



# AMANZIFLOW PROJECTS

*World leaders in automatic, self actuating, water control equipment.*

## THE IMPORTANCE OF AMANZIFLOW PROJECTS TO DEVELOPMENT

Water is the single most important commodity on which all countries rely, and is rapidly becoming scarcer in most countries around the world. The accurate control of water is fast becoming the main preoccupation of engineers, to maximize the use of water, increase storage capacity and minimize losses. AmanziFlow Projects, through its innovative technology, has equipment that can help solve the problems of shortage and control of WATER.

With increasing population and living standards in most countries, more water is required for food production, industry and domestic use. Furthermore, with global warming, there is a

greater need for renewable energy sources and hydro power is now more sought after.

South Africa is a semi-arid country and it is now generally accepted that the average annual rainfall will steadily reduce due to global warming. Droughts, as well as intermittent floods, will be more frequent in the years to come. It is estimated that within 20 years, at current demand, South Africa will exhaust its water resources. The lack of WATER is therefore the Achilles heel of the SA economy. Similarly more than half the world's countries are classified as arid or semi-arid and water is of a great concern to them also.

## WHO WE ARE

AmanziFlow Projects is a South African Company, which deal in the design, supply and installation of automatic water control equipment. The equipment is highly specialised and unique in the world. The products require no electrical supply or human operation in their application, which is a key differentiator to other water control equipment.

The Company's Vision statement and signature is to be "World leaders in automatic self-actuating water control equipment."

AmanziFlow Projects has 25 years of experience in water control equipment. A considerable number of these unique and innovative items of equipment have been installed in Southern Africa and Africa.

Some equipment has been operating now for over 40 years. A number of the larger items such as the TOPS, crest and scour gates have operated automatically in flood conditions. The equipment has proved to be reliable and robust and meets dam safety requirements.

## WHAT WE OFFER

### SERVICE:

We offer a consulting service to consulting engineers, local authorities, regional water boards and government departments etc, to solve problems of water storage and control using our automatic self actuating equipment.

### EQUIPMENT:

Our equipment is unique, innovative and specialised. It offers water engineers additional and much sought after capabilities in their design of water schemes.

## COMPANY STRUCTURE

The founding and Managing Director is Peter Townshend, a registered professional civil engineer in South Africa. The other directors are Johan von Holdt, a mechanical engineer and Roger von Holdt, a civil engineer.

AmanziFlow Projects has formed an association with WSP/IPB, a leading Consulting Engineering firm for the design, project management, inspection, installation control and commissioning of the equipment. AmanziFlow Projects is equipped to offer turnkey projects to clients for water storage and control.



Trading as AmanziFlow Water Control Projects (Pty) Ltd  
Directors: P D Townshend BSc Eng (Civil) Pr Eng, J von Holdt B Eng Mech (Stell) N Dipl Mech, R von Holdt B Eng Civil (Stell)

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## THE RANGE OF EQUIPMENT OFFERED INCLUDE:

- TOPS automatic spillway gates
- Crest gates
- Release gates
- Scour gates
- Canal regulating gate
- Diaphragm regulating valves
- Tidal gates
- Also electro - mechanical equipment such as Radial and vertical lift gates, screens, stoplogs, grappling beams etc

## FEATURES INCLUDE:

- Increased water supply in existing dams
- Cost effective new dams
- Dam spillway improvements for increased dam safety
- Flood control
- Sediment removal from river weirs
- Trouble free river off takes
- Canal flow control
- Automation of irrigation schemes
- Inflow control to reservoirs, treatment works and dams
- Dam outlet controls
- Tidal flooding control
- Pollution control in watercourses



## THE ADVANTAGES OF THESE SYSTEMS INCLUDE:

- Automatic and Self actuating, using water forces only and not reliant on external sources of power which can be unreliable
- Self restoring to maintain FSL after the passage of floods
- Proven in flood conditions
- Back-up safety features to ensure operation under all conditions
- Flexible in operation for releases for environmental and dam safety purposes
- Robust, fabricated in steel or concrete
- Low maintenance
- Designed for trouble free operation in dirty and debris laden waters
- Very reliable and therefore suitable for remote sites
- Cost effective compared to conventional alternatives

