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# FLEXIBORE

## CATALOGUE

# IF IT IS A BORE THINK

# FLEXIBORE100

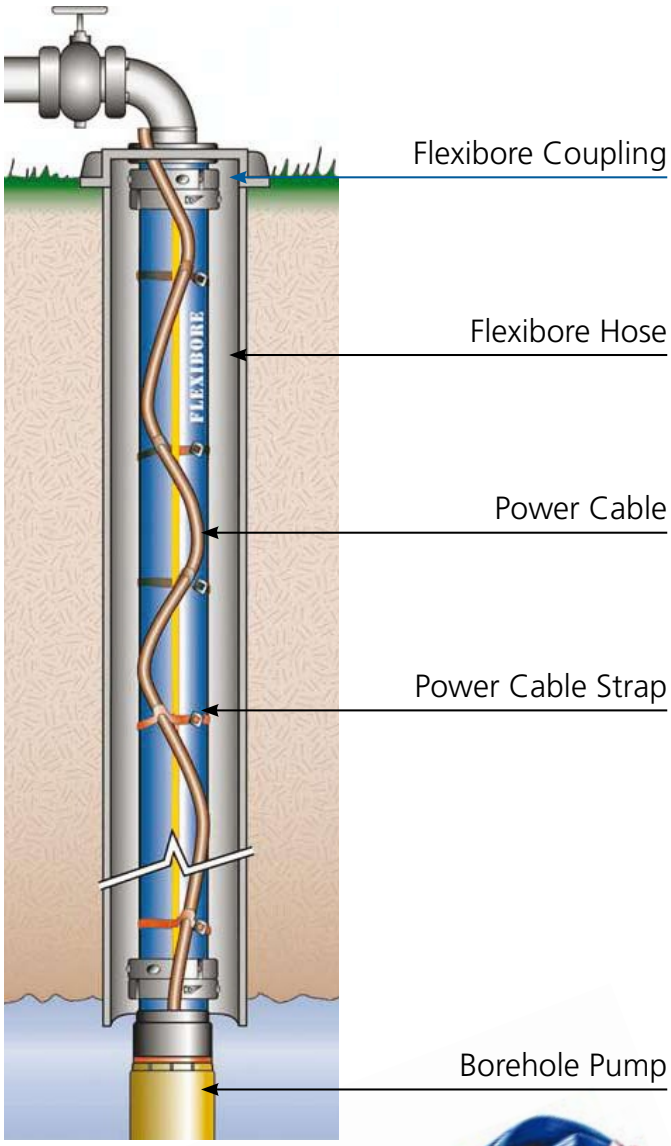
**Flexible Rising Main**


**Flexibore** the most cost ef□cient and effective method for pumping bore water.

# FLEXIBORE100

## Flexible Rising Main

**Flexibore 100** series has been designed to reduce the time of installing bore pumps pumping at shallower depths down to 100m, while maintaining the advantages of a flexible riser. **Flexibore 100** series lends itself to hand and basic installation in rural and domestic applications as well as remote areas with difficult access.




*Pre-assambled off site and ready to install into bore*

**Flexibore is a flexible riser used for ground water pumping**
Flexibore 100 will suit many borehole applications and is compatible with most submersible pumps. The diameters are 32mm & 50mm ID for depths of up to 100m.
For deeper applications refer to Flexibore 200.

**General Application**
Flexibore has been specifically designed to replace rigid riser pipes such as Poly & PVC which are subject to encrustations resulting in reduced flow rates. Poly pipe can be difficult to remove when the pump requires servicing. There is no safety cable required when using Flexibore due to its high tensile strength.

**Typical Applications**
These include mine de-watering, domestic and municipal water supply, test pumping, rural and industrial bore-water retrieval and similar ground water projects.

**Easy Installation**
Flexibore is attached to the pump with the patented couplings. The pump, with hose and cables attached, is lowered into the bore using either a simple rolling wheel or a crane. With its continuous length, the hose can be installed with less time and labour than rigid systems, this includes poly pipe. The same advantages apply to pump retrieval.

