Buffalo Farm Equipment *Helping you Grow ....*

Pump Sizing Questionnaire - Selecting the right pump for the job is essential

Name: _____

Address: _____

Postcode: _____ **Phone/Mobile:** _____

Email Address: _____

Buffalo Farm Equipment is a water specialist with well trained staff in the principles of pump operation and pump selection. To assist, take a few minutes to gather some basic information and send this completed form to b.farm@bigpond.net.au

1. For what purpose do you require a water pump?

- ☐ Household water pressure
- ☐ Garden watering / sprinklers
- ☐ Irrigation
- ☐ Stock water supply
- ☐ Hosing down
- ☐ Tank filling
- ☐ Firefighting
- ☐ Other (specify) _____

1a. Operating pressure required (if known) _____ kPa

2. **Total output required (if known)** _____ L/min

OR Total no. of taps to be serviced at one time: ___+++_____

3. **From what source of supply is the water to be drawn?**

- ☐ River, creek, channel
- ☐ Dam
- ☐ Rainwater tank (above ground)
- ☐ Underground tank
- ☐ Bore
- ☐ Spear point
- ☐ Other (specify) _____

3a. Water supply: clean, muddy or gritty? _____

3b. If bore, state inside diameter of casing _____

Bore depth _____m

3c. If water is to be drawn from bore, state the quantity of water the bore will deliver _____L/min

From what constant depth? _____m

What is the standing water level in the bore? _____m

4. Vertical suction lift from water supply level to the pump site?

_____m

5. Pipe length to be run on suction side of pump from applications other than a bore _____m

6. Diameter of suction pipe, if already laid _____mm
Type of pipe e.g. polythene metric or imperial, galvanised iron, PVC, other (specify) _____

7. Vertical height from pump to highest point of delivery _____m

8. Pipe length to be run on delivery side of pump _____m

9. Diameter of delivery pipe, if already laid _____mm
and type of pipe e.g. polythene metric or imperial, galvanised iron, PVC, other (specify) _____

10. Type of pump required:

- ☐ Automatic Pressure System
- ☐ Petrol Engine Driven Pump
- ☐ Manual Electric Pump
- ☐ Diesel Engine Driven Pump
- ☐ Other (specify) _____

11. If electric, voltage of electricity supply is:

1 phase	☐ 240 volt OR ☐ 480 volt
3 phase	☐ 415 volt
Other	☐ Other (Please specify) _____

12. If replacing an existing pump, please give details:

Make: _____

Model: _____

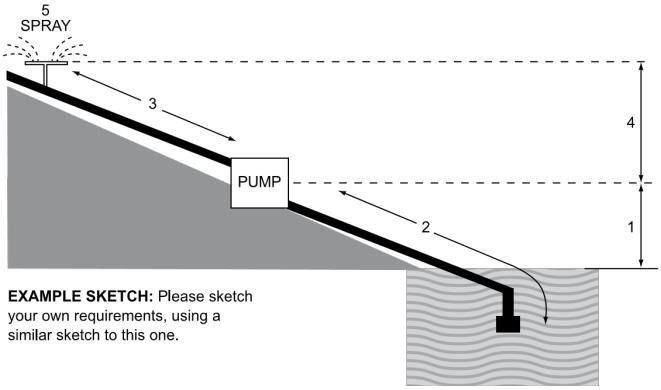
Were you happy with the performance of the old Pump?

_____

_____

Please sketch your proposed layout so that we can recommend the best equipment for your requirements.

1. Vertical height from water level to pump?
2. Length of suction pipe to the pump?
3. Length water has to be pushed to outlet?
4. Vertical height from pump to outlet?
5. Total flow required?



EXAMPLE SKETCH: Please sketch your own requirements, using a similar sketch to this one.

Notes:

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Common Average Water Requirements

The average water requirements, shown below, may vary due to specific application concerns. Water requirements should be supplied within acceptable daily running times. This time will vary according to the nature of the application.

SHOWER: 15 lpm at 140 kPa (3.3 gpm at 20psi)
LAWN SPRINKLER: 15 lpm at 140 kPa (3.3 gpm at 20psi)
½" TAP: 12-15 lpm at 140 kPa (2.6 – 3.3 gpm at 20psi)
¾" HOSE & ¼" NOZZLE: 40 lpm at 210 kPA (8.8 gpm at 30psi)
1' HOSE & 3/8" NOZZLE: 75 lpm at 210 kPa (16.5 gpm at 30psi)
100 CHICKENS: 25 litres/day (5.5 gallons/day)
CATTLE: 30-55 litres/day (6.5 – 12 gallons/day)
MILKING COWS: 70 litres/day (15.4 gallons/day)
SHEEP: 5 – 10 litres/day (1-2 gallons/day)
PIGS: 10 litres/day (2 gallons/day)
HORSE: 55-60 litres/day (12 – 13.2 gallons/day)

SUCTION LIFT

Pumps do not actually suck: rather, pumps create a partial vacuum into which atmospheric pressure pushes water via the suction pipework. There are a number of factors which affect suction life:

Altitude: As altitude increase, atmospheric pressure decreases, thus exerting less "push" on the water entering the pump suction.

Pump Suction Performance: Generally, the higher the flow rate from the pump, the less the partial vacuum created by the pump.

Water Temperature: The higher the water temperature, the more likely it is to boil when exposed to a partial vacuum, thus reducing suction lift.

Friction Loss: Friction loss in the suction pipe reduces the vertical life possible.

In practical terms, a maximum suction lift of 6.7 metres at sea level is common, but all of the items above will reduce this figure.

Suggested Max Flows for Imperial Poly Pipe:

¾"	18 L/M
1"	27 L/M
1¼"	45 L/M
1½"	67.8 L/M
2"	113.4 L/M