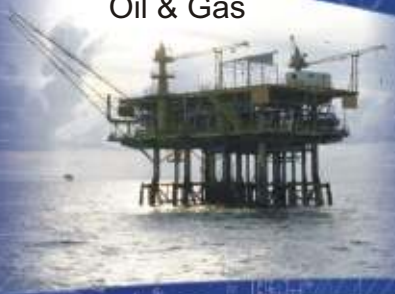
Dynapumps

DYNAMIC PUMP SOLUTIONS

Pressure & Vacuum Pump Specialist

Tel: 1300 788 579 • Fax: 1300 799 139

Oil & Gas



Power Generation

Water Treatment

Chemical Processing

Mining

Water Supply

Food Processing

Hospitals & Research

Pumps for All Industries

Our Experience Counts

Quality

Safety

Environment

Design

Testing

Service

Repairs

Management discussing a new project

Since our inception in 1981 Dynapump's concept has been to supply high quality, recognised products to our clients as a packaged equipment to your specifications and to give you excellent after sales service and spares.

Little has changed in these ideas but we have improved our company to ensure you get better service and value for money.

Our management team is always available for you to discuss your pumping needs and we would like to hear from you on the ways we can continue to improve our ability to fulfil your needs.

Quality, Safety & the Environment

We are Quality Assured to ISO 9001 and continually implement changes in our systems and procedures to give you better quality products from our Engineering, Sales and Manufacturing departments. We provide comprehensive drawings, documentation, service manuals and spare parts service.

Dynapumps operate compliant OHS and Environment Policies to ensure the safety of our people, your people, the community and the environment at large.

...but there is still more to us

To ensure our team of people are ready to help you, we give them continual training to expand their skills and provide the latest technologies to improve their competence and productivity.

Our engineering team work within our quality system for projects and orders that ensures you receive a progress report and our document control people make sure you receive your documents on time, in the format you require.

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Australia Wide

We have branches in Perth, Melbourne, Sydney and Brisbane. In 2001 we commenced manufacturing our Australian designed **Flo-Max** Submersible and Turbine Pumps in our Sydney plant.

All offices can supply the complete range of the Dynapumps products.

We have a team of engineers that provide technical back up for all offices as well as a large manufacturing base for pump products and vacuum systems.

Australia Wide

Flo-Max Turbine pumps installed for Town Water Supply Dubbo, NSW

System Design

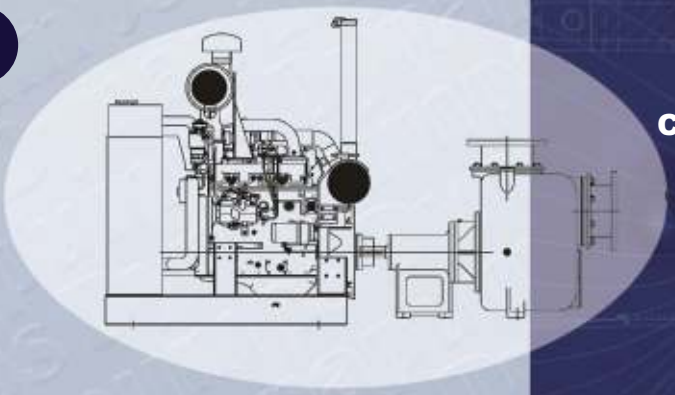
We specialise in the design and supply of complete pump systems to suit your needs. We can incorporate pressure and vacuum vessels, pumps, valves, controls and installation when required.

Once built, we perform full functional testing to ensure you are happy with the job.

System Design

Consultative Approach

We are able to provide Autocad drawings so that you can review the system before it is built and we actively invite you to participate in the design so that you get what you want.



Consultative Approach

Products Built to Last

Because we have a large selection of pumps and pump types to choose from within our range we can select the best product to meet your needs. We use computerised pump selections to ensure you get the right pump for the job.

Our pump bases are designed to make life easy for you with back pull out design and lifting lugs incorporated as standard. Inertia bases and bases to API standards with certification are also available. All of our welders have undertaken Welder Qualification testing and all couplings are laser aligned.

We utilise Australian, European and USA Standards in our design selections and can test pumps to AS 2417 Grades 1 and 2 on our in house test rig.

