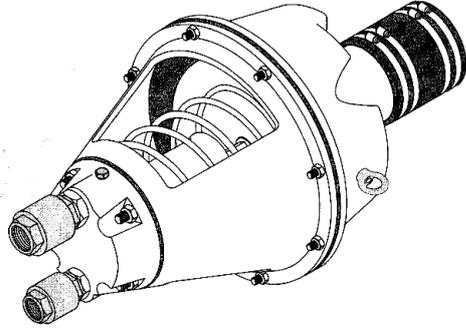


GLOCKEMANN PUMP

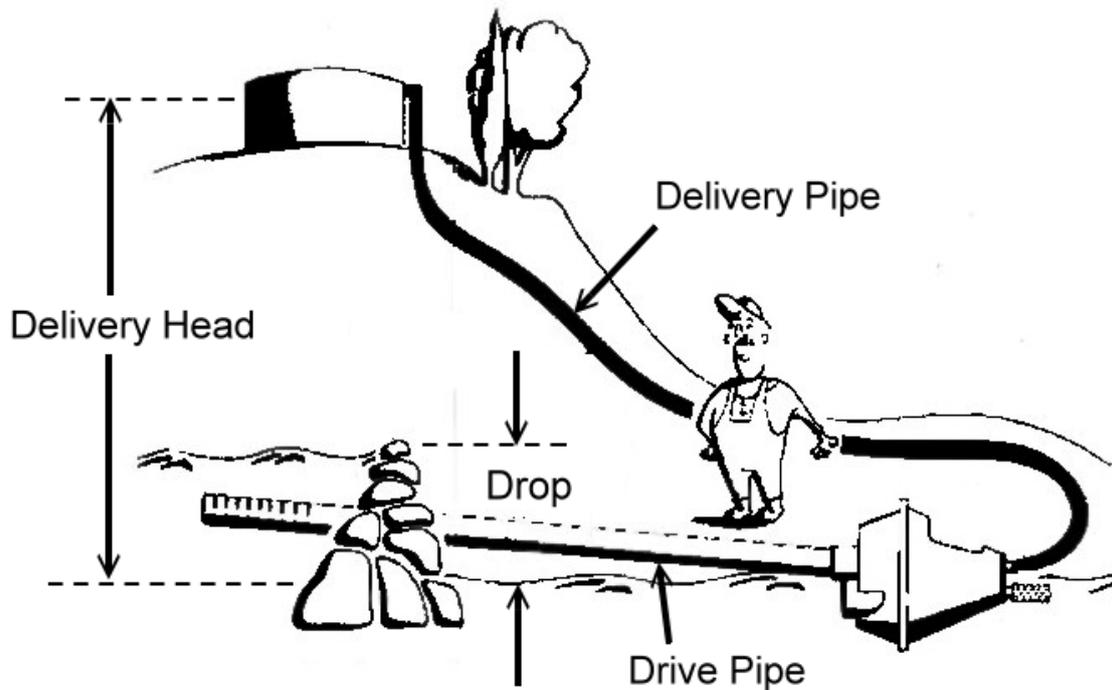


Site Assessment

What you need to know before doing ahead.

The Basics

The Glockemann is a water powered water pump.



It requires water flowing down the 'Drive Pipe' to power the pump so it can pump some of that water up the delivery pipe.

Important points:

1. 'Drop' from 0.6m to 1.8m
2. 'Flow' of water through pump 2 to 7Litres/sec
3. 'Delivery Head' max. 150m
4. Pump output in Litres/24hrs
5. Drive pipe length & diameter
6. Bore diameter

Site assessment

Have you got a suitable site?

You can find out by following steps below

For details see diagrams in the following pages.

Step 1. What steam FLOW rate do you have?

- a. The flow could be obviously plenty therefore go to next step.
- b. Often a visual picture is OK since the flow tends to vary anyway.
- c. Or you can measure it.

Step 2. What is your potential DROP?

- a. A drop can be a natural drop with small weir for the drive pipe.
- b. Or a weir only
- c. Or over a distance along you stream.
- d. Or a combination of the above.

Step 3. What is your delivery head?

