

# **HIGH PRECISION INDUSTRIAL ULTRASONIC CLEANING SYSTEMS**

## **Highest Cleaning Quality Through Advanced Industrial Cleaning Techniques**

Till today, many industries use chlorinated solvents for cleaning various components. Although solvent based cleaning system like ultrasonic vapor degreasing systems does give good cleaning results but adopting new technology has become imperative to avoid use of highly chlorinated solvents due to strict environmental regulations worldwide.

A highly advanced semi-automated / automated high efficiency ultrasonic cleaning systems are built depending on the job specifications. High quality aqueous solutions not only offer efficient alternative cleaning but also allow maximum environment & labor protection, highest cleaning quality with better output, low solution & energy consumption, easier waste disposal etc.

We at ROOP TELSONIC offer you highly sophisticated & modern AQUEOUS BASED ultrasonic cleaning systems consisting of various cleaning, rinsing & drying stages. Depending on the cleaning tasks, complete systems are provided with filtration & recovery units, oil separators. The desired cleaning result is achieved by rotation, lifting/lowering movements of the baskets.



# **COMPONENT CLEANING - INTEGRAL PART OF MODERN PRODUCTION SEQUENCE**

Cleaning is, almost by definition, a part of any manufacturing process for the removal of sufficient surface contamination to make something suitable for the next phase of its use. It may come in at the raw material prep stage, some intermediate manufacturing stage, and prior to surface finishing such as plating or painting or before final packaging. Industrial cleaning system plays a key role during final manufacturing stages for the cleaning of various components .It's demand has been ever increasing as highly cleaned components are needed for various production units in reduced/less time. This is not only to create conditions for trouble free manufacturing but also decides the quality and service life of the end product. The cleaning sequence depend on various aspects like: type of component, material, surface quality, type of contamination and required cleanliness level in terms of Millipore as well as particle Size.

## **RANGE OF PRODUCTS**

- Industrial Cleaners: From 50 Lts To 250 Lts
- Customized Single chamber Ultrasonic cleaners of any capacity
- Conveyorized Ultrasonic cleaning systems
- Online Ultrasonic wire / strip cleaning system
- Multi-chamber Ultrasonic cleaning systems
- Single chamber multi operation cleaning systems ( coarse /intermediate / fine cleaning)
- Vapor degreasing systems
- Ultrasonic Components :TUBE RESONATORS , ECO-GENERATORS, IMMERSIBLE BOXES,TRANSDUCERS etc.



# **ULTRASONIC MULTI CHAMBER CLEANING SYSTEMS**

## **Salient Features:**

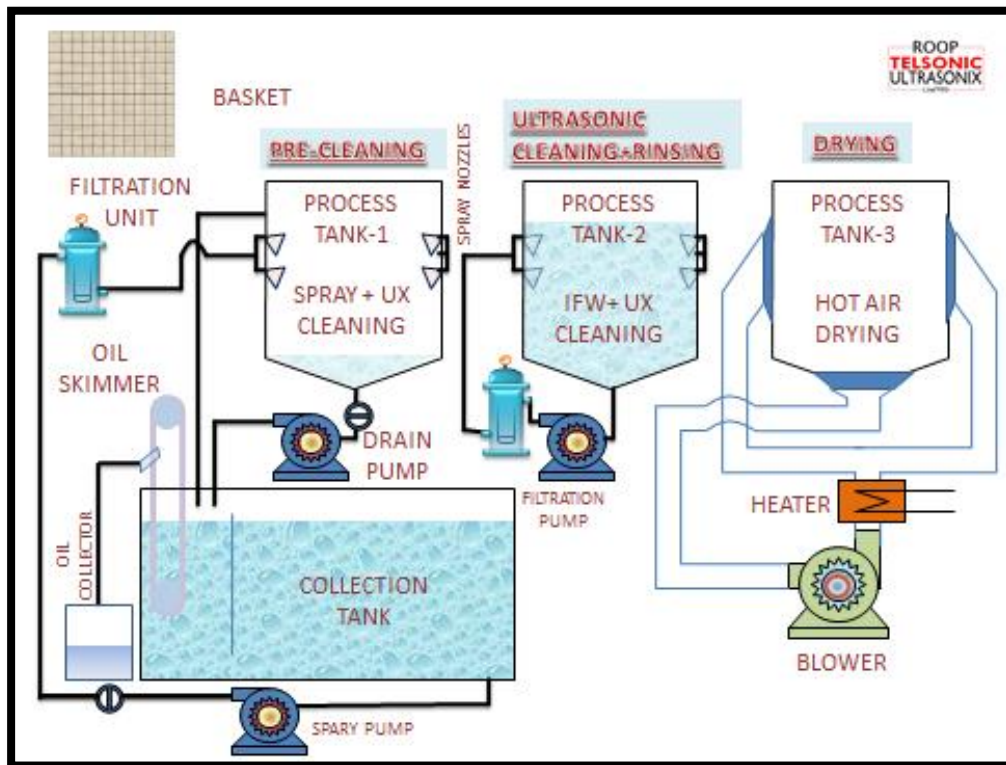
- Advanced proven SWISS TECHNOLOGY
- Micro-processor controlled Ultrasonic Generators
- Options available for multiple frequencies: 20 /25 / 30/ 36 / 40 / 80 /120 Khz
- Use of high efficiency Ultrasonic components like patented Tube Resonators / Immersible Transducers , box / conventional Transducers
- Various options available to choose from: High pressure jet cleaning /Inject flood washing / Turbulence / Plain dip / Ultrasonic cleaning /Ultrasonic rinsing / Anti-rust coating / Hot air drying / vacuum drying
- Provided with filtration / recovery units / oil separators
- Automated Material Handling systems .Design of baskets / trays / fixtures to get the optimum throughput with required cleanliness level
- We have a state of the art lab available for Millipore testing which allows selecting / recommending / designing optimum system for desired cleanliness level.