Fire pump undergoing testing

Products Built to Last

Markets Serviced by Dynapumps

Oil & Gas
Mining
Chemical Processing
Power Generation
Agriculture & Food Processing
Water Supply & Treatment
Hospitals & Research

Oil & Gas

API 610 & ANSI B73.1 Centrifugal
API 674 Reciprocating
API 675 Metering
API 676 Rotary Pumps
API 685 Magnetic Drive
NFPA20 Fire Pumps
Air Driven Diaphragm
Vacuum Pumps

Mining

Turbine & Borehole
Centrifugal
Rotary Lobe
Magnetic Drive
Self Priming
Fire Pumps
Peristaltic
Reciprocating
Helical Rotor
Vacuum Pumps

Chemical Processing & Power Generation

Centrifugal
Fire Pumps
Reciprocating
Magnetic Drive
Helical Rotor
Metering
Peristaltic
Rotary Lobe
Air Driven Diaphragm
Vacuum Pumps & Blowers

Agriculture & Food Processing

Turbine
Centrifugal
Reciprocating
Helical Rotor
Metering
Peristaltic
Rotary Lobe
Air Driven Diaphragm
Vacuum Pumps & Blowers

Water Supply & Treatment

Turbine
Borehole
Centrifugal
Submersible
Helical Rotor
Metering
Peristaltic
Rotary Lobe
Vacuum Pumps & Blowers

Hospitals & Research

Central Vacuum Systems
Vacuum Pumps
Centrifugal
Fire Pumps
Metering
Blowers

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Stainless Steel Submersible Pumps

Stainless Steel “borehole” submersible pumps are readily available to suit 80 mm to 300mm bores.

These pumps are easy to install using a flexible rising main

They come in a range of materials, ie. 304, 316 or 904L stainless steel, with a variety of seals and connections to handle all types of water quality.

Applications	Flow m^3/h Max	Head Metre Max	Motor kW Max
Mine Dewatering, Water Supply & Pressure Boosting	470	670	220

Stainless Steel Multistage Pumps

The new range of “smart” pumps using modern frequency inverter technology can respond to variable flow and pressure needs to save you wasted kilowatts.
Remote controllers plus motor and pump protection add to the new technology.

Standard fixed speed motor pumps are still available when lower capital costs are a consideration.

All pumps come in a range of material i.e. stainless steel, titanium or cast iron with a variety of seals and connections.

Applications	Flow m^3/h Max	Head Metre Max	Motor kW Max
Pressure boosting, washdowns & boiler feed	120	480	45
Heating & Ventilating, Mine Process Water	1000	164	160
Multiple Pump Booster Stations	720	160	180

Multiple pumps coupled to controller allow infinite variable flow

Groundwater Supply

Mine De-watering

Pressure Boosting

Industrial Applications

Chemical Injection

Gland Seal for Slurry Pump

Sea water

Reverse Osmosis

Washing Systems

Water Treatment

Boiler Feed

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Centrifugal End Suction Pumps

To International Standards ISO 2858, ISO 5199

Flows up to 7,200 m³/h
Heads up to 164 metres

The range includes close coupled and direct coupled pumps. Close coupled pumps eliminate shaft couplings and ensure that the motor and pump are correctly aligned. This also reduces the footprint of the pump saving valuable space and reducing the plinth size required.

2 YEAR WARRANTY ON PUMPS

Dynapumps can provide ISO pumps for industrial plants or mine sites for water supply or de-watering. These come with various drive options of electric or diesel motor and can be base mounted for fixed locations or trailer mounted for mobility.

Available in Cast Iron, ZF Bronze, Stainless Steel, Duplex Steel and Special Alloys

Helical Rotor Pumps

Flows up to 4000 lpm
Pressures up to 480 metres
Port Sizes up to 250mm

These pumps feature an improved rotor/stator geometry resulting in high performance and long life. A two pin Cardan type Universal Joint gives longer life and less maintenance over the life of the pump compared to single pin joints.

They come in various material options including cast iron, stainless steel or duplex alloys and a wide range of elastomers.

NEW CLOSE-COUPLED DESIGN

Process Water

Mining

Pressure Boosting

Industrial Applications

Chemical Injection

Gland Seal for Slurry Pump

Sludges & Sewage

Foodstuffs

Washing Systems

Water Treatment

Oil Transfer

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Submersible & Turbine Pumps

FLO-MAX

Flows up to 3000 litres/sec
Heads up to 500 metres
Materials Cast Iron, Zinc Free Bronze Stainless Steel, Duplex Alloys, Special Materials

425 kW Cooling Water Pump for Victorian Power Station pumping 11,000 m^3/h at 9.7 metres head

Mining

Oil & Gas

Agricultural

Water Supply

Power Generation

Fire Protection to AS2941 & NFPA20

PROUDLY MANUFACTURED IN AUSTRALIA BY DYNAPUMPS

A full and comprehensive range of vertical turbine and submersible borehole pumps are available. Standard sizes for the turbine range from 125mm - 1200mm. An extended range of axial flow pumps and larger turbines are available. We can also supply drive shafts, columns, bearing guides and rubber bearings for **ALL** makes of turbine pumps.