*Metre marked*

*Secure Coupling*

*Secure Power Cable to Hose*

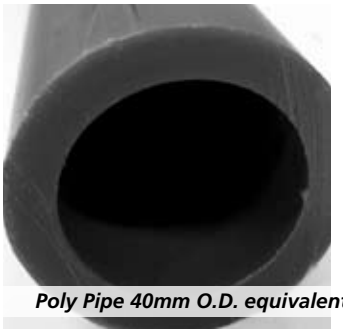
*300m stock on plastic drum*

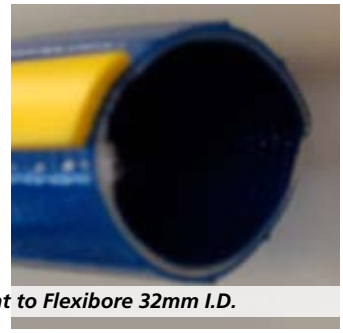
*Lower Pump into Bore*

*Bore Cap attached*

# FLEXIBORE100

## Flexible Rising Main





*Poly Pipe 40mm O.D. equivalent to Flexibore 32mm I.D.*

*No Iron Bacteria build up*


*Swells up to 10%*

*Poly Pipe Transport*

*Flexibore 100 easy Transport*

*No Safety Cable necessary*

*Flexibore Tensile tested*

**Easy installation**
The hose is lightweight, easy to handle and can be equipped ready for installation at your premises or on site.

**Continuous length**
We will supply the exact length required reducing waste and on site modifications.

**No internal build up**
Iron bacteria present in many aquifers will not build up on the inside of Flexibore. The hose swells slightly during pumping, thus no build up occurs inside the riser. This ensures major electricity savings compared to rigid pipes in which the flow can be restricted.

**Low friction loss**
The slight inherent swell minimizes friction loss resulting in excellent hydraulic performance. The flow rate of 32mm Flexibore compares favorably with 40mm Polypipe

**Transportable**
Delivered in a compact reel, the hose is easy to transport, light weight and easy to handle.

**No safety cable required**
Every hose is hydrostatically tested for tensile strength and pressure rating. 50mm Flexibore has been tested by a NATA laboratory and has a peak tensile load of 3 tonne.

**Secure couplings**
Total security with industry best, precision engineered and patented couplings. Flexibore is compatible with all types of submersible pumps.

**Easy retrieval**
The ease of retrieval is significantly better than any other type of riser. No damage can occur due to kinking .

**Cost effective**
The savings on quick and easy installation & retrieval, electrical power to maintain flow rates and corrosion resistance ensure Flexibore is the most cost effective riser available.


| Cost Savings using | Poly Pipe 40mm x 50m | Flexibore 100 32mm x 50m |
|---|---|---|
| Riser | 50% | 100% |
| Coupling | 30% | 100% |
| Safety Cable | 100% | 0% |
| Handling/Off-loading/Storage | 100% | 40% |
| Preparation | 100% | 50% |
| Travel Cost | 100% | 50% |
| Installation/Retrieval Time | 100% | 65% |
| Electricity Efficiency Saving per year | 100% | 70% |
| Servicing Benefits | Low | High |

# FLEXIBORE100

## Flexible Rising Main

Tough PU Cover

Woven polyester fabric

Strip with loops every two meters from which to secure power cable

PVC Nitrile lining bonded to fabric which eliminates separation

Each Crusader hose is covered by a 1 year warranty against faulty materials and workmanship.

### Data Specification Sheet

| | | |
|---|---|---|
| **Nominal Size** (inches) | 1 1/4" | 2" |
| **Internal Diameter** (mm) | 32 | 50 |
| **Burst Pressure** (bar) | 70 | 46 |
| **Max. Recommended Operating Pressure** (bar) | 28 | 18 |
| **Peak Tensile Load** (tonnes) | 2.0 | 3.0 |
| **Max. Recommended Tensile Load** (tonnes) | 0.8 | 1.2 |
| **Weight of Flexibore** (kg/m) | 0.33 | 0.48 |
| **Outer Diameter of Coupling** (mm) | 65 | 90 |
| **Well/Bore Casing Requirement** (mm) | 76 | 102 |
| **BSP Coupling Thread Size** (mm) | 32 | 50 |
| **Weight of Stainless Steel Coupling** (kg) | 0.6 | 1.7 |
| **Weight of Water at 10% Swell** (kg/m) | 1.0 | 2.4 |
| **Max. Flow Rate** (litres/sec) | 2 | 6 |

### Other Specifications

| | |
|---|---|
| **Water pH** | 4 - 9 |
| **Max. Swell** | 10% |
| **Max. Pump Setting** | 100m |
| **Max. Extension** | 1% |
| **Max. Operating Temperature** | 40˚C |
| **Safety Factor** | 2.5:1 |

NOTE: For OPERATION beyond stated RECOMMENDED OPERATING LIMITS, contact your Flexibore distributor.

