



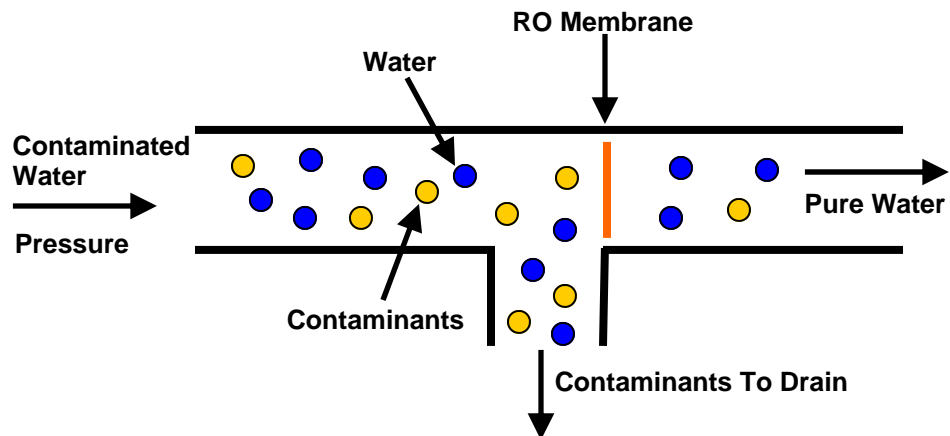
MEMBRANE SYSTEMS

HF Pure Water

203 West Artesia Blvd. Compton, CA 90220-5550 Phone:310-605-0755 Fax: 310-608-1556

Reverse osmosis is...

The separation of suspended and dissolved impurities, including ions, from a solution through the application of pressure on a special semi-permeable membrane element. The removal of ionic, organic and suspended / dissolved impurities is accomplished during the RO process. Unlike a filter, which separates by conventional filtration, the RO membrane element separates using a process called cross-flow filtration. Feed water is separated into two streams - permeate and concentrate - and collected from both sides of the membrane element.



For more information call 800-421-5000
www.HFPureWater.com



MEMBRANE SYSTEMS

SMALL CAPACITY

HF2 SERIES SPECIFICATIONS

MODEL:	HF-1.2	HF-1.8
Recovery Range	33-50%	33-50%
Permeate Rate (gpm)	1.2	1.8
Concentrate Rate (gpm)	1.2-.08	1.8-1.2
PUMP AND MOTOR		
Pump Motor (HP)	0.75	0.75
MEMBRANE ELEMENTS		
Number of elements	2	3
Array	1-1	1-1-1
PIPING		
Inlet (inch)	0.38	0.38
Permeate (inch)	0.38	0.38
Concentrate (inch)	0.38	0.38
OVERALL DIMENSIONS		
Height Approx. (inch)	51	51
Width Approx. (inch)	18	18
Depth Approx. (inch)	15	15
SHIPPING WEIGHT		
LBS. Approx.	75	85



MEDIUM CAPACITY

HF4 SERIES SPECIFICATIONS

MODEL:	HF4-2	HF4-3	HF4-5	HF4-6	HF4-8	HF4-10
Recovery Range	50-75%	50-75%	50-75%	50-75%	50-75%	50-75%
Permeate Rate (gpm)	1.5	3	4.5	6	7.5	9
Concentrate Rate (gpm)	1.5-5	3-1	4.5-1.5	6-2	7.5-2.5	9-3
PUMP AND MOTOR						
RO Motor (HP)	3	3	3	3	5	5
MEMBRANE ELEMENTS						
Number of elements	1	2	3	4	5	6
Array	1	1-1	1-1-1	1-1-1-1	2-1-1-1	2-2-1-1
PIPING						
Inlet (inch)	0.75	0.75	0.75	0.75	0.75	0.75
Permeate (inch)	0.5	0.5	0.5	0.75	0.75	0.75
Concentrate (inch)	0.5	0.5	0.5	0.75	0.75	0.75
OVERALL DIMENSIONS						
Approx. Height (inch)	50	50	55	55	60	60
Approx. Width (inch)	30	30	30	30	30	30
Approx. Depth (inch)	20	20	20	26	26	26
SHIPPING WEIGHT						
Approx. LBS. .	170	185	215	235	325	345



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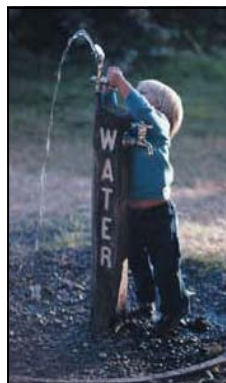


