

	Shell and Tube	Cylindrical Block
Cost	tubes are less costly to produce	higher cost of machining and treating block material
Cleaning	mechanical (with care), chemical and high pressure wash	chemical cleaning is only practical option. Small holes make mechanical cleaning difficult; high likelihood of damaging block. High pressure may damage web
Fouling	7/8" or 1 1/2" ID holes reduces effect of fouling and allows more complete cleaning	limitations on cleaning may result in reduced efficiency
Repair Cost	Failed tube can be identified by a shell side hydrotest and plugged in the field	Each block must be removed from the shell and individually tested to determine location of failure. The block may be repaired by plugging, but frequently must be replaced.
Downtime	Plugging can be done onsite; typically requires 1-2 day downtime	Leadtime for replacement blocks is 1-2 months
Robustness	No thermal shock at design temperature (350F)	No thermal shock at design temperature (350F)
	Fully graphitized tube can withstand system stresses throughout many years of operation.	Point loading and system stresses can lead to premature block failure