Ways to measure this Head in metres

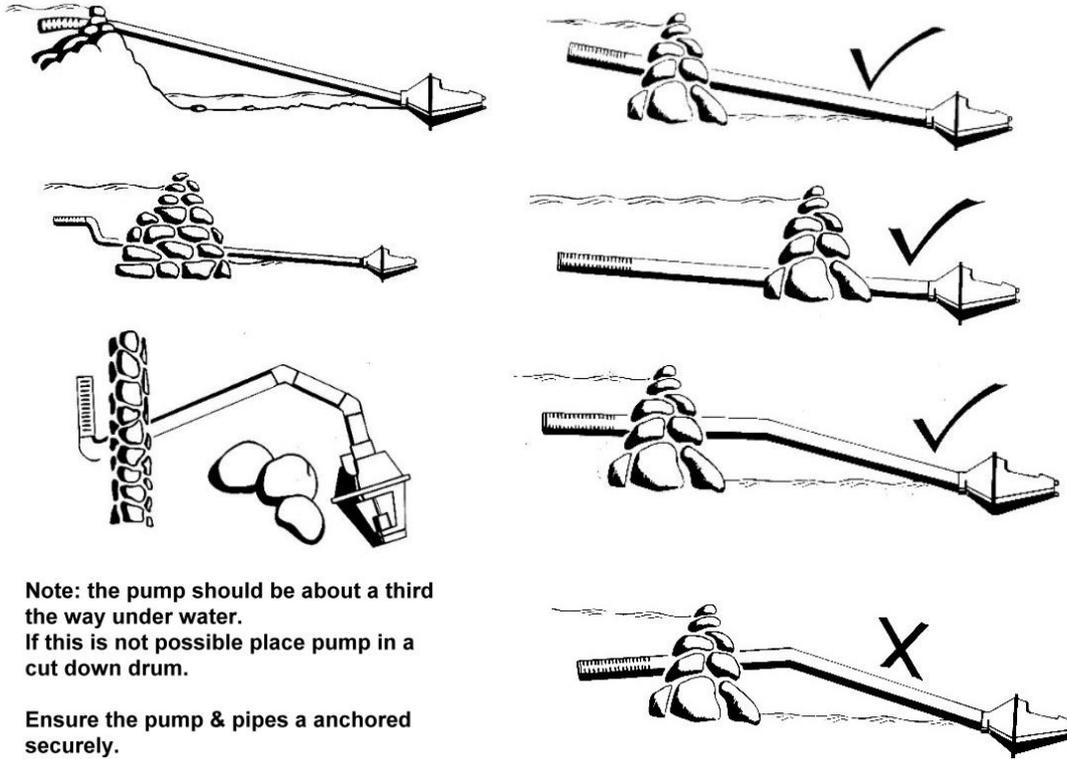
- a. An altimeter is first choice if available.
- b. Using a topographical map by counting the contour lines is often accurate enough for heads above 30m.
- c. For these lower heads use a spirit level to measure.

Step 4. What will your pump output be?

From the above you now know the Flow, Drop & Delivery Head. These values allow you to determine the pump output & appropriate cylinder bore diameter using the Pump output table.

After following these steps you will be able to decide whether to go ahead.