Flo-Max Turbine pumps installed for Town Water Supply Dubbo, NSW

One of nine Super Duplex Flo-Max Turbine pumps pumping seawater at Nickel Mine in Ravensthorpe, W.A.

Submersible Pump

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Lubricating Oils

Power Generation

Mining

Chemicals

Hydraulic Oil

Bitumen

Molasses

Gear Pumps

Flows up to 5883 lpm
Pressures to 16 Bar
Port sizes to 300mm
Viscosities to 100,000 cSt,

MAGNETIC DRIVE PUMPS

The complete range of gear pumps is also available as a sealless design, magnetic drive pump to eliminate seal problems.

Self Priming Pumps

For Heavy Duty Applications and High Heads

Self-priming centrifugal pumps are used for pumping clear or dirty liquids with solids and are useful when there is a need for:

- rapid self-priming
- handling large diameter solids
- handling abrasive fluids
- dry running

De-watering

Clear Water

Abrasive Fluids

Construction

Mining

Civil Engineering

Flows up to 1500 m^3/h
Heads up to 70 Metres
Port sizes to 300mm
Solids up to 75mm
Suction Lifts up to 7.5 Metres

Mine de-watering pump in acoustic enclosure

Rotary Lobe Pumps

Flows up to	**1000 m^3/h**
Pressures up to	**16 Bar**
Port sizes to	**400mm**
Solids up to	**100mm**
Suction Lifts up to	**8 metres**

They have a unique lobe design which can be supplied with replaceable rubber tips or in hard metals. The Maintenance In Place (MIP) design enables you to replace wear components without removing the pump. An oil filled separate seal design means the pump can self prime and run dry.

Sewage Treatment

Mining

Chemicals

Paints

Clay Sludges

Oil Processing

Grease

Waste Oil

AS 2941 & NFPA20 Fire Pump Sets

FM Approved also available

We are able to supply end suction and turbine submersible fire pump sets to AS2941 and NFPA20 to meet your specific requirements.

We offer electric or diesel driven complete with compliant Electric Panels and the necessary valves and pipework.

Mining

High Rise Buildings

Hospitals

Factories

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Piston & Plunger Pumps **API 674**

Drilling Rig Mud Pumps

Oil & Gas

Flows up to **362 m³/h**
Pressures to **690 Bar**

These pumps come with 2, 3, 4, or 5 cylinders to reduce pulsations. DYNAPUMPS can supply fabricated assemblies for you complete with motor, drive arrangement and all accessories such as relief valves, pulsation dampeners, pressure gauges and instrumentation.

Underground De-watering

Reverse Osmosis

Boiler Feed

Gland Seal for Slurry Pumps

High Pressure Washdowns

Built for heavy duty applications in the oilfields, including our API674 version pump, for drilling and exploration. Used in onshore plants and offshore platforms in the oil and gas industry.

In the mining industry where reliability counts these pumps are used for high head underground de-watering, pressure filter feed pumps, high pressure washdowns for railways and haulage vehicles and are standard equipment on diamond drill rigs.

Glycol Injection pump

Type	Cylinders	Max. Pressure (Bar)	Max. Flow (LPM)
Piston	Duplex	58	34
Piston	Quadruplex	58	70
Piston	Triplex	172	429
Plunger	Triplex	645	3163
Plunger	Quintuplex	809	6025

Centrifugal Pumps **API 610** & **API 685**

Oil & Gas

Petrochemical Industry

Chemical Industry

Widely used for heavy-duty applications in oil & gas, petrochemical and chemical industry. Designed and manufactured according to API 610 and API 685 norms.

API 610 Process pumps

Flows up to 20,000 m³/h
Heads up to 3700m

– for petrochemical & process plants

– for heavy and continuous duty with hot, corrosive and viscous fluids

Magnetic drive API 685
1600 m³/h up to 400m & 400°C

Process Pumps API 610
for small capacity, high head and low NPSH

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Motor Driven Metering Pumps **API 675**

Diaphragm & Piston Type

One of four injection skids for a fertiliser plant

Dynapumps offers you an unrivaled range of metering pumps for practically every application in which liquids have to be measured and mixed together.

