

# Flexible Rising Main / Wellman 300

**Wellman 300 Flexible Rising Main** is designed as a permanent alternative to traditional materials such as steel, fiberglass, PVC and polyethylene in water wells with electric submersible pumps.

## ▶ **Rapid installation and retrieval of the submersible pump**

Supplied in a single length to the required pump setting, there are no flanges or joints, except at the pump and headworks. Installation options include by crane or with a vehicle allowing for rapid restoration of service in the event of routine maintenance or pump failure.

## ▶ **Superior hydraulic performance**

The textile reinforcement is designed to swell under operating conditions up to 15%. This feature gives a nominal increase in drop pipe diameter, reducing friction loss and improving hydraulic performance. Often this can be translated into a smaller Wellman diameter than conventional rigid pipe, giving additional financial benefits

## ▶ **Low maintenance**

All synthetic materials of construction mean that there is zero corrosion and no scale build up. The high grade polyurethane lining and cover material is resistant to hydrocarbon fuels, many chemicals, ozone and UV, abrasion and microbial attack

## ▶ **Easy to store and transport**

Wellman has a small storage footprint compared to rigid pipe, allowing transportation by smaller vehicles and requiring less manpower. Particularly useful when installation is required in remote locations with poor access.



### **Typical Applications Include:**

- Groundwater abstraction - potable and brackish
- Water supply wells in R.O. desalination plant app.
- Food processing
- Irrigation / Agriculture
- Environmental monitoring
- Mine de-watering
- Land stabilization
- Solar power systems
- Offshore rig fire water and service pumps

### **International Drinking Water Certification**

<b>USA</b>	NSF61 listed
<b>UK</b>	WRAS approval to BS6920
<b>Germany</b>	KTW-DVGW approved
<b>Australia</b>	AS-NZS4020-2005 approved
<b>Poland</b>	PZH approved

AS/NZS 4020

KTW-DVGW



## Technical Data / Wellman 300

Diameter	mm Inch	51 mm 2"	76 mm 3"	102 mm 4"	127 mm 5"	152 mm 6"
Maximum pump setting	m ft	<b>300</b> 1,000	<b>300</b> 1,000	<b>300</b> 1,000	<b>280</b> 930	<b>280</b> 930
Burst pressure	bar psi	<b>62</b> 900	<b>62</b> 900	<b>62</b> 900	<b>58</b> 840	<b>58</b> 840
Maximum operating pressure	bar psi	<b>31</b> 450	<b>31</b> 450	<b>31</b> 450	<b>29</b> 420	<b>29</b> 420
Effective tensile strength	kg lb	<b>4,600</b> 10,150	<b>8,000</b> 17,650	<b>14,000</b> 31,000	<b>20,000</b> 44,100	<b>23,000</b> 50,700
Maximum continuous end load	kg lb	<b>1,800</b> 4,000	<b>3,200</b> 7,050	<b>5,600</b> 12,350	<b>8,000</b> 17,650	<b>9,200</b> 20,300
Weight (hose only)	kg/m lb/ft	<b>0.7</b> 0.5	<b>1.0</b> 0.7	<b>1.6</b> 1.1	<b>2.0</b> 1.3	<b>2.5</b> 1.7
Weight (Mandals coupling)	kg lb	<b>1.4</b> 3.1	<b>3.4</b> 7.5	<b>6.3</b> 13.9	<b>11.3</b> 25.0	<b>15.6</b> 34.4
Mandals coupling O/D	mm in	<b>80</b> 3.1	<b>115</b> 4.5	<b>145</b> 5.7	<b>177</b> 7.0	<b>200</b> 8.0
Maximum extension under load conditions	%	<b>+ 2</b>				
Maximum diameter swell	%	<b>+ 15</b>				
Maximum water temperature	°C °F	<b>- 40 to + 50. (with intermittent use up to 80)</b> - 40 to +122 (with intermittent use up to 176)				
Water quality Below 30 °C / 86 °F Above (or equal) 30 °C / 86 °F	pH	<b>4 - 9</b> <b>5 - 9</b>				
Pressure loss at maximum flow	bar psi	<b>2</b> 29				
Velocity at maximum flow	m/s f/s	<b>2.4</b> 8	<b>3.0</b> 10	<b>3.0</b> 10	<b>4.2</b> 14	<b>4.5</b> 15
Velocity flow rate a nominal 250m / 820 ft pump setting	l/s gpm	<b>8</b> 127	<b>18</b> 285	<b>41</b> 650	<b>78</b> 1,238	<b>105</b> 1,665

**Note:** Safety BP / WP is 2:1 (50%). For all non-hazard and/or non-flammable liquids.

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**Wellman 300** is manufactured using "through-the-weave" technology, where the high grade polyurethane lining and cover are formed in a single process to provide a tough composite riser. The textile reinforcement is designed to support the weight of the submersible pump, the column of water, the power cable and the riser itself, with a minimum 2.5:1 safety factor.

Additionally, torque on pump start-up is accommodated without damage to the riser.

The Mandals company also manufactures the textile weaving machines used by all the major hose companies throughout the world so our understanding of textile design and technology is unparalleled.

Wellman 300 is the main component of a complete system, which includes couplings, power cable attachment equipment, lifting clamps and wellhead rollers. All ancillary equipment can be supplied and factory-trained installation engineers are available to provide assistance and training if required.

**It is important that only approved accessories are used with the Wellman riser. The use of alternative components will compromise the integrity of the complete system**