STEAM MIXING UNIT COMPARISON

BRAND					Advantages of
FOCUS	SUPERKLEAN	GHEYSER	STRAHMAN	RADA	SuperKlean
Exterior Finish / Lead Free	Fair surface finish. Lead free.	Uniform surface finish front only. Rear somewhat rough. Not lead free.	Uniform surface finish. Not lead free.	Uniform surface finish. Not lead free.	In order to be LEAD FREE compliant, the material necessary for SuperKlean units is more viscous during the manufacturing process. As such the benefit of being LEAD FREE results in a fair
					surface compared to that of a product that is uniform in surface finish yet NOT LEAD FREE.
External Connection	Unit uses ball joints as check valves. This allows the direction of globe valve inlets to be adjustable, thus facilitates piping installation. Easy to disassemble and clean.	Inlet port is straight and rigid. Disassembly of the disc shaped valve inlets is complex because of hex head bolts. Same for remainder of unit as hex head bolts will tend to strip with maintenance. Disassembly and assembly very time consuming.	Similar installation as SuperKlean.	Unit uses eight bolts to mount to plate. This makes it difficult to tighten unit down. Inlet position inconvenient as most feed lines drop down from ceiling and this unit has inlets on sides.	SuperKlean units allows for easy inlet connections and is also easy to disassemble and clean.

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Temperature Gauge Installation	In front port built into valve. Easy installation.	Similar to SuperKlean. Chamber of temperature gauge port integral part of valve.	Additional mixing chamber is required and has to be purchased separately and installed. Rear port requires mixing unit	Additional mixing chamber is required and has to be purchased separately.	SuperKlean units allow for temperature gauge installation while unit is in operation. Port is built into the valve body.
Dual Outlet	VEC	NO.	dismount in order to install.	VEC	·
Dual Outlet Design	YES	NO	NO	YES	SuperKlean unit offers a built in secondary outlet.
Completeness of Offered Unit vs. Price	Globe valves, check valves, mixing valves, mounting plate, hose rack, temperature gauge and mounting hardware included. No additional accessories required.	Check valves, mixing valve, temperature gauge, and some hardware included. Globe valves, hose rack, mounting plate, and mounting hardware required and are an additional hidden cost.	Similar to SuperKlean with the exception that the temperature gauge and mixing chamber necessary to mount gauge are required and are an additional hidden costs.	Mixing valve and some mounting hardware included. Globe valves, check valves, mounting plate, hose rack, temperature gauge, and mounting hardware required along with additional plumbing at an additional hidden costs.	SuperKlean offers the only 100% complete unit in the market. One package contains all necessary parts to install. Competitors have hidden costs because of required parts are not included.

Internal Seals	Copper gaskets are used in areas where seal is in direct contact with steam. Steam poppet and check valve poppet are stainless steel. Seats for these are directly matched to poppets which guarantee a "sure" seal. Other gaskets and seals not directly in contact with steam are reinforced teflon. Long life of seals is therefore the result.	Internal sealing is done through rubber o-rings. Steam poppet has o-rings and washer. Disassembly of steam poppet for replacement of o-rings difficult. Life of gaskets and seals are short as rubber ages faster when in contact with steam.	Similar to SuperKlean. Difference is that check valves and steam poppet are not directly matched which in turn results in excessive leakage.	Teflon steam poppet and gaskets. Seal very unstable with live steam. Life of gaskets and seals are relatively short as teflon ages faster when in contact with steam.	SuperKlean units offer excellent sealing performance. Long seal life. Easy seal and gasket installation.
Minimum Water Pressure Required (Steam side tested with 115 PSI compressed air)	Less than 30 PSI	65 PSI	30 PSI	15 PSI	SuperKlean requires minimum water pressure to operate. Excellent for remote locations.

Temperature	Hassle free	Temperature	Similar to GHEYSER.	Relatively easy to	SuperKlean unit is easy
Output Control (Tested at 45 PSI steam and 30 PSI water)	adjustment with side temperature control hand wheel. No other required adjustment required as this control will remain the same as long as inlet pressures are steady. Adjusted in a few seconds throughout its entire temperature range.	adjustment is done with inlet globe valves. Cold water side and steam side have to be adjusted one at a time in order to achieve required temperature. This has to be done every single time the unit is shut down.	Adjustment has to be done using globe valves. More difficult at higher temperature output.	adjust with dial type adjustment.	to adjust using temperature control hand wheel. Unique as unit is very stable throughout its entire temperature output range.
Temperature Output Stability	Incorporates balancing valve design. Fluctuations of inlet pressures of 5% or less PSI will have little or no effect on output temperature.	Varies according to inlet pressure fluctuations.	Varies according to inlet pressure fluctuations.	Varies according to inlet pressure fluctuations.	SuperKlean unit is very stable with little or no effect on output temperature because of inlet pressure fluctuations of 5% or less PSI.
Flow Rate (Tested at 45 PSI steam and 30 PSI water. Temperature output 169°F = 76°C)	5.06 GPM	4.96 GPM	3.41 GPM	4.14 GPM	SuperKlean unit has the highest flow rate and therefore is the most efficient.

Leakage (Units	30 seconds under load	Continuous small	Continuous large	Continuous small as	SuperKlean unit's seal is
are tested	and no leakage	bubbles signifying low	bubbles signifying high	well as large bubbles	the most effective as it
using	detected at outlet.	steam leakage. Unit	steam leakage. Unit	signifying low and	prevents steam
compressed air		leaks continuously at	leaks continuously at	high steam leakage.	leakage.
at steam inlets)		outlet.	outlet.	Seal unstable. Unit	
				leaks continuously at	
				outlet.	

Summary: SuperKlean unit is the most safe, efficient and stable unit in current domestic and international market. Installation is fairly simple and user friendly. Internal seals are designed for a secure seal as well as long life. Operation is extremely easy, user friendly and requires minimal maintenance. Maintenance can be done while in service or dismounted and requires very little time. Temperature adjustment is consistent and easy. Flow rate is highest of any other competitor under the same working conditions.



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