

## Wellflex

### Flexible Rising Pipe for extracting underground water

Manufactured under ISO 9001 Quality Management systems accreditation

#### Hoses + Fittings + Well Head + Elbow

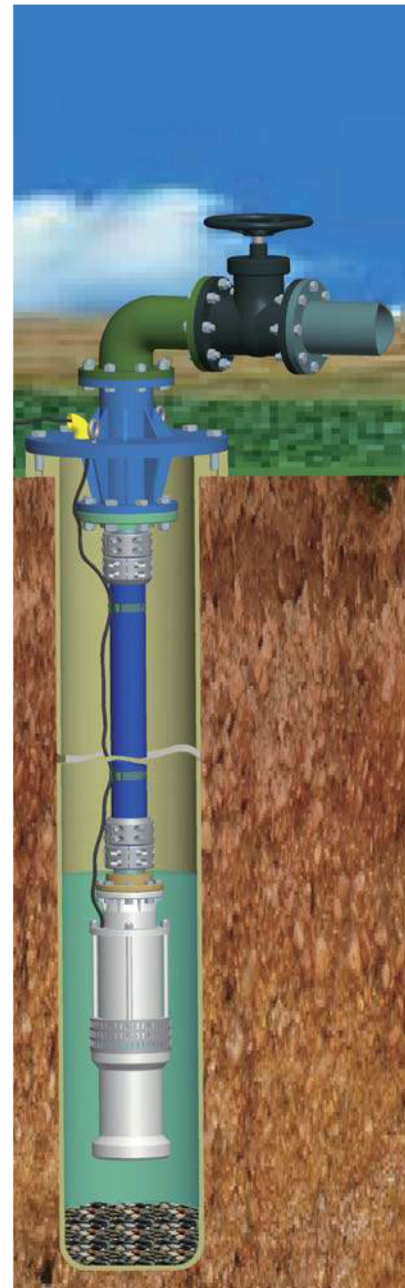
#### Wellflex *New Generation Flexible Rising Pipe for Extracting Underground Water*

When extracting underground water is necessary, **WELLFLEX** hoses are recommended strongly because of its innate advantage on rigid plastic pipes or steel pipes in the following situations:

- Underground water is very deep.(For example, deeper than 60 meters )
- Underground water is salty or acid
- The borehole size is bigger than 3 inches.
- Maintenance cost is high
- End-users want to save money in long term

Furthermore, **WELLFLEX** hoses are layflat, coilable, of long-length ( its length can be more than 400 meters per piece), and can hold high pressure and strong tensile strength due to encapsulated reinforcement jacket. It means that it is the easiest to install submersible pumps with **WELLFLEX** hoses than any other type of rigid pipes because no extra connectors are needed and submersible pumps can be directly hung into the bottom of wells after pumps are connected to hoses with specialized fitting beside the wells.

In above scenarios, **WELLFLEX** hoses are your best option!





- No joints between pumps and well head
- No corrosion
- No bacteria growth
- No money and time to waste on transporting, installing and maintaining rising main

**Wellflex** are one type of through-the-weave polyurethane (PU) covered hose which is made of PU materials approved according to NSF 61 standard.

**Wellflex** hoses shall be made from 100% high tenacity virgin synthetic yarn circular woven and completely, totally embedded in the PU compound, excellent protected against mechanical damage, forming a single homogenous construction without the use of any glues or adhesives of any type.

The structure of **Wellflex** ensures that exposure to seawater and contamination by most chemical substances, hydrocarbons, oils, alkalis, acids and greases have no effect on the short or long term performance of **WELLFLEX** hoses.

- Structure
  - Inner tube and cover:** Smooth PU cover and tube
  - Reinforcement:** Circular woven polyester jacket
  - Incorporates a **stripe** of reinforced polyurethane on the side to support the electrical cables and accessories
  - Operating Temperature** Range: From -60° F to 176° F (-50° C to 80° C)
  - Standard Color** : Blue, other colors available per request
  - Standard Length** : 330ft/100m, 660ft/200m, 990ft/300m; other lengths available per request;
  - Comparable Brand:** Wellmaster hose from Angus, Wellman hose from Mandals, Boreline from Crusader, Oroflex Well from Tipsa
  - Raw Materials** : PU made by BASF, NSF61 approved