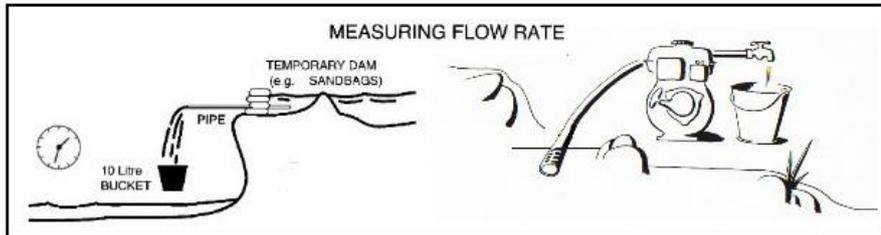
PUMP & DRIVE PIPE CONFIGERATIONS



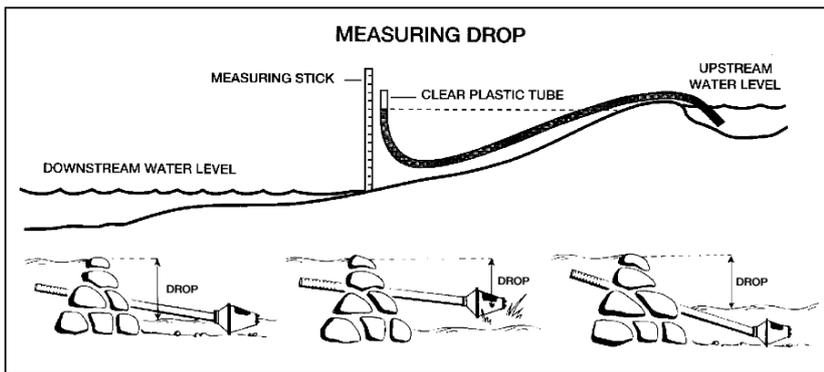
Note: the pump should be about a third the way under water.
If this is not possible place pump in a cut down drum.

Ensure the pump & pipes are anchored securely.

MEASURING FLOW RATE

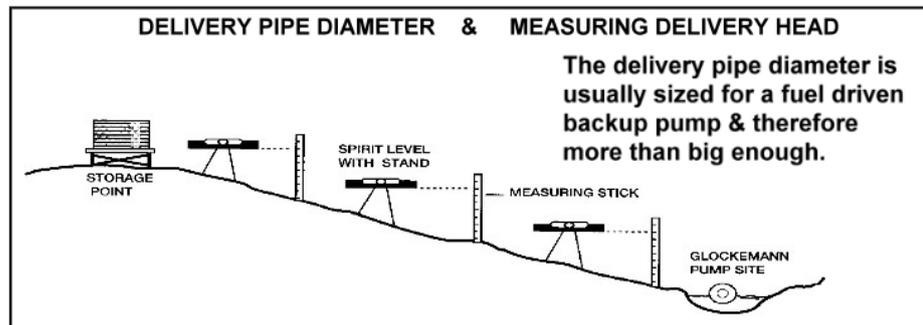


MEASURING DROP

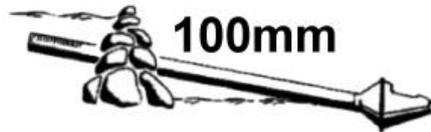
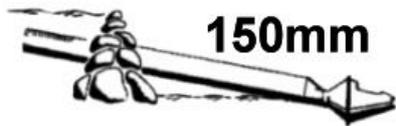


DELIVERY PIPE DIAMETER & MEASURING DELIVERY HEAD

The delivery pipe diameter is usually sized for a fuel driven backup pump & therefore more than big enough.



OUTPUTS IN LITRES/DAY WITH 150MM DRIVE PIPE									
DELIVERY HEADS & OUTPUTS IN LITRES / DAY									
DROP	5M	10M	20M	35M	50M	75M	100M	150M	FLOW
1.4M			g 17000	e 10000	d 7500	c 5200	c 3900	b 2600	7.5 L/S
1.2M		g 23000	f 14500	e 8600	d 6700	c 4500	b 3350	b 2250	7.0 L/S
1.0M	g 23000	g 19000	e 11200	d 7100	c 4950	b 3350	b 2500	a 1600	7.0 L/S
0.8M	g 18900	f 13000	d 7200	c 4150	b 2900	b 1900	a 1450	a 1000	6.0 L/S
0.6M	f 13950	d 7800	c 4150	b 2350	a 1600	a 1100	a 800	a 550	5.5 L/S
0.4M	d 6480	c 3400	a 1700	a 1000	a 650				5.0 L/S



CYLINDER BORE DIAMETER SELECTION

a	35mm	d	73mm	g	124mm
b	48mm	e	86mm		
c	60mm	f	98mm		

OUTPUTS IN LITRES/DAY WITH 100MM DRIVE PIPE									
DELIVERY HEAD									
DROP	5M	10M	20M	35M	50M	75M	100M	150M	FLOW
1.8M			g 17000	e 10300	d 7450	c 4950	c 3750	b 2500	5.5L/S
1.6M		g 25000	f 14400	e 9100	d 6400	c 4300	b 3200	b 2100	5.0L/S
1.4M		g 21000	f 12200	d 7650	c 5350	c 3650	b 2650	a 1700	5.0L/S
1.2M		g 19200	e 10300	d 6350	c 4450	b 2300	b 2300	a 1450	4.5L/S
1.0M	g 21000	f 15200	d 8500	c 4800	b 3400	b 2200	a 1700	a 1150	4.5L/S
0.8M	g 16500	e 9300	c 5400	b 3350	b 2150	a 1400	a 1100	a 650	4.0L/S
0.6M	f 12400	d 6450	b 3250	a 1800	a 1300	a 850	a 600		4.0L/S