Flows up to **44m³/h**
Pressures up to **1150 Bar**

These are precision process pumps with high efficiency. Available as a double diaphragm type with intermediate hydraulic control interface.

Chemicals

Oil & Gas

Power Generation

Water Treatment

Food Industry

Solenoid, Spring Return and Peristaltic Pumps

Available in chemically resistant plastics or metals for water treatment, acid injection, reagent dosing, chlorination systems and a multitude of other uses. High viscosity pump ends can also be supplied.

Flows up to **1000 lph**
Pressures up to **20 Bar**

Chlorination

pH Control

Chemical Injection

Complete Dosing Packages

Let us look after your metering pumps in critical areas such as Chlorination, pH Control and chemical applications.

We provide complete packages including pumps, controllers, meters and valving.

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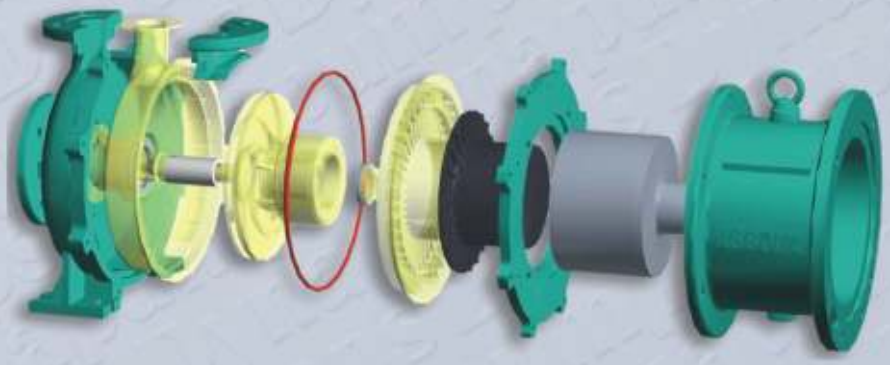
Magnetically Driven Pumps

for chemicals and chemical slurries

- Chemicals
- Mining Reagents
- Water Treatment
- Pharmaceutical
  Tanker Unloading
- Wastewater
  Treatment
- Carcinogenic
  Liquids
- Pulp & Paper
  Industry
- Power Generation
- Metal Processing
- Waste Disposal
- Semi Conductor
  Processing



These magnetic coupled pumps are available in the following constructions

- All plastic components (PP, PVDF, ETFE-CP, PFA)
- Metal housing – plastic lined
- All metal construction
- Metal pump – ceramic lined

Available for pumping up to 30% solids

Plastic Housing

Style	Max. Capacity (l/min)	Head (m)	Max.Motor (kW)
Small Plastic	300	14.0	0.37
Larger Plastic	500	31.8	3.7
Lined metal	800	49.3	18.5
Metal	10000	110	200.0
Ceramic Lined	5000	90	75.0

Lined Metal Housing

All Metal Pump

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Air Operated Diaphragm (AOD) Pumps

Completely portable, these pumps come in polypropylene, aluminium, stainless steel plus other material options with a wide range of elastomers to suit your requirements.

These pumps are self priming and can run dry if left unattended.
AOD pumps have a special air motor that does not require lubrication.

Flows up to **62 m³/h**
Pressures up to **8.6 Bar**
Size range **6mm to 80mm**

Peristaltic (Hose) Pumps

Hose pumps are ideal for highly viscous products such as cement slurries, acids (e.g. 35% Hydrochloric) and various other industrial and mining applications.

They are self priming, can run dry and have no valves. The hose is the ONLY part in contact with the product and this comes in a variety of materials to suit the pumped product.

Flows up to **60 m³/h**
Pressures up to **15 Bar**
Hose sizes **10mm to 100mm**

Chemicals

Oil Transfer

Mine Water

Solids Handling

Viscous Products

Grout

Acids

Solids Handling

Mining

Food Products

- Hospital Central Vacuum Systems
- Food Packaging
- Printing
- Chemical Plants
- Lifting
- Materials Handling
- Sewage Plants
- Medical Applications
- Mine Laboratories
- Pipeline Drying
- Universities

Rotary Vane Vacuum Pumps

Dry running, air cooled oil lubricated pumps, provide the following advantages:

No waste disposal problems so piping and power usage is reduced.
Lubrication is automatic and the exhaust filters reduce emissions.
They're easy to install and you don't need costly foundations.
They run really quietly for an improved working environment.

