

# Industrial Ultrasonic Cleaner Series

Skymen Technology Corporation Limited



# Focus on Ultrasonic Cleaning Solution Manufacturer

Skymen is committed to becoming the smartest, most precise, and ecofriendly cleaning equipment and system integration provider

Founded

**Export Region** 

2007

120 +

**Employees** 

**Industries Served** 

350+

20+





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# PART ONE.

# **Standard Series**

Single Tank Ultrasonic Cleaner | 02-04

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### **Single Tank Ultrasonic Cleaner**















#### **Features**

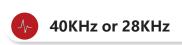
- Built-in ultrasonic generator control system
- Industrial-grade ultrasonic transducer with strong intensity and stable output
- Overheat, overload, and short-circuit protection to prevent equipment damage
- High-quality SS material, corrosion-resistant, high-temp resistant, non-deformable for long-term use

#### **JP-ST Series Parameters**

Model	Capacity (L)	Tank Size (mm)	Ultrasonic Power (W)	Heating Power (W)	Frequency (kHz)
JP-120ST	38	500*300*250	0-600	1500	28/ 40
JP-180ST	53	500*350*300	0-900	1500	28/ 40
JP-240ST	77	550*400*350	0-1200	3000	28/40
JP-300ST	99	550*450*400	0-1500	3000	28/40
JP-301ST	96	800*300* <mark>400</mark>	0-1500	3000	28/40
JP-360ST	135	600*500*450	0-1800	4500	28/ 40
JP-480ST	175	700*500*500	0-2400	6000	28/ 40
JP-600ST	264	800*600*550	0-3000	6000	28/40
JP-720ST	360	1000*600*600	0-3600	9000	28/ 40
JP-840ST	420	1500*700*400	0-4200	15000	28/ 40
JP-960ST	480	1200*500*800	0-4800	15000	28/ 40
JP-1108ST	540	1000*900*600	0-5400	18000	28/ 40
JP-1120ST	640	1000*800*800	0-6000	21000	28/40
JP-1132ST	800	1000*1000*800	0-6600	24000	28/40
JP-1144ST	960	1200*1000*800	0-7200	27000	28/40
JP-1216ST	1500	1500*1000*1000	0-10800	36000	2 <mark>8/ 4</mark> 0

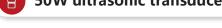
# Single Tank Ultrasonic Cleaner

with Filtration System



Timing: 0-99 MIN















- Equipped with a filtration system, the cleaning fluid is recycled to reduce the frequency of fluid changes
- Industrial-grade ultrasonic transducer with strong intensity and stable output
- Overheat, overload, and short-circuit protection to prevent equipment damage
- High-quality SS material, corrosion-resistant, high-temp resistant, non-deformable for long-term use

#### JP-G Series Parameters

Model	Capacity (L)	Tank Size (mm)	Ultrasonic Power (W)	Heating Power (W)	Frequency (kHz)
JP-120G	38	500*300*250	0-600	1500	28/ 40
JP-180G	53	500*350*300	0-900	1500	28/ 40
JP-240G	77	550*400*350	0-1200	3000	28/ 40
JP-300G	99	550*450 <mark>*</mark> 400	0-1500	3000	28/ 40
JP-301G	96	800*300*400	0-1500	3000	28/40
JP-360G	135	600*500*450	0-1800	4500	28/ 40
JP-480G	175	700*500*500	0-2400	6000	28/40
JP-600G	264	800*600*550	0-3000	6000	28/ 40
JP-720G	360	1000*600*600	0-3600	9000	28/ 40
JP-840G	420	1500*700*400	0-4200	15000	28/40
JP-960G	480	1200*500*800	0-4800	15000	28/40
JP-1108G	540	1000*900*600	0-5400	18000	28/40
JP-1120G	640	1000*800*800	0-6000	21000	28/40
JP-1132G	800	1000*1000*800	0-6600	24000	28/40
JP-1144G	960	1200*1000*800	0-7200	27000	28/40
JP-1216G	1500	1500*1000*1000	0-10800	36000	28/ 40

