

# Industrial Ultrasonic Sono-Processor

## SONO PROCESSOR

Roop Telsonic Ultrasonix Ltd. has been involved exclusively with Ultrasonic Technology since 1982, for more than three decades, thanks to intensive research & development. Roop Telsonic Ultrasonix Ltd. is at the fore-front of Ultrasonic technology. It develops and manufactures laboratory as well as a wide product range of ultrasonic processors for industrial use. For small volumes we offer processors ranging from 150ml to 25 litres and for large volumes we offer processors ranging from 25 litres to 100KL.

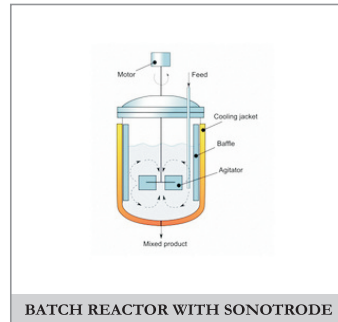
“SONO- PROCESSOR” is ideally suited for online continuous and batch processes. The control panel displays time, temperature and the ultrasonic power. One can preset desired time, temperature and ultrasonic power as required.

## SMALL SCALE INDUSTRIAL PROCESSOR

- \* The small scale ultrasonic sono-processor is normally recommended to process liquids of smaller quantities in the range of 150ml to 25 litres. It is mainly used in process development i.e either for lab scale and pilot scale or to process liquids with higher processing consistency i.e online continuous reaction.
- \* The intense cavitation effect induced by ultrasound, is used for various processes such as particle size reduction, homogenization, polymerization/ de-polymerization, dispersion/ suspension, emulsification/ mixing, agglomeration/ de-agglomeration, acceleration of various chemical reactions, decrease in reaction time, etc.
- \* The small scale industrial ultrasonic sono-processor can be used with various ultrasonic accessories such as sonotrodes, agitators, booster, tube resonator and flow cells depending on the application and volume of liquid to be processed.
- \* Flow cells are generally recommended to achieve a higher processing consistency. It approximately processes 1 to 10 liters/min and it comes either with jacket or without jacket.



USG 1000



BATCH REACTOR WITH SONOTRODE



SERIES ONLINE SONO REACTOR



PARALLEL ONLINE SONO REACTOR

## LARGE SCALE INDUSTRIAL PROCESSOR

- \* The large scale ultrasonic sono-processor is normally recommended to process liquids of larger quantities in the range of 25 litres to 100 KL. It is mainly used in processing industrial liquids.
- \* The intense cavitation effect induced by ultrasound, is used for various processes as mentioned in small scale industrial processors.
- \* The large scale industrial ultrasonic sono-processor can be used with various ultrasonic accessories such as agitator, sonotrodes, booster, tube resonator and flow cells depending on the application and volume of liquid to be processed.
- \* Flow cells which are generally recommended to achieve a higher processing consistency provides approximately a flow rate of 10 to 200 liters/min and it comes either with jacket or without jacket.



BATCH REACTOR



SERIES ONLINE SONO REACTOR



PARALLEL ONLINE SONO REACTOR

# TECHNICAL SPECIFICATIONS

## SPECIFICATIONS FOR SMALL VOLUMES- LABORATORY PURPOSE- BATCH

MODEL NO	MODEL	COMPONENTS
USG-35-100	Lab processor standard, 35 KHz-150 W	SS stand, Generator 35 Khz, Converter, Sonotrode and Cooling arrangement
USG-20-1000/ 2000	Lab processor standard, 20 KHz-1/2/3 KW	SS stand, Generator 20 Khz- 1/2/3 KW, Converter, 1.5 Booster, Sonotrode and Cooling arrangement
USG-36-1000/1500	Lab processor standard, 36 KHz-1/1.5 K W	SS stand, Generator 36 Khz- 1/2/3/4.5 KW, Converter, 1.5 Booster, Sonotrode and Cooling arrangement

## SPECIFICATIONS FOR SMALL VOLUMES- LABORATORY PURPOSE- ONLINE (SERIES & PARALLEL)

MODEL NO	MODEL	COMPONENTS
1SR-20-1000-SD	1 litre flow cell sono processor, non FLP	Jacketed 1 litre vessel , FLP convertor, SG-22 Generator with touch display , Sonotrode , jacket cooling arrangement with inlet and outlet valve & process inlet and outlet valve
1SR-20-1000-FLP	1 litre flow cell sono processor, FLP	Jacketed 1 litre vessel , FLP convertor, SG-22 Generator with touch display & with FLP body , Sonotrode ,jacket cooling arrangement with inlet & outlet valve & process inlet & outlet valve
1SR-25-750-SD	1 litre flow cell sono processor with Tube resonator, non FLP	Jacketed 1 litre vessel , FLP convertor, ECO Generator with touch display , tube resonator , jacket cooling arrangement with inlet and outlet valve & process inlet and outlet valve
1SR-25-750-FLP	1 litre flow cell sono processor with Tube resonator, FLP	Jacketed 1 litre vessel , FLP convertor, ECO Generator with touch display & with FLP body , tube resonator ,jacket cooling arrangement with inlet & outlet valve & process inlet & outlet valve

## SPECIFICATIONS FOR SMALL VOLUMES - PILOT PLANT - BATCH

MODEL NO	MODEL	COMPONENTS
10SP-20-3000-SD	10 litre sono processor with sonotrode, non FLP	Vessel with temperature sensor , Convertor, SG 22 Generator , Sonotrode, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
10SP-25-750-SD	10 litre sono processor with tube resonator, non FLP	Vessel with level switch & temperature sensor ,Eco Generator ,Tube Resonator, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
10SP-20-3000-FLP	10 litre sono processor with sonotrode, FLP	Vessel with temperature senso , FLP Convertor, FLP panel with SG 22 , Sonotrode, Agitator with Vfd & Mechanical Seal,Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
10SP-25-750-FLP	10 litre sono processor with Tube resonator, FLP	Vessel with level switch & temperature sensor ,Eco Generator ,Tube Resonator, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.

