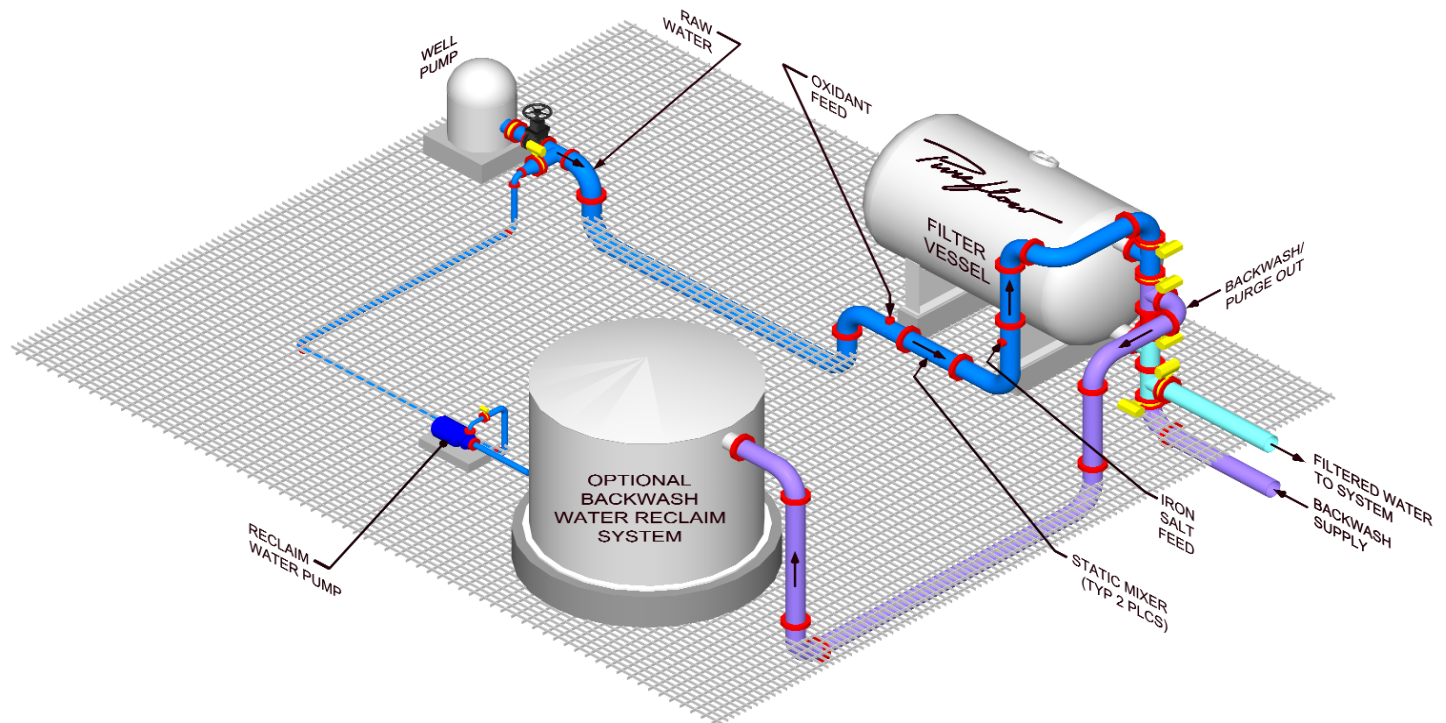




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ARSENIC FILTRATION SYSTEMS

The PUREFLOW[®] SYSTEM FOR ARSENIC FILTRATION is an improved design for the water treatment industry. A highly adsorptive media, and chemical pretreatment system, combine to provide a simple, safe, compact filtration system requiring minimal attendance by maintenance personnel.



- o **LOW OPERATIONAL COSTS**
- o **NO REGENERATION CHEMICALS OR ACID/CAUSTIC WASTE DISPOSAL**
- o **MINIMAL MAINTENANCE REQUIREMENTS**
- o **NO-HASSLE SERVICE**
- o **BACKWASH RECLAIM SYSTEMS (OPTIONAL)**
- o **STAINLESS STEEL WEDGEWIRE UNDERDRAINS**
- o **CHEMICAL PRETREATMENT**
 - ... **OXIDANT (Chlorine, Hypochlorite, Ozone, Etc...(no KMnO_4)**
 - ... **FLOCCULANT (Ferric Chloride)**
- o **DESIGN / BUILD SYSTEMS**
- o **TOTAL SYSTEM RESPONSIBILITY**
- o **FLOW RANGES FROM 20 GPM TO 10,000 GPM**

THE SYSTEM AND HOW IT WORKS

The removal of arsenic occurs by its adsorption onto an iron precipitate that is formed in the Pureflow[®] pretreatment process. The Pureflow[®] multi media filter includes a highly adsorptive active media that adsorbs the iron and arsenic (as well as other heavy metals such as cadmium, zinc, etc.) in essentially hydroxide forms. The filter media is cleaned by backwashing the filter with processed water. The backwash to filtration ratio is less than 5%.

Well water containing arsenic is chemically treated with an oxidant (such as chlorine) at the first static mixer. If dissolved iron (in sufficient concentration) is not present in the raw water, ferric chloride is also fed ahead of the second static mixer. The iron is oxidized to a processable form and a free chlorine residual is provided to the water distribution system.

The filter media does not contain greensand or activated alumina, and therefore does not require

costly regenerating chemicals such as potassium permanganate or acid/caustic solutions. Backwash water is usually discharged to the sewer system. An optional backwash water reclaim system is available to reclaim approximately 99% of the backwash water.

The chemical pretreatment is manually set and automatically operated. The filter effluent is continuously monitored with a chlorine residual analyzer to permit the positive and simple adjustment of the oxidant chemical feed.

A control panel provides automatic operation of the filtration system, and includes flexibility in the simple adjustment of various filter cycles.

A pilot testing program is available to insure the proper design and operation of every system. The cost of this program is deductible from the purchase price.

STANDARD FEATURES AND EQUIPMENT:

- o 75 psi ASME code pressure vessel
- o Oxidation 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 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 instruction

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 Service contracts
- o Pilot filters for field testing
- o Special options and designs available on request.

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/FT² FLUX RATE, FOR OTHER SIZES CONSULT PUREFLOW



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