Drive Pipe Lengths

150mm Dia. Between 8 & 14 X the drop

100mm Dia. Between 5 & 9 X the drop

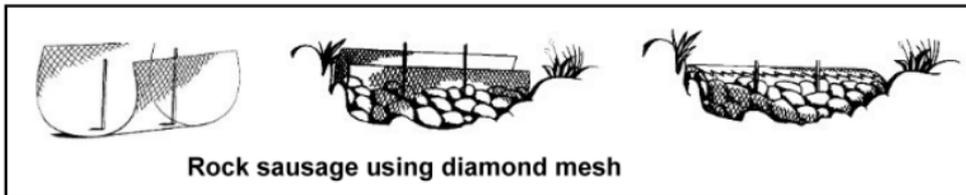
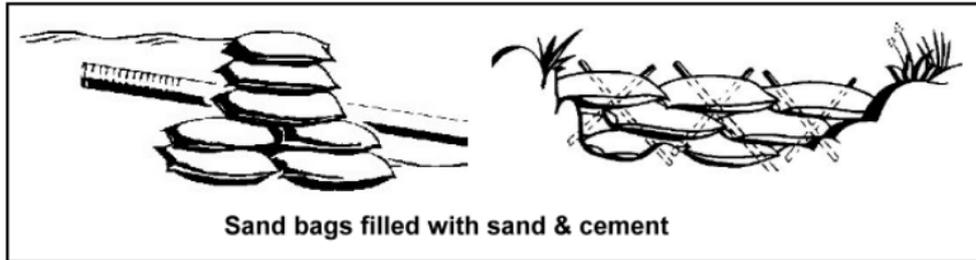
Example: if your drop = 1.5m

For 100mm pipe length can be between 7.5m (= 5 X 1.5m)

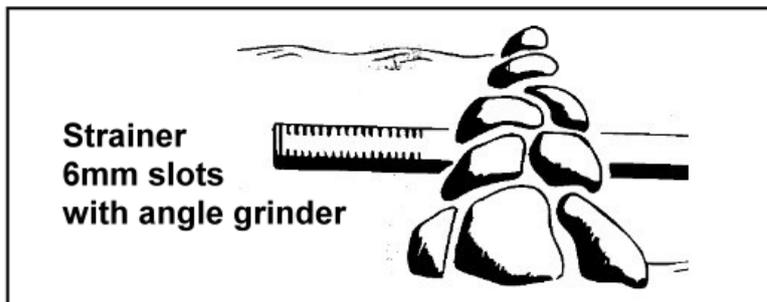
& 13.5m (= 9 X 1.5m)

Drive pipe material: PVC sewer pipe.

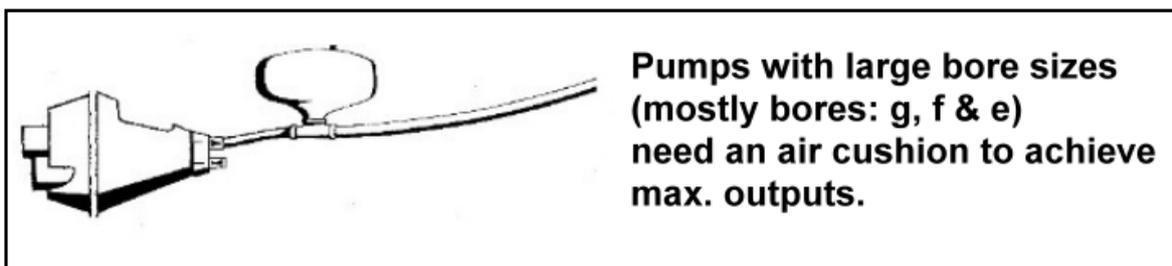
Making Weirs



Drive Pipe Strainer



Air cushions



Please contact Glockemann Water Pumps for more details as guidance is an important part of what you purchase.

www.glockemannwaterpumps.com

**30 Herberton Street, Mareeba 4880
Queensland, Australia**

Tel.: 61 07 4092 3592