### Accessories

**Bore Cap**

**Coupling**

**Flexibore Joiner**

**Installation Roller**

**Cable Ties**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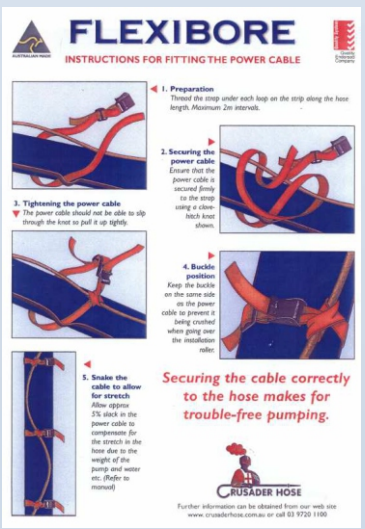
# Flexibore application above 150m drop require:

- A combination of Heavy duty cable ties and a Polyurethane (PU) Strap

  Heavy Duty Cable Ties: 2 units every 1 metre

  Polyurethane (PU) Strap: 1 unit every 5 metre

Heavy Duty Cable Ties Instruction


Polyurethane (PU) Strap Instruction

# FLEXIBORE 200

## Flexible Rising Main

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# FLEXIBORE 200

## Flexible Rising Main

## Product Description

Crusader's range of hoses

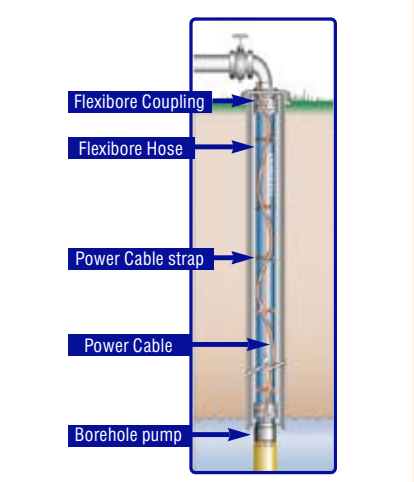
### Description

Flexibore is a flexible riser used for ground water pumping. By integrating thermoplastic polyurethane into a woven textile fabric of high tenacity polyester, the hose is produced. This process gives the hose flexibility while sustaining the weight of a submersible pump.

### Compatibility

Flexibore will suit many borehole applications and is compatible with most submersible pumps. The sizes range from 40mm to 200mm internal diameter and depths of up to 250m.

## Applications




Typical borehole arrangement

### Typical Applications

These include mine de-watering, domestic and municipal water supply, test pumping, rural and industrial bore-water retrieval and similar ground water projects.

### General Application

Flexibore has been specifically designed to replace rigid riser pipes such as steel which is subject to rust and encrustations. This internal scaling reduces flow rates and pump efficiency. Other risers such as PVC and polypipe can be brittle or bend. They are also generally heavier and hard to handle.

# FLEXIBORE 200

*Flexible Rising Main*

## *Ease of Use*

### Easy Installation

Once in the field, Flexibore is attached to the pump with the patented couplings. The pump, with hose and cables attached, is lowered into the bore using either a simple rolling wheel or a crane. See our installation brochure for further details.

### Transportable

With its continuous length, the hose can be installed with less time and labour than rigid systems, this includes poly pipe. The same advantages apply to pump retrieval.