MEMBRANE SYSTEMS

LARGE CAPACITY

HF4H SERIES SPECIFICATIONS

MODEL:	HF4H-12	HF4H-15	HF4H-20	HF4H-27	HF4H-31
Recovery Range	66-75%	66-75%	66-75%	66-75%	66-75%
Permeate Rate (gpm)	11.2	15	18.8	26.2	30
Concentrate Rate (gpm)	3.4	5	6.3	8.8	10.0
PUMP AND MOTOR					
RO Motor (HP)	7.5	7.5	10	15	15
CIP Motor (HP)	2	2	2	5	5
MEMBRANE ELEMENTS					
Number of elements	9	12	15	21	24
Array	2-1	2-2	3-2	4-3	5-3
Number of Pre-filters	2	2	2	2	2
PIPING					
Inlet (inch)	1.5	1.5	1.5	1.5	1.5
Permeate (inch)	1	1	1	1	1
Concentrate (inch)	1	1	1	1	1
OVERALL DIMENSIONS					
Approx. Height (inch)	61	61	61	61	61
Approx. Width (inch)	77	77	77	77	77
Approx. Depth (inch)	34	34	34	34	34
SHIPPING WEIGHT					
Approx. Low Energy (LBS.)	700	1300	1500	1700	2000
Approx. DLX (LBS.)	1200	1800	2000	2200	2500



Safe Drinking Water



Product Ingredient Water

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MEMBRANE SYSTEMS

The inherent advantages of RO technology can be summed up as follows:

1. RO units produce water similar in quality to demineralized or distilled water.
2. Low operating costs as well as the ability to remove organic contaminants and 95-99% of inorganic salts make RO an attractive and ideal water purification technology for most industrial applications.

The tradition of research and technological innovations at HF provides important advantages to our customers and this is underscored by the constant effort in presenting new models, solutions and plant design ideas.

Three classes of units are available as follows:

HF2 Series Reverse Osmosis Units

The HF2 is available in configurations ranging from 375 to 2,535 gpd. Standard Features include 5-micron pre-filter, automatic inlet shut-off valve, remote machine on/off capability, operating pressure gauge, flow control center including concentrate and recycle valves. Deluxe Features in addition to the standard include low inlet pressure switch, conductivity meter, stainless steel pump, and permeate and concentrate flow meters.



HF4 Series Reverse Osmosis Units

The HF4 are available in configurations ranging from 2,200 to 43,200 gpd. Standard features include one-micron ROsave.Z™s prefilter, automatic inlet shut-off valve, permeate and concentrate flow meters, remote machine on/off capability, thermal motor protection, pre-filter, post-filter, primary & final pressure gauges, and flow control center including concentrate/ recycle valves. Deluxe Features in addition to the standard include auto flush system, low inlet pressure switch, digital conductivity meter with programmable relay, and alarms: low inlet pressure, motor starter overload.



HF4H Series Reverse Osmosis Units

The HF4H are available in configurations ranging from 2,200 to 43,200 gpd. Standard features include 5-micron pre-filter and housing, 20 inch, motor thermal protection, pre/post-filter and primary/final pressure gauges, alarms: low inlet pressure, high amp draw, high permeate conductivity, and remote machine on/off capability. Deluxe features in addition to the standard include casters, upgraded PLC control package, digital pH probe system, alarms: high-low pH, and chemical dosing system.



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MEMBRANE SYSTEMS



Pre-Filter

RO pretreatment is critical to extracting the longest life out of the RO membrane elements by removing RO membrane-plugging contaminants from source water. Effective pretreatment minimizes wear-and-tear on your RO elements by reducing the Silt Density Index (SDI) to recommended levels.

Self Contained

Our state-of-the-art Reverse Osmosis systems are compact and self contained, thus saving our customers valuable space as well as enabling freer access to the unit during installation, service or maintenance.



(PLC) Real-time Monitoring Control Panel

Designed around the Allen-Bradley SLC 503 series system, with integrated touch screen, control and real time monitoring, system navigation is a breeze and all programming changes and process parameters remotely.

APPLICATION	HF2	HF4	HF4H
Boiler feed water	X		X
Boiler Water		X	
Car wash	X	X	X
Food ingredient water		X	
Greenhouse watering	X	X	X
Grocery stores	X	X	X
Ion exchange pre-treatment	X	X	X
Metal plating	X	X	X
Process ingredient water	X	X	X
R & D lab use	X		
Restaurant	X	X	X
Rinse water		X	
Safe Drinking Water	X	X	X
Spot free rinse	X		
Whole home RO	X	X	X

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Over its more than 60-year history, the HF Group has provided manufacturing and worldwide product support for industrial process equipment.

HF Group was established in 1936 by H. W. Houston, a former business partner of the legendary Howard Hughes. In 1950 the H. W. Houston Corporation merged with Fearless Camera Corporation to become Houston Fearless Corporation. Following a change in ownership in 1976, the company became known as Houston Fearless 76, Inc. The company is now privately owned by Mr. M. S. Lee.

Corporate Office
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HF Group is an innovative world leader in designing, manufacturing, and servicing of chemical handling, processing and pollution control systems. HF is a registered DoD Contractor, certified as an SDB by the SBA and an MBE certified by the SCRPC.

HF Group is staffed by a highly-skilled work force which supports research and development, design, engineering, manufacturing, testing, and service of our diverse product line. With its strong resources, HF Group produces a broad range of standard products and provides customer-focused product design and engineering services.



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