Pureflow FILTRATION DIV.

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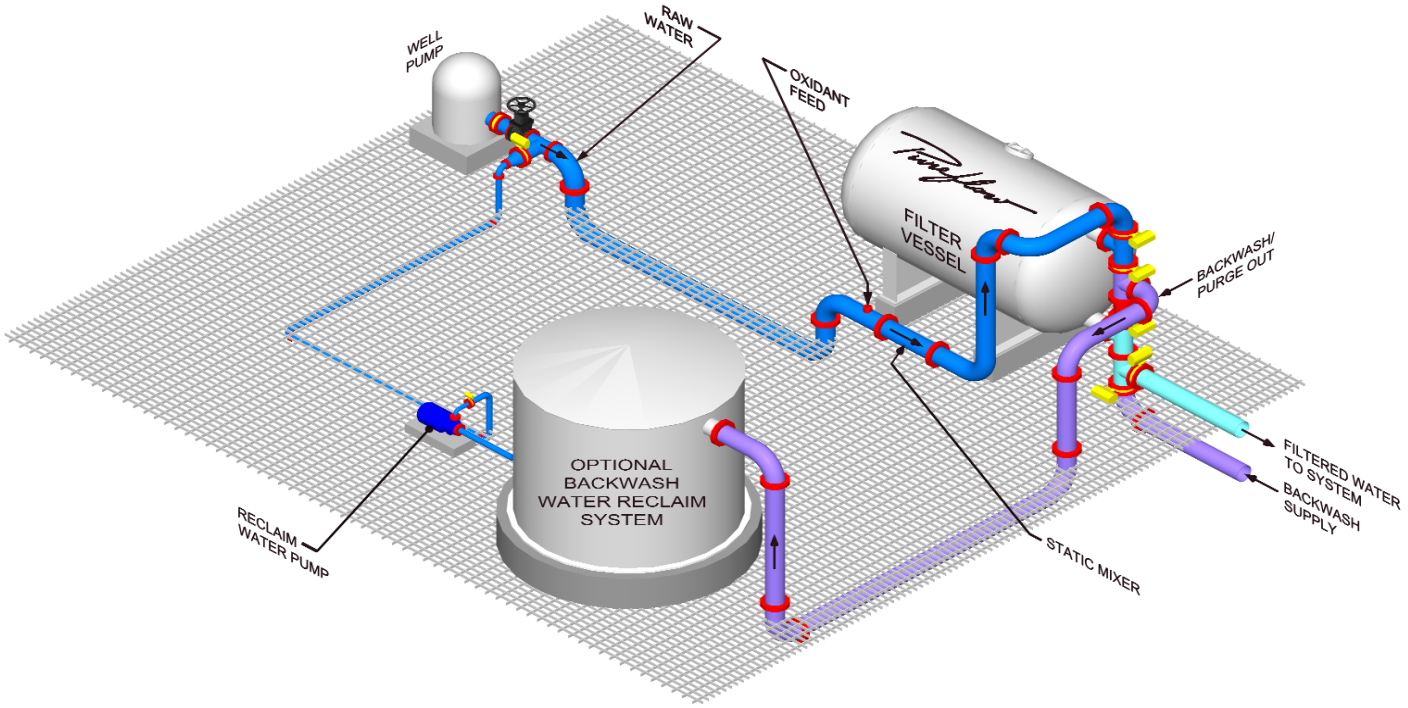
IRON AND MANGANESE

FILTRATION SYSTEMS

PUREFLOW SYSTEMS FOR IRON AND MANGANESE FILTRATION are improved designs for the water treatment industry. Adsorptive NSF approved media, and a pretreatment system combine to provide a simple compact automated filtration system requiring only weekly attendance by maintenance personnel.