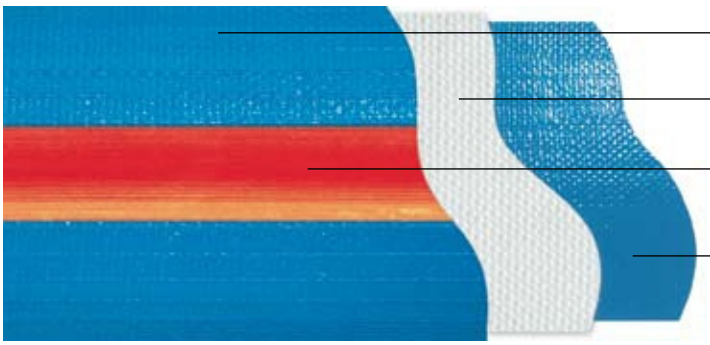
## *Benefits*

### Benefits and Cost Saving Features

- Quick and easy installation and retrieval
- No internal scaling
- Totally corrosion resistant
- Reduced head losses and improved flow rates due to swelling under pressure
- Less labour intensive due to ease of installation
- Reduced transport costs due to light weight and easy handling
- Custom lengths made to order
- Potable water approved: AS 4020
- All hydrostatically tested

# FLEXIBORE 200

## Flexible Rising Main



Tough polyurethane cover

Woven polyester fabric

Strip with loops every meter from which to secure power cable

Impregnated polyurethane lining bonded to outer cover which eliminates separation

Each Crusader hose is covered by a 5 year pro-rata warranty against faulty materials and workmanship.

| FLEXIBORE 200 SERIES | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal size (inches) | 1 1/2 | 2 | 3 | 4 | 5 | 6 | 8 |
| Internal diameter (mm) | 40 | 51 | 76 | 102 | 126 | 152 | 200 |
| Burst pressure (bar) | 38 | 74 | 58 | 52 | 50 | 44 | 42 |
| Maximum recommended operating pressure (bar) | 15 | 30 | 23 | 21 | 20 | 18 | 16 |
| Peak Tensile Load (tonnes) | 2.1 | 3.2 | 8.3 | 10.0 | 14.5 | 16.0 | 22.0 |
| Max. recommended Tensile Load (tonnes) | 0.9 | 1.3 | 3.3 | 4.0 | 6.0 | 6.5 | 9 |
| Weight of Flexibore (kg/m) | 0.3 | 0.6 | 0.9 | 1.5 | 2.1 | 2.5 | 3.4 |
| Outer diameter of Coupling (mm) | 70 | 90 | 115 | 140 | 170 | 190 | 270 |
| Weight of coupling stainless steel (kg) | 2.0 | 2.8 | 5.2 | 7.1 | 11.0 | 12.1 | 41.0 |
| FittingBolt Torque (Nm) | 10 | 12 | 30 | 30 | 40 | 45 | 45 |
| Weight of water at 10% swell (kg/m) | 1.52 | 2.38 | 5.49 | 9.89 | 15.09 | 21.96 | 31.00 |
| Maximum flow rate (L/sec) | 4 | 6 | 18 | 40 | 55 | 90 | 148 |

NOTE: For OPERATION beyond stated RECOMMENDED OPERATING LIMITS, contact your Flexibore distributor.

| OTHER SPECS | |
|---|---|
| Maximum operating temperature | 45˚C |
| Water pH range | 4 to 9 |
| Maximum pump setting | 250m |

| | |
|---|---|
| Maximum diametric swell | 15% |
| Maximum extension | 2% |
| Safety Factor | 2.5:1 |

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Quality System

# FLEXIBORE 250

## Flexible Rising Main

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# FLEXIBORE 250

## Flexible Rising Main

## Product Description

Crusader's range of hoses

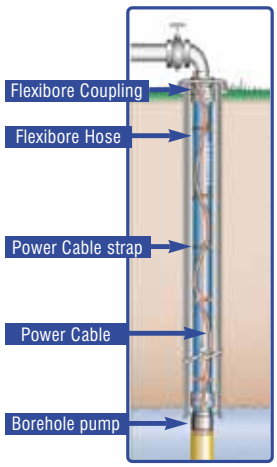
### Description

Flexibore 250 is a flexible riser used for ground water pumping. By integrating thermoplastic polyurethane into a woven textile fabric of high tenacity polyester, the hose is produced. This process gives the hose flexibility while sustaining the weight of a submersible pump.

### Compatibility

Flexibore 250 will suit many borehole applications and is compatible with most submersible pumps. The sizes range from 40mm to 200mm internal diameter and depths of up to 250m.

## Applications




### Typical Applications

These include mine de-watering, domestic and municipal water supply, test pumping, rural and industrial bore-water retrieval and similar ground water projects.

### General Application

Flexibore has been specifically designed to replace rigid riser pipes such as steel which is subject to rust and encrustations. This internal scaling reduces flow rates and pump efficiency. Other risers such as PVC and polypipe can be brittle or bend. They are also generally heavier and hard to handle.