## SPECIFICATIONS FOR SMALL VOLUMES- PILOT PLANT- ONLINE (SERIES AND PARALLEL)

MODEL NO	MODEL	COMPONENTS
3SR-20-1000-SD	3 litre flow cell sono processor, non FLP	Jacketed 3 litre vessel , FLP convertor, SG-22 Generator with touch display , Sonotrode , jacket cooling arrangement with inlet and outlet valve & process inlet and outlet valve
3SR-20-1000-FLP	3 litre flow cell sono processor, FLP	Jacketed 3 litre vessel , FLP convertor, SG-22 Generator with touch display & with FLP body , Sonotrode ,jacket cooling arrangement with inlet & outlet valve & process inlet & outlet valve
3SR-25-750-SD	3 litre flow cell sono processor with Tube resonator, non FLP	Jacketed 3 litre vessel , FLP convertor, ECO Generator with touch display , tube resonator , jacket cooling arrangement with inlet and outlet valve & process inlet and outlet valve
3SR-25-750-FLP	3 litre flow cell sono processor with Tube resonator, FLP	Jacketed 3 litre vessel , FLP convertor, ECO Generator with touch display & with FLP body , tube resonator ,jacket cooling arrangement with inlet & outlet valve & process inlet & outlet valve

## SPECIFICATIONS FOR LARGE VOLUMES- INDUSTRIAL PURPOSE- BATCH

MODEL NO	MODEL	COMPONENTS
100SP-20-3000-SD	100 litre sono processor with sonotrode, non FLP	Vessel with temperature sensor , Convertor, SG 22 Generator , Sonotrode, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
100SP-25-750-SD	100 litre sono processor with tube resonator, non FLP	Vessel with level switch & temperature sensor ,Eco Generator ,Tube Resonator, Panel, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
100SP-20-3000-FLP	100 litre sono processor with sonotrode, FLP	Vessel with temperature senso , FLP Convertor, FLP panel with SG 22 , Sonotrode, Agitator with Vfd & Mechanical Seal,Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.
100SP-25-750-FLP	100 litre sono processor with Tube resonator, FLP	Vessel with level switch & temp. sensor ,Eco Generator ,Tube Resonator, FLP Panel, Agitator with Vfd & Mechanical Seal , Process Inlet & Outlet Valve, Jacket Cooling Inlet & Outlet Valve.

## SPECIFICATIONS FOR LARGE VOLUMES- INDUSTRIAL PURPOSE- ONLINE (SERIES AND PARALLEL)

MODEL NO	MODEL	COMPONENTS
7FC-20-3000-SD	7 litre flow cell sono processor with Sonotrode, non FLP	Jacketed vessel with temperature sensor, FLP convertor, SG 22 Generator , Sonotrode, panel, process inlet & outlet valve, jacket cooling arrangement with inlet & outlet valve.
7FC-20-3000-FLP	7 litre flow cell sono processor with Sonotrode, FLP	Jacketed vessel with temperature sensor, FLP convertor, SG 22 Generator with FLP body, Sonotrode, panel, process inlet & outlet valve, jacket cooling with inlet & outlet valve.
7FC-25-750-SD	7 litre flow cell sono processor with Tube resonator, non FLP	Jacketed vessel with level switch & temperature sensor, Eco Generator, Panel, Tube resonator, process inlet & outlet valve, jacket cooling with inlet & outlet valve.
7FC-25-750-FLP	7 litre flow cell sono processor with Tube resonator, FLP	Jacketed vessel with level switch & temperature sensor, Eco Generator, FLP Panel, Tube resonator, process inlet & outlet valve, jacket cooling with inlet & outlet valve.
MFC-25-750-SD	Flow cell sono processor with 6 tube resonator , non FLP	Vessel with level switch & temperature sensor, Eco Generator, Panel, 6 Tube resonator, process inlet & outlet valve, jacket cooling with inlet & outlet valve.
MFC-25-750-FLP	Flow cell sono processor with 6 tube resonator , FLP	Vessel with level switch & temperature sensor, Eco Generator, FLP Panel, 6 Tube resonator, process inlet & outlet valve, jacket cooling with inlet & outlet valve.

# A PPLICATIONS

## Pharmaceutical Industry



VACCINE BIOTECH



LIQUID ORALS



STERILE API



OINTMENT



API BULK DRUG



FORMULATIONS

## Non Pharmaceutical Industry



AGROCHEMICALS



PESTICIDES



PAINT & EMULSIONS



PETROCHEMICALS



COSMETICS



PIGMENTS

## T HE SIGNIFICANT ADVANTAGES.

- \* Reduction in Process time
- \* Improves Yield
- \* Quick Payback Period
- \* Can be retrofitted to existing reactors
- \* Suitable for Mini Plant (50 Lit.) to Large scale up (100 KL or more)

NOTE: Technical specifications are subject to change without prior notice, due to continuous upgradation.

## C ONTACTS

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