

## WELLMAN BORE HOSE – FLEXIBLE RISING MAIN



Light and flexible polyurethane layflat hose with drinking water approval, designed as a permanent alternative to traditional materials in water wells with electric submersible pumps, manufactured in Norway to exacting standards.

### ADVANTAGES

#### Rapid installation and retrieval of pump

- > Lengths available up to 300m (depending on size)
- > Joints only needed at pump and headwork
- > Easier handling in restricted work areas
- > Cost efficient installation and operation

#### Low maintenance

- > No corrosion and no scale build up
- > Resistant to hydrocarbons, chemicals, ozone, UV
- > Resistance to microbial attack, no clogging
- > High abrasion resistance
- > Minimised equipment damage risk
- > Long lifetime expectancy

#### Superior hydraulic properties

- > Slight diameter swell (up to 15%)
- > Reduced friction loss, improved flow rates
- > Stainless steel easy to mount couplings

#### Easy storage, packing and transportation

- > Lightweight, flexible and easy to handle
- > Transportation by smaller vehicles
- > Less manpower needed
- > Easier access to remote locations

#### Quality control

Mandals hoses are manufactured to the highest standards and quality control procedures and are warranted to be free from defects in workmanship and materials.

#### International drinking water certification

Australia: AS 4020

UK: WRAS approval to BS6920

USA: NSF61 listed

Germany: KTW-DVGW approved, W270 approved

#### Typical applications, permanent or temporary

- > Ground water abstraction
- > Beach wells in desalination plants
- > Dewatering (mines, flooding, etc)
- > Environmental monitoring
- > Land stabilisation
- > Leachate removal in landfill sites
- > Offshore rig fire water etc

### A complete system

The complete well riser main system consists of the Wellman hose, with special couplings, a submersible pump and power cables.

### AISI 316 Stainless Steel Couplings

The potable water approved Wellman couplings are especially developed by Mandals to ensure easy installation and secure operation in the long term. They can be reused as needed and help ensure that the hose is coupled properly every time.



INNER DIAMETER OF HOSE	OUTER DIAMETER OF COUPLING	PART No.	WEIGHT PER COUPLING
2"/51mm	106mm	WHC51	3.60kg
3"/76mm	133mm	WHC76	6.75kg
4"/102mm	164mm	WHC102	10.70kg
6"/154mm*	200mm	WHC152	8.00kg

\*The 6" coupling is a different design.

### Hose Construction

Mandals Wellman is manufactured using "through the weave" technology, where the thermoplastic polyether based polyurethane (TPU) lining and cover are formed in a single extrusion process to provide a tough composite riser with excellent wear and tear properties.

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 2:1 safety factor. Additionally, torque on pump start-up is accommodated without damage to the riser.

The preattached and strong loops allow for easy attachment of the power cables for the submersible pump.

### Technical Data Mandals Wellman

INNER DIAMETER OF HOSE		WALL THICKNESS	PART No.	WEIGHT*	BURST PRESSURE		MAX. WELL DEPTH	MAX. CONTINUOUS END LOAD**
INCH	MM	MM		KG/M	PSI	BAR	M	KG
2	51+2.0	3.1	WELMAN51	0.57	870	60	250	1,700
3	76+2.0	3.1	WELMAN76	0.91	870	60	250	3,000
4	102+2.5	3.7	WELMAN102	1.50	870	60	250	5,500
5	127+2.5	3.7	WELMAN127	1.88	870	60	250	7,200
6	152+3.0	4.0	WELMAN152	2.30	870	60	250	9,000

To obtain maximum lifetime for the hose, it is recommended that actual working pressure does not exceed 30 bar/435 psi at the submerged pump head.

\*Dry hose without any attachments.

\*\*Including weight of water, pump, power cable, coupling, attachments, etc.