# FLEXIBORE 250

*Flexible Rising Main*

## *Ease of Use*

### Easy Installation

Once in the field, Flexibore 250 is attached to the pump with the patented couplings. The pump, with hose and cables attached, is lowered into the bore using either a simple rolling wheel or a crane. See our installation brochure for further details.

### Transportable

With its continuous length, the hose can be installed with less time and labour than rigid systems, this includes poly pipe. The same advantages apply to pump retrieval.

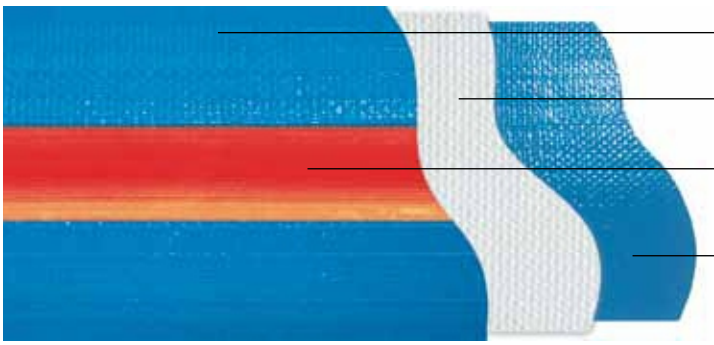
## *Benefits*

### Benefits and Cost Saving Features

- Quick and easy installation and retrieval
- No internal scaling
- Totally corrosion resistant
- Reduced head losses and improved flow rates due to swelling under pressure
- Less labour intensive due to ease of installation
- Reduced transport costs due to light weight and easy handling
- Custom lengths made to order
- Potable water approved: AS 4020
- All hydrostatically tested

# FLEXIBORE 250

## Flexible Rising Main



Tough polyurethane cover

Woven polyester fabric

Strip with loops every meter from which to secure power cable

Impregnated polyurethane lining bonded to outer cover which eliminates separation

Each Crusader hose is covered by a 5 year pro-rata warranty against faulty materials and workmanship.

| FLEXIBORE 250 SERIES | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal size (inches) | 1 1/2 | 2 | 3 | 4 | 5 | 6 | 8 |
| Internal diameter (mm) | 40 | 51 | 76 | 102 | 126 | 152 | 200 |
| Burst pressure (bar) | 38 | 74 | 58 | 52 | 50 | 44 | 42 |
| Maximum recommended operating pressure (bar) | 19 | 37 | 29 | 26 | 25 | 22 | 21 |
| Peak Tensile Load (tonnes) | 2.1 | 3.2 | 8.3 | 10.0 | 14.5 | 16.0 | 22.0 |
| Max. recommended Tensile Load (tonnes) | 1.0 | 1.6 | 4.2 | 5.0 | 7.3 | 8.0 | 11.0 |
| Weight of Flexibore (kg/m) | 0.3 | 0.6 | 0.9 | 1.5 | 2.1 | 2.5 | 3.4 |
| Outer diameter of Coupling (mm) | 70 | 90 | 115 | 140 | 170 | 190 | 270 |
| Weight of coupling stainless steel (kg) | 1.3 | 2.8 | 5.5 | 7.8 | 11.7 | 13 | 41 |
| Weight of water at 10% swell (kg/m) | 1.52 | 2.38 | 5.49 | 9.89 | 15.09 | 21.96 | 31.00 |
| Maximum flow rate (l/sec) | 4 | 6 | 18 | 40 | 55 | 90 | 148 |

NOTE: For OPERATION beyond stated RECOMMENDED OPERATING LIMITS, contact your Flexibore distributor.

| OTHER SPECS | |
|---|---|
| Maximum operating temperature | 60˚C |
| Water pH range | 3 to 9 |

| | |
|---|---|
| Maximum diametric swell | 15% |
| Average extension | 0.5% |
| Safety Factor | 2:1 |

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Flexibore250 Rev1 02/16

# FLEXIBORE 300

## Flexible Rising Main

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### Description

Flexibore 300 is a flexible riser used for ground water pumping.
By integrating thermoplastic polyurethane into a woven textile fabric of high tenacity polyester, the hose is produced. This process gives the hose flexibility while sustaining the weight of a submersible pump.