- **LOW OPERATIONAL COST**
- **USER FRIENDLY SYSTEM**
- **MINIMAL MAINTENANCE REQUIREMENTS**
- **NO-HASSLE SERVICE**
- **BACKWASH RECLAIM SYSTEM (OPTIONAL)**
- **STAINLESS STEEL WEDGEWIRE UNDERDRAINS**
- **CHEMICAL PRETREATMENT… OXIDANT (Chlorine, Hypochlorite, Ozone, Etc…..No KMnO4)**
- **DESIGN/BUILD SYSTEMS**
- **TOTAL SYSTEM RESPONSIBILITY**
- **FLOW RANGES UP TO 20,000 GPM**
- **BIOFILTRATION SYSTEMS**
- **DISPOSABLE MEDIA SYSTEMS**

THE SYSTEM AND HOW IT WORKS

Well waters containing iron and/or manganese, along with other dissolved contaminants such as hydrogen sulfide, organic carbon, arsenic, etc, are treated with chlorine prior to filtration. This step oxidizes these contaminants to a processable form and provides a free chlorine residual to the water distribution system.

The filtration step collects the iron and manganese on NSF approved adsorptive media in hydroxide form. The filter media is cleaned by reversing the flow using processed water. The typical backwash to filtration ratio is less than 2%. The backwash water can be drained to a sanitary sewer; or, an optional reclaim system can be supplied, allowing approximately 99.9% recovery/recycle.

TYPICAL FILTER SIZES

gpm*	MODEL NUMBER	SURFACE AREA SQ. FT.	FILTER DIAMETER IN INCHES	FILTER STRAIGHT SIDE SHELL	FILTER SHIPPING WEIGHT LBS.	PIPE OUTLETS IN INCHES
20	C-40	2	20	54" Vert.	200	1 1/2
30	C-60	3	24	54" Vert.	300	2
50	C-100	5	30	54" Vert.	400	2 1/2
70	C-140	7	36	54" Vert.	1020	3
95	C-190	9.5	42	54" Vert.	1100	3
125	C-250	12.5	48	54" Vert.	1340	4
155	C-310	15.5	54	54" Vert.	1800	4
200	C-400	20	60	54" Vert.	2000	6
250	C-480	23.5	66	54" Vert.	2300	6
280	C-560	28	72	54" Vert.	2600	6
330	C-660	33	78	66" Vert.	3000	6
385	C-760	38	84	66" Vert.	3500	6
500	C-1000	50	84	74" Horiz.	6000	8
750	C-1500	75	84	120" Horiz.	8000	10
1000	C-2000	100	84	166" Horiz.	10000	12
1250	C-2500	125	84	212" Horiz.	12000	12
1500	C-3000	150	84	258" Horiz.	14000	12
2000	C-4000	200	84	351" Horiz.	19000	14
2500	C-5000	250	96	356" Horiz.	26000	16

*@ 10 gpm/ft^2 FLUX RATE. FOR OTHER SIZES CONSULT PUREFLOW

LOCAL REPRESENTATIVE:

The chemical pretreatment is manually set and automatically operated. Stand-by equipment provides continuous uninterrupted treatment.

The filter effluent is continuously monitored with a chlorine residual analyzer to ensure complete oxidation of contaminants and disinfection of the treated water.

Automatic filter operation is provided by a system control panel which includes a programmable logic controller with an operator interface. The control panel operates the well pump, system valves, filter cycles, and the chemical pre-treatment system.

Pilot testing of each well water is recommended to determine oxidation demand, filtration process design (chemical dosage rate, vessel sizing, etc.) and operational costs. Pureflow© will provide pilot testing equipment and field personnel.

STANDARD FEATURES AND EQUIPMENT:

- o 75 psi ASME code pressure vessel
- o Chemical pretreatment equipment
- o Multi-media filter load
- o Filter face piping
- o Pneumatically operated butterfly valves
- o Filter flow control valves
- o Backwash flow control valves
- o Filter and backwash flow meters
- o Air compressor for valve operation
- o Automatic control panel
- o Stainless steel underdrains
- o SSCP-SP5 sandblasted interior
- o NSF approved interior coatings (holiday tested)
- o Process analyzer and recorder
- o Manways, plus hatchway, when required
- o Up to 4" valved drain on each filter
- o Air relief valves
- o Custom written O & M Manuals
- o Start-up instructions

OPTIONS AND SPECIAL DESIGNS:

- o Backwash water reclaim system
- o High pressure ASME code vessels
- o Systems designed to fit tight site conditions
- o Ozone pretreatment systems
- o Design/Build systems
- o Pilot filters for field testing
- o Special options and designs available on request.