

Industrial Ultrasonic Sono-Processor

Sono processor

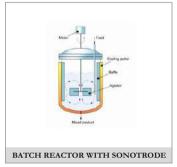
Roop Ultrasonix Ltd. has been involved exclusively with Ultrasonic Technology since 1982, for more than three decades, thanks to intensive research & development. Roop Ultrasonix Ltd. is at the fore-front of Ultrasonic technology. It develops and manufactures laboratory as well as a wide product range 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.









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.







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. |

TPPLICATIONS

Pharmaceutical Industry_













VACCINE BIOTECH

LIQUID ORALS

STERILE API

OINTMENT

API BULK DRUG

FORMULATIONS

Non Pharmaceutical Industry













AGROCHEMICALS

PESTICIDES

PAINT & EMULSIONS

PETROCHEMICALS

COSMETICS

PIGMENTS

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.

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