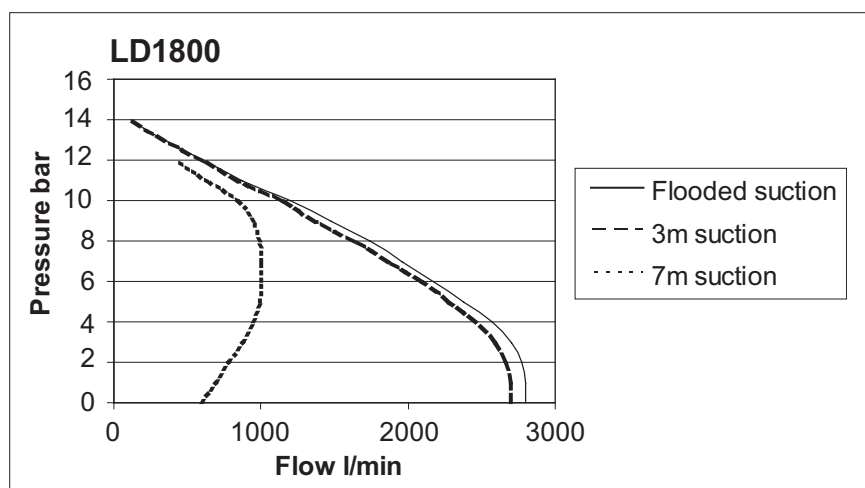
Corrosion-resistant 304 grade stainless steel outer frame and fabricated components

4 x Stainless steel fold away carrying handles

Pump

Two bearing stainless steel shaft design. Corrosion-resistant light alloy body and impeller cast from LM25 to BS1490 with TF heat treatment

Performance



Outlet pressure*	Flow
4 bar	2,445 l/min
5 bar	2,280 l/min
6 bar	2,015 l/min
7 bar	1,875 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

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 tested 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 pressure tested to 1½ x the nominal rated maximum output pressure to allow for high input pressures when operating in relay (13.3 bar)

Priming

Manually actuated exhaust ejector system – single moving part design
7.3m lift (24" Hg) in under 24 seconds

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 - 100mm (4") British Standard Round Thread male connection (other connections optional)

Outlet

Standard - twin rotatable manual globe valves, 2½" instantaneous female coupling (other connections optional)

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

Quality Control

Manufactured in compliance with BS EN ISO 9001:2000 quality management systems

100% quality check on all pumps for build and performance

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

DIN exhaust extension connection

Positive displacement priming

Lighting mast

Trailer-mounted pump

† Special oil may be required.

* Based on 3m suction lift.

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