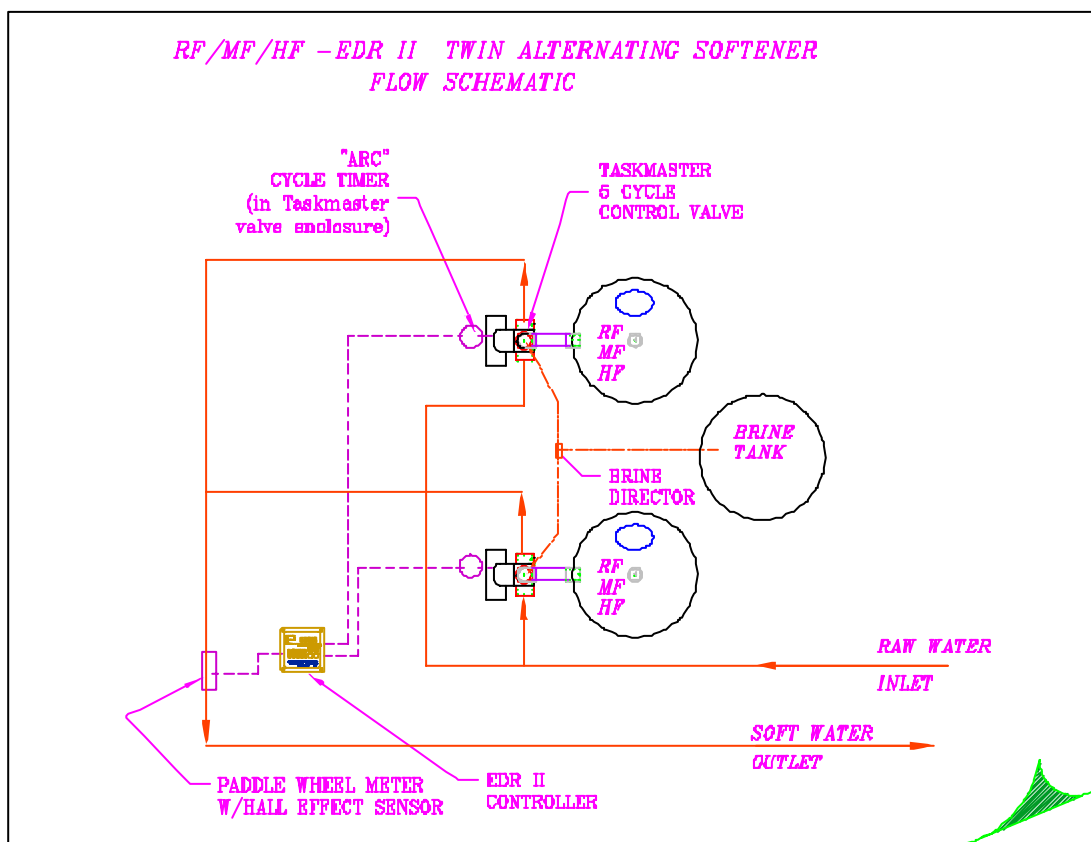


Twin Alternating (-TA) Controls

DEFINITION. A twin alternating system has two tanks that alternate service. At any time one tank is in service and the other is either in regeneration or standby mode. These systems are used to provide a continuous stream of softened water. One of the softeners is always working.

CONTROL SCHEME. All -TA systems are demand regenerated. From a controls perspective, the twin alternating system is quite unique. Since it is certain that only one unit will be functioning at any time, the softened water flow can be monitored by a single meter. The controller determines if the resin is exhausted based on the volume of water treated (or totalized flow) and then signals the cycle timer to regenerate one of the softeners.

SYSTEMS. All of the Water King softeners can be configured in a twin-alternating mode. The diagram below shows an example of a twin alternating system using the Taskmaster valve and EDR II.



NOTES ON DIAGRAM. The diagram shows a configuration for a Twin Alternating system using Taskmaster valves with internal ejectors, which includes all RF and MF systems and HF systems up to HF 750.

CAT401.2

COMPONENTS OF TWIN ALTERNATING (-11) CONTROL SYSTEM					
	RF, MF, HF	RF, MF, HF Superflow	RF, MF, HF Superflow	VN	VN
Pipe Size	1 ½", 2" & 2½"	2 ½" & 3"	4" & 6"	up to 3"	4" & up
Controller (One)	EDRII	EDRII	ED520	EDRII	ED520
Meter (One)	PW075, PW150 or PW300 OR TM100 or TM200	PW150 or PW300 OR TM200	PW400S & PW600S Saddle Mounted Meters	PW075, PW150 or PW300 OR TM100 or TM200	PWXXXS Series Saddle Mounted Meters
Cycle Timer (Two)	ARC	ARC	ARC	ARC	ARC
Valves	Taskmaster (One per tank)	Taskmaster (One per tank)	Taskmaster (One per tank)	DM or DP Series Diaphragm (Six per tank)	DM or DP Series Diaphragm (Six per tank)
Stager	NA	NA	NA	Series 58 Stager (One)	Series 58 Stager (One)
Auxiliary Valves	SOK (One per tank)	2 ½" or 3" SFK (One per tank)	4" or 6" Flanged or Gruvloc SFK (One per tank)	NA	NA

Notes:

SOK – Shut Of Kit to prevent hard water bypass during regeneration.

SFK – Super Flow Kit to allow service flow to bypass Taskmaster also prevents hard water bypass during regeneration.

ADVANTAGES OF EDRII CONTROL

PROVEN, EXPANDABLE, EFFICIENT, ROBUST, ECONOMICAL

PROVEN. The EDRII has been in production since the mid 80's. There are thousands of successful installations.

EXPANDABLE. The EDRII control system allows easy expansion of a simplex to a twin or a twin to a triplex with no new controllers, very little new wiring, and no new technology to learn.

EFFICIENT. Demand regeneration is the best balance of reliability and efficiency of operation. By optimizing the water treated between regenerations, the salt usage can be minimized and hardness breakthrough can be eliminated.

Robust. The twin alternating system is the most elegant demand regenerated system. If the EDRII should fail, the Taskmaster valves can be manually initiated. If one mineral tank is out of service, its twin can be converted to a simplex demand regenerated system. Redundancy is built into these systems. The EDRII and PW meters are easily replaced and inexpensive enough to keep as spares.

ECONOMICAL. The EDRII is the most economical controller on the market. Coupled with its other advantages and a top quality Water King system, the EDRII minimizes capital expenditures and O & M costs.

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