### Compatibility

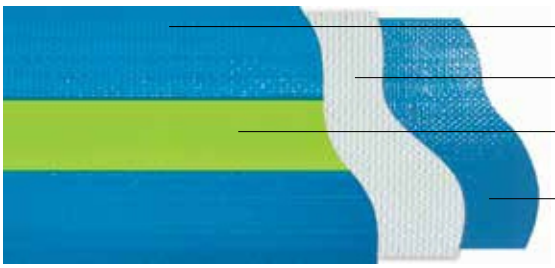
Flexibore 300 will suit many borehole applications and is compatible with most submersible pumps. The sizes range from 76mm (3") to 152mm (6") internal diameter and depths of up to 300m.

# FLEXIBORE 300

## *Flexible Rising Main*

### Easy Installation

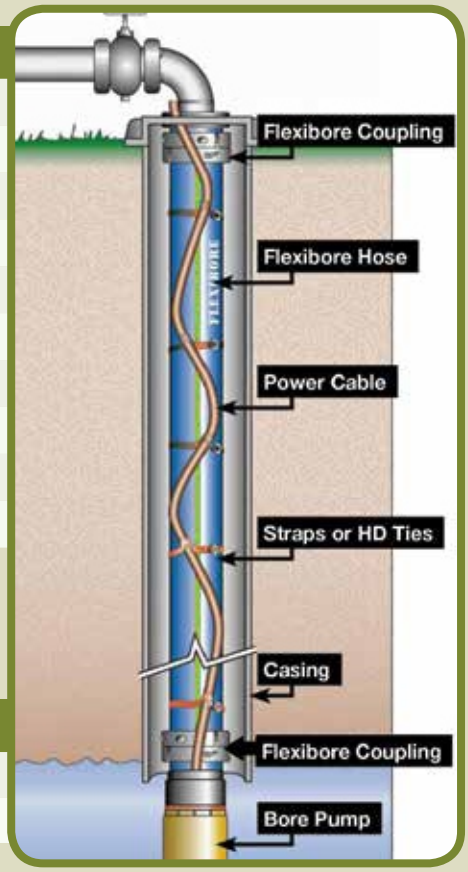
Once in the field, Flexibore 300 is attached to the pump with the patented couplings. The pump, with hose and cables attached, is lowered into the bore using either a simple rolling wheel or a crane. See our installation brochure for further details.




Each Crusader hose is covered by a 5 year pro-rata warranty against faulty materials and workmanship.

| FLEXIBORE 300 SERIES | | | | |
|---|---|---|---|---|
| Nominal Size (inches) | 3″ | 4″ | 5″ | 6″ |
| Internal Diameter (mm) | 76 | 102 | 127 | 152 |
| Burst Pressure (bar) | 80 | 80 | 70 | 70 |
| Maximum Recommended Operating Head (m) | 300 | 300 | 300 | 300 |
| Peak Tensile Load (tonnes) | 10 | 15 | 20 | 25 |
| Maximum recommended Tensile Load (tonnes) | 5 | 7.5 | 10 | 12 |
| Weight of Flexibore (kg per metre) | 1.5 | 2.3 | 3 | 3.5 |
| Outer Diameter of Coupling (mm) | 120 | 145 | 175 | 195 |
| Weight of Stainless Steel Coupling (kg) | 6 | 8 | 12 | 14 |
| Fitting Bolt Torque | 35Nm | 35Nm | 45Nm | 45Nm |

NOTE: For OPERATION beyond stated RECOMMENDED OPERATING LIMITS, contact your Flexibore distributor.




| OTHER SPECS | |
|---|---|
| Maximum operating temperature | 50°C-70°C |
| Water pH range | 3 to 9 |

| | |
|---|---|
| Maximum diametric swell | 15% |
| Maximum extension | 0.5% |

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Flexibore300 04/20

# FLEXIBORE 400 Series

## Flexible Rising Main


### Description

**Flexibore® 400** is a flexible riser used for ground water pumping. This flexible hose is fabricated by integrating thermoplastic polyurethane into a woven textile reinforcement of high-tenacity polyester. This process gives **Flexibore® 400** both pressure and tensile strength to sustain the forces when pumping groundwater with a submersible pump.