### Extra Large Ultrasonic Cleaner







#### **Features**

- Using pure manual argon arc welding, durable and high-temperature resistant
- Unique memory chip and independent generator control system
- Capacity from 1500L to 20480L available, perfect for large-scale cleaning tasks, such as heat exchangers, large engines, aircraft parts, etc.
- PLC intelligent control ensures automated, precise cleaning process
- The filtration system is optional, which recycles the cleaning fluid to reduce the frequency of fluid changes
- Equipped with ladders and platforms available, and customizable functions like cranes and more for better operation

#### **JP-ST Series Parameters**

Model	Capacity (L)	Tank Size (mm)	Ultrasonic Power (W)	Heating Power (W)	Frequency (kHz)
JP-1216ST	1500	1500*1000*1000	0-10800	36000	28/ 40
JP-1288ST	1920	2000*1200*800	0-14400	36000	28/ 40
JP-1360ST	2400	2000*1200*1000	0-18000	36000	28/ 40
JP-1432ST	3000	2000*1500*1200	0-21800	36000	28/ 40
JP-1576ST	4500	2500*1500*1200	0-28800	36000	28/ 40
JP-1648ST	5400	3000*1500*1200	0-32400	36000	28/ 40
JP-1720ST	6400	4000*1600*1000	0-36000	36000	28/ 40
JP-1936ST	7280	3500*1600*1300	0-45800	36000	28/ 40
JP-11152ST	8500	2500*2000*1700	0-57600	36000	28/ 40
JP-11224ST	9600	3200*2000*1500	0-61200	36000	28/ 40
JP-11368ST	11520	8000*1200*1200	0-68400	36000	28/ 40
JP-11512ST	20480	8000*1600*1600	0-75600	48000	28/40

### **Dual Tank Ultrasonic Cleaner**









#### **Features**

- Double-tank design: independent cleaning tank and rinsing/ drying tank
- Support timed cleaning (0–99 hours adjustable), suitable for long-term continuous work
- Built-in heating system, room temperature–95°C (cleaning)/ 120°C (drying) adjustable
- 50W industrial-grade ultrasonic transducer, strong and durable
- The cleaning/ rinsing tank can be equipped with a filtration system
- Multiple safety protections such as overheating, overload, short circuit, etc.

Process Flow	#1	#2		
JP-GH Series	#1 Ultrasonic Cleaning & Filtration	#2 Hot Air Drying		
JP-H Series	#1 Ultrasonic Cleaning	#2 Hot Air Drying		
JP-G Series	#1 Ultrasonic Cleaning & Filtration	#2 Ultrasonic Rinsing		

#### **JP-GH Series Parameters**

Model	Capacity (L)	Tank Size (mm)	Ultrasonic Power (W)	Heating Power (W)	Drying Power (W)	Frequency (kHz)
JP-2012GH	38	500*300*250	0-600	1500	3000	28/ 40
JP-2018GH	53	500*350*300	0-900	1500	3000	28/ 40
JP-2024GH	77	550*400*350	0-1200	3000	3000	28/ 40
JP-2030GH	99	550*450*400	0-1500	3000	3000	28/40
JP-2031GH	96	800*300*400	0-1500	3000	3000	28/40
JP-2036GH	135	600*500*450	0-1800	4500	3000	28/ 40
JP-2048GH	175	700*500*500	0-2400	6000	3000	28/ 40
JP-2060GH	264	800*600*550	0-3000	6000	3000	28/ 40
JP-2072GH	360	1000*600*600	0-3600	9000	6000	28/ 40 /05

### **Three Tank Ultrasonic Cleaner**









#### **Features**

- The multistage design realizes ultrasonic cleaning/ rinsing, spraying, drying, and other functions
- Each tank has independent temperature control, timing, power adjustment, and other settings
- The operation interface is simple and clear, and easy to operate
- Equipped with a filtration system to reduce the frequency of changing cleaning agents and water
- Compatible with diverse cleaning needs

Process Flow	#1	<del>-îî</del> 1	
JP-GH Series	#1 Ultrasonic Cleaning & Filtration	#2 Ultrasonic Rinsing	#3 Hot Air Drying
JP-GPH Series	#1 Ultrasonic Cleaning & Filtration	#2 High-pressure Spraying	#3 Hot Air Drying