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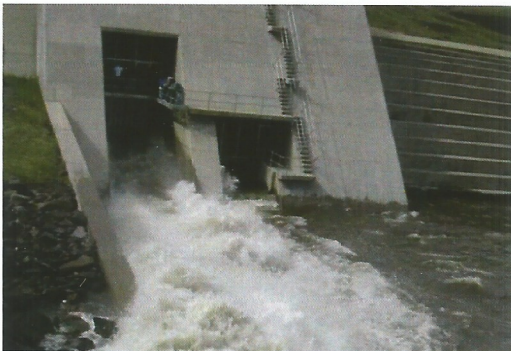
*World leaders in automatic, self actuating, water control equipment.*

## COMPLETED PROJECTS

There are numerous installations around Southern Africa and Africa with the following representing only a few of them.



*Raising of the Belfast dam using TOPS spillway gates to increase storage capacity by 50 %*



*Large Scour gate on the Matsoku River Lesotho*



### 1995

Two large 1300 mm diameter automatic diaphragm valves (DVs) for Umgeni Water Board to regulate inflows against previously uncontrollable surges in water supply from the Inanda dam. These DVs work extremely well to control very sharp surge peaks.

### 1996

Two large 1500 mm diameter automatic DVs for a hydro electric scheme in Uganda to control flow from the Mubuku River into a headrace canal feeding the penstocks.

### 1997

Four No. 2m high TOPS gates to increase water supply in the Belfast dam, Mpumalanga to give an additional 50% storage in the dam.

### 1998

One large scour gate on the Matsoku River, Lesotho for the world renown Highlands Water scheme. This gate protects a tunnel supplying water to the Katse dam from sediment build-up and works frequently each year.

### 2001

Two large 3,5m high TOPS gates for the Avis dam in Windhoek, Namibia. These gates have worked twice under flood conditions to open and close automatically.

### 2004

One large 4m high TOPS gate to act as a scour gate for a weir on the Runde River, Zimbabwe for Murowa Diamonds. This gate works frequently when floods come down the river.

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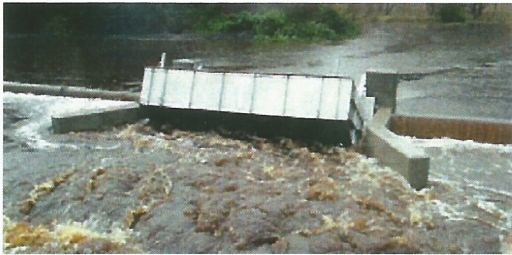
**2007**

The two largest 1600mm DVs in the world on the Maguga dam regulating weir, Swaziland. These have been successfully commissioned and they regulate with good accuracy. These DVs automatically regulate the intermittent and large flows from the hydro power station at Maguga to give a constant flow down the Komati River.



**2007**

Six No. 16m long TOPS gates installed on the Mnjoli dam in Swaziland to raise the water level by 1,5m and gain an extra 22 million m<sup>3</sup> of valuable water for irrigation. This is a 17% increase in the capacity of the dam.



**2014**

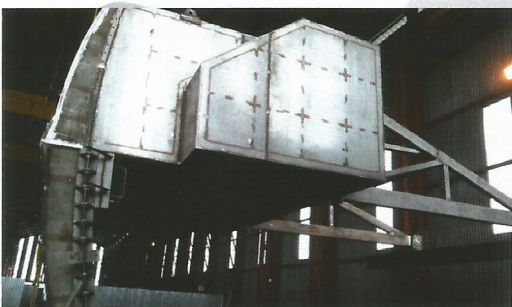
Karataru River Estuary tidal gates. These gates won an award for innovation. The two gates automatically prevent migration of saline water upstream whilst allowing floods to pass to the estuary.



**2015/2016**

Various in let control diaphragm valves 200NB-900NB for large reservoirs with TWL float valves to control water level.

Presidential Intervention Program, OR Tambo District Municipality



**2016**

Neckartal dam project: a large scour gate in the abstraction weir to remove silt for the Ministry Of Agriculture, Water and Forestry, Namibia.

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