### Compatibility

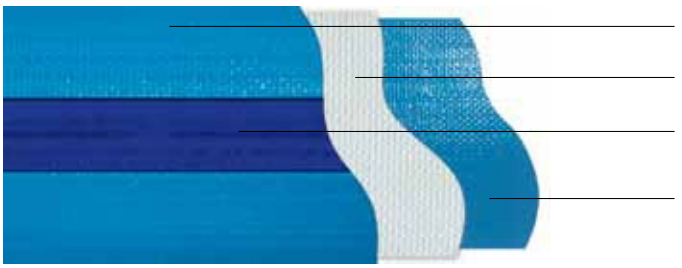
**Flexibore® 400** will suit many borehole applications and is compatible with most submersible pumps. The sizes range from 76mm (3") to 152mm (6") internal diameter and depths of up to 400m.

# FLEXIBORE 400 Series

## Flexible Rising Main

### Easy Installation

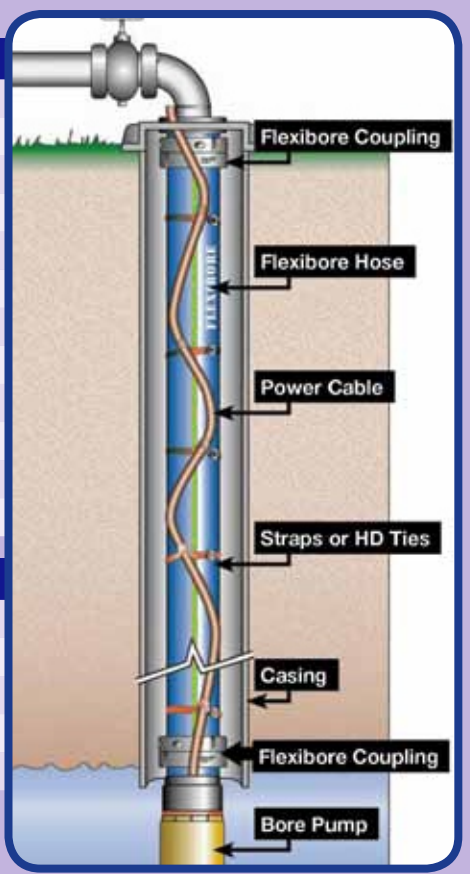
Once in the field, the **Flexibore® 400** is attached to the pump with the patented couplings. The pump, with hose and cables attached, is lowered into the bore using either a simple rolling wheel or a crane. See our installation manual for further details or visit **www.flexibore.com.au.**




Each **Flexibore® 400** hose is covered by a 5 year pro-rata warranty against faulty materials and workmanship.

| FLEXIBORE® 400 SERIES | | | | |
|---|---|---|---|---|
| Nominal Size (inches) | 3" | 4" | 5" | 6" |
| Internal Diameter (mm) | 76 | 102 | 127 | 152 |
| Burst Pressure (bar) | 110 | 110 | 90 | 90 |
| Max. Recommended Operating Head (m) | 400 | 400 | 400 | 400 |
| Peak Tensile Load (tonnes) | 14 | 20 | 25 | 30 |
| Max. Recommended Tensile Load (tonnes) | 7 | 10 | 12 | 15 |
| Weight of Flexibore® (kg/m) | 1.5 | 2.3 | 3 | 3.5 |
| Outer Diameter of Coupling (mm) | 120 | 145 | 175 | 195 |
| Weight of Coupling Stainless Steel (kg) | 6 | 8 | 12 | 14 |
| Weight of Water at 10% Swell (kg/m) | 3.74 | 8.91 | 14.30 | 19.80 |
| Fitting Bolt Torque (Nm) | 60 | 60 | 80 | 80 |
| Maximum Flow Rate (litres/sec) | 18 | 40 | 55 | 90 |

| OTHER SPECS | |
|---|---|
| Maximum Operating Temperature | 60°C |
| Water pH Range | 3 to 9 |
| Maximum Diametric Swell | 15% |
| Maximum Extension | 0.5% |
| Safety Factor | 2:1 |




NOTE: A **FlexiboreCalc input form** is required for **Flexibore® 400.**
For operation beyond stated RECOMMENDED OPERATING LIMITS, contact your **Flexibore®** distributor.

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# FLEXIBORE

## CATALOGUE

For Assistance please contact Michael: 0488 917 285 or
michael@irrigationdirect.com.au