## **Typical Stages Of Multichamber Cleaning Systems**

Pre-cleaning  
Ultrasonic-cleaning  
Rinsing  
Anti-rust coating  
Hot air drying  
Vacuum drying  
Selection of number of stages depends upon the desired Cleanliness level  
Available systems: - 3 to 10 chambers



## **A TYPICAL PROCESS DIAGRAM OF MULTICHAMBER CLEANING**



We develop and offer complete cleaning solution for any of your cleaning requirements. Our most advanced technologies provide long term cleaning and environmental solution to the industry. Our special application & technology support cell members are always available to guide our customers.

The machine is transported in READY TO INSTALL assembled condition.

# **ULTRASONIC SINGLE CHAMBER MULTI OPERATION CLEANING SYSTEMS**

## **Features:**

- Single chamber multi-operational
- Versatile yet compact
- Various MODES available: Jet / Turbulence /cleaning / Rinsing / Drying
- Auto fill up available
- Basket rotation possible
- Bag Filtration available
- Front load / Unload
- Totally PLC controlled operation
- Various warning alarms for any malfunction
- User friendly front panel
- Front load / Unload conveyor roller arrangement ( single / tri-directional)
- Provision of Oil skimmer



## **Process Selection:**

- Spray Cleaning
- Turbulence Cleaning
- Ultrasonic Cleaning (Optional)
- Spray Rinsing
- Turbulence Rinse
- Ultrasonic Rinse (Optional)
- Hot Air Drying

***Single Chamber Multi Operation cleaning systems, are especially useful where there are floor space constraints. The machine is designed to occupy minimum floor space with ergonomically designed operation panel for ease of operation.***

# **APPLICATIONS OF ULTRASONIC CLEANING SYSTEMS**

- **AUTOMOBILE SEGMENT:**  
Automotive components cleaning: Cutting Oils /Coolant / chips removal from Machined Metal Components like Engine Block, Cylinder Head, fuel injection parts, carburetors, valves, brake parts, piston & piston rings, steering unit parts etc
- **OTHER ENGINEERING MANUFACTURING:**  
Cleaning of Gears, tools, castings, precision and Non-precision Bearings, Engine Transmissions, Wire Drawing Lubricant Removal, hydraulic components, a/c components, compressor parts etc
- **TEXTILE INDUSTRY:**  
Cleaning of Spinnerets, Candle Filter, Ceramic-Nozzles/Jet Inserts, Texturing Discs, Spinning Aprons, Machine Components etc.
- **PRINTING INDUSTRY:**  
Cleaning of anilox rolls / gravure cylinders and toners
- **PLASTIC INDUSTRY:**  
Cleaning of injection moulds
- **ELECTRONIC INDUSTRY:**  
Cleaning of PCBs, video heads, transistor leads, stencils etc
- **MEDICAL INDUSTRY:**  
Cleaning of Dental & surgical instrument, endoscope tubes. Orthopedic implants, surgical blades, hypodermic needles, specimen slides etc.
- **OPTICAL INDUSTRY:**  
Cleaning of lenses / glasses / glass moulds
- **CHEMICAL / PHARMA INDUSTRY:**  
Cleaning of sieving mesh, sonication of liquids, degassing of HPLC solvent etc
- **GEMS & JEWELLERY:**  
Cleaning of precious metals & jewelry
- **MISC APPLNS:**  
Cleaning of watch / clock parts, cutlery, hardware (taps etc.), brassware (handles etc.), aerospace components, ball-pen tips etc.

**AND MANY MORE..**



BEFORE CLEANING



AFTER CLEANING

MATERIAL : S.S.  
CONTAMINATION : OIL, CHIPS, DIRT



BEFORE CLEANING



AFTER CLEANING

MATERIAL : C.I.  
CONTAMINATION : OIL, PASTE



BEFORE CLEANING



AFTER CLEANING

MATERIAL : CERAMIC  
CONTAMINATION : BLACK PASTE



BEFORE CLEANING



AFTER CLEANING

MATERIAL : COTTON  
CONTAMINATION : DYES COLOR



BEFORE CLEANING



BEFORE & AFTER CLEANING COMPERISION



AFTER CLEANING

MATERIAL : GLASS  
CONTAMINATION : LAPPING PASTE



BEFORE CLEANING



AFTER CLEANING

MATERIAL : BRASS  
CONTAMINATION : OIL, CHIPS, DIRT



BEFORE CLEANING



AFTER CLEANING

MATERIAL : STEEL  
CONTAMINATION : OIL, BUFFING PASTE



BEFORE CLEANING



AFTER CLEANING

MATERIAL : FIBER  
CONTAMINATION : OIL, GREASE, PASTE



BEFORE CLEANING



AFTER CLEANING

MATERIAL : ALUMINIUM  
CONTAMINATION : OIL, CHIPS, DIRT