Flows up to 16,000 m^3/h
End vacuum 0.05 mbar

Blowers

Flows up to 630 m^3/h
End pressure 470 mbar

DYNAPUMPS can deliver a complete pump system for your specific needs to include a vacuum vessel to AS1210, Dynapumps vacuum pump, PLC controls for automatic operation and all the necessary pipework and valves. We can even provide installation if you need it.

WE SERVICE ALL MAKES OF VACUUM PUMPS

Service contracts are available to keep your vacuum pump in tip top shape.
Hire pumps are also available

- Central Vacuum Systems
- De-aeration
- Impregnation
- Condensing
- Distillation
- Drying Systems
- Sterilization
- Filtration
- Solvent Recovery

Liquid Ring Vacuum Pumps

LIQUID RING DESIGN PUMPS are capable of handling high volumes of vapours, condensables and liquids. The pump service liquid can be water, oil or solvents to satisfy any process requirements.

Flows up to 30,000 m^3/h
End Vacuum 33 mbar

PACKAGE VACUUM & COMPRESSION UNITS WITH TOTAL WATER OR OIL CIRCULATION

Partial or total re-circulation systems save on costs and reduce environmental emissions. The use of process friendly service liquids also eliminates contamination of the pumped product.

LIQUID RING MATERIAL CONSTRUCTIONS

Cast Iron - Stainless Steel - Special

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Programmed Maintenance

Our service staff are able to arrange fixed price, programmed service and maintenance calls to your site to take the worry out of maintaining your equipment.

We are able to monitor the condition of your pumps and provide you with a report that notes any problems that are evident or that might be expected in the future.

Call us to arrange a free pump audit so you can assess your pumping plant status.

FREE PUMP AUDIT

Guaranteed Repairs

When you send your pumps to Dynapumps for repair we know you want them be “just like new” so we repair them to the manufacturer's standards and test them before we return them to you.

If we can’t repair them to “like new” condition we will let you know what options you have and provide a full report on their condition.

Once they are tested we paint them and ship them back to you as quickly as possible.

Laser alignment of couplings

Onsite Installation & Repairs

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USEFUL FORMULAE

Centrifugal Pumps Input Power Calculation

$$kW = \frac{SG \times Ht \times Q}{102 \times ep}$$

SG	=	Specific Gravity Liquid
Ht	=	Total Dynamic Head in metres
Q	=	Flow in litre/sec
102	=	Constant
ep	=	Pump Efficiency

Positive Displacement Pumps Input Power Calculations

$$kW = \frac{SG \times LPM \times Bar}{599.8 \times M.E.}$$

SG	=	Specific Gravity Liquid
LPM	=	Flow in litre/min
Bar	=	Pressure in Bar
599.8	=	Constant
M.E.	=	Mechanical Efficiency

kW to HP = kW x 1.341 **HP to kW = HP x 0.746**

UNITS OF FLOW

M^3/Hr to Litres/sec	=	M^3/Hr x 0.278
Litres/sec to M^3/Hr	=	Litres/sec x 3.6
US gpm to Litres/min	=	US gpm x 3.787
Imp. gpm to Litres/min	=	Imp. gpm x 4.546
US Liquid Barrel Oil	=	42 US gpm

UNITS OF PRESSURE

PSI to kPa	=	PSI x 6.895
kPa to PSI	=	kPa x 0.145
Ft. Head to PSI	=	Ft. Head x 0.4335
PSI to Ft. Head	=	PSI x 2.307
Metre Head to Bar	=	Metre Hd x 0.098
Bar to Metre Head	=	Bar x 10.20

UNITS OF MASS & LENGTH

Pounds to kilograms	=	lbs x 0.454
Kilograms to Lbs	=	kg x 2.2
Litres to kilograms	=	Litres x 1 x SG
Feet to Metres	=	Feet x 0.3048
mm to inches	=	mm x 0.0394
Inches to mm	=	Inches x 25.4

VACUUM UNITS

1 bar	=	1000 mbar
1 atmosphere	=	1013 mbar
29.92 Inches Hg	=	1013 mbar
1 atmosphere	=	760 Torr
1 atmosphere	=	406.8 in H_2O

all conversions based on 20° Celcius

The above formulae are intended as a guide only. Please consult Dynapumps regarding final pump selection.