#### **JP-GH Series Parameters**

Model	Capacity (L)	Tank Size (mm)	Ultrasonic Power (W)	Heating Power (W)	Drying Power (W)	Frequency (kHz)
JP-3024GH	38	500*300*250	0-600W*2	1500W*2	3000	28/ 40
JP-3036GH	53	500*350*300	0-900W*2	1500W*2	3000	28/ 40
JP-3048GH	77	550*400*350	0-1200W*2	3000W*2	3000	28/ 40
JP-3060GH	99	550*450*400	0-1500W*2	3000W*2	3000	28/ 40
JP-3062GH	96	800*300*400	0-1500W*2	3000W*2	3000	28/ 40
JP-3072GH	135	600*500*450	0-1800W*2	4500W*2	3000	28/ 40
JP-3096GH	175	700*500*500	0-2400W*2	6000W*2	3000	28/ 40
JP-3120GH	264	800*600*550	0-3000W*2	6000W*2	3000	28/ 40
JP-3144GH	360	1000*600*600	0-3600W*2	9000W*2	6000	28/ 40 /06

## Multi Stage Ultrasonic Cleaner





#### **Features**



- Support combinations of cleaning, rinsing, drying, and various additional processes to meet different cleaning standards
- Suitable for industries with high precision, high cleanliness or special environment requirements
- Customized with parameters such as size, frequency, and power etc.
- Suitable for large-volume cleaning

#### **Customization Processes (Optional)**

Cleaning Processes

Ultrasonic cleaning, high-pressure spraying, soaking

Drying Processes

Hot air drying, vacuum drying, centrifugal drying, wind cutting

Additional Processes

Lifting, agitator, bubbling, rotating, rolling, stirring, refrigerating, filtration, overflow

#### **Compatible with Different Materials**

It has a good cleaning effect on items of various materials, including metal, plastic, glass, ceramics, etc. It can complete the cleaning task without damaging the material



# PART TWO.

# Semi-automatic/ Fully-automatic Series

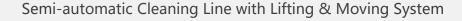
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### Semi-automatic Ultrasonic Cleaning Line









Semi-automatic Cleaning Line with Crane System



#### **Semi-automatic Operation** Design

Manually controlled the translation devices or cranes to transport the cleaning basket to each process



#### **Temperature control** system

Heats the cleaning fluid to keep it within the optimal working temperature range, improving cleaning effect



#### **Industrial-grade Ultrasonic Transducer**

Adopts 50W transducer, which can efficiently convert electrical energy into mechanical energy, with uniform and stable vibration and durability



#### : Filtration System

Filters the cleaning fluid to remove oil stains and impurities floating on the liquid surface, reducing the frequency of cleaning fluid replacement and preventing pollution



#### **Inner Tank Material**

304 or 316 stainless steel is selected, which has good corrosion resistance, oxidation resistance and mechanical strength



#### **Wide Application Range**

Suitable for cleaning various materials and types of workpieces, such as metal parts, electronic components, optical glass, plastic rubber, etc.

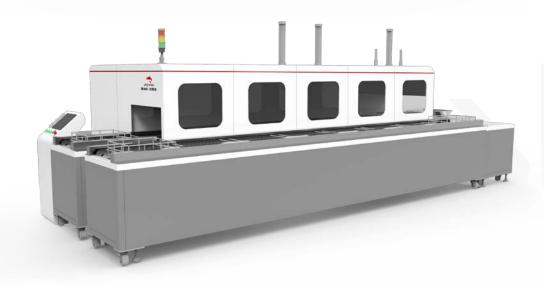


#### Safety

Multiple protection mechanisms such as over-temperature protection, overload protection, leakage protection, and liquid level alarm

# Fully Automatic Water-based Solvent Cleaning Equipment













**Labor-saving** 



**Efficient & Time-saving** 

#### **Features**

- Configurable with various additional systems (agitator, roller, filtration, etc.) to speed up workpiece