## Technical Specification on Wellflex

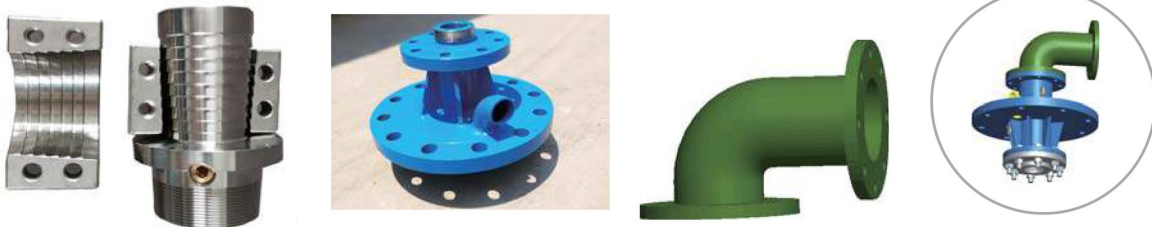
ID		Wall Thickness		Weight		Working Pressure	Bursting Pressure	Tensile Strength	
Inch	mm	Inch	mm	lbs/ft	kg/m			Kg	Lbs
1"	26+1.0	0.90"	2.1	0.18	0.26	425PSI/30bar	920PSI/65bar	1,900	4,200
1 1/2"	39+1.5	0.10"	2.4	0.27	0.40	425PSI/30bar	920PSI/65bar	3,800	8,300
2"	52+1.5	0.11"	2.8	0.44	0.65	425PSI/30bar	920PSI/65bar	5,600	12,300
2 1/2"	65+1.5	0.12"	3.0	0.50	0.75	425PSI/30bar	920PSI/65bar	8,800	19,300
3"	77+2.0	0.13"	3.2	0.77	1.15	390PSI/27bar	870PSI/60bar	10,000	22,000
4"	104+2.0	0.14"	3.5	1.00	1.50	380PSI/26bar	870PSI/60bar	16,500	36,000
5"	128+2.0	0.15"	3.8	1.44	2.15	360PSI/25bar	870PSI/60bar	25,000	55,000
6"	155+2.5	0.16"	3.9	1.74	2.60	360PSI/25bar	870PSI/60bar	36,000	79,000
8"	204+3.0	0.18"	4.5	2.41	3.60	290PSI/20bar	700PSI/48bar	40,000	88,000



## :: Technical Specification on Wellflex

ID		Wall Thickness		Weight		Working Pressure	Bursting Pressure	Tensile Strength	
Inch	mm	Inch	mm	lbs/ft	kg/m	PSI/bar	PSI/bar	Kg	Lbs
4"	104+2.0	0.20"	5.0	1.29	2.00	510PSI/35bar	1320PSI/90bar	25,200	55,000
6"	155+2.5	0.23"	5.8	2.25	3.35	510PSI/35bar	1320PSI/90bar	48,600	107,000
8"	204+3.0	0.24"	6.0	3.02	4.50	260PSI/30bar	1160PSI/80bar	70,200	154,000
10"	254+3.0	0.24"	6.0	3.86	5.75	440PSI/30bar	1100PSI/75bar	83,700	184,000

## :: Flexible Rising Pipe Solution



WELLFLEX Couplings	Well Head	Elbow
Stainless Steel 316L, duplex Couplings No corrosion	made of carbon steel Anti-rust Processed	made of carbon steel Anti-rust Processed

## :: Installation

- Assemble hoses with **WELLFLEX** coupling
- Swivel **WELLFLEX** coupling onto submersible pumps
- Attach power cable using **WELLFLEX** Cable Straps
- Hang **WELLFLEX** hoses and pumps
- Lower **WELLFLEX** hoses and pumps into well
- Assemble the other end of hoses onto **WELLFLEX** coupling
- Swivel top **WELLFLEX** coupling onto Well Head Base
- Fix Well Head Base
- Install elbows, valve and other output pipes

For some large boreholes, vehicles and cranes are required to assist installation



## :: Typical Applications

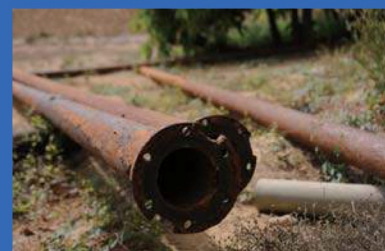
Residential wells  
 Industry water supply  
 Agriculture  
 Mining  
 Water utilities  
 Sports fields, playgrounds or parks  
 Appraisal wells  
 Water monitoring



## :: Comparison on Performance

Performance of different type of well rising main

	Steel Pipe	Plastic Pipe	WELLFLEX
Length of Pipe	6 to 9 m	3 to 6 m	maximum to 400m
Corrosion	Yes	No	No
Maintenance	Every 2-5 years	No	No
Pressure	High	Low	High
Retrieve	Difficult	Difficult	Easy
Installation Speed	Slow	Slow	Quick
Installation Equipment	More	More	Less



## :: Advantage

Lightweight, layflat coilable construction	Easily installed in irregular wells
Easy to handle - reducing the time and cost involved when installing submersible pumps	Higher water flow in narrow wells
Easy to store and transport	High safety margins in both tensile and hydraulic performance
Free of maintenance on rising main	Compatible with all types of submersible pumps
Resistant to corrosion and microbiological and internal scaling	Rapid installation and retrieval methods resulting in substantial labour and cost savings
Absorbs vibrations, rapid changes in pressure and unwanted noise from the installation	Long operational life with a 30 years warranty
Self-supporting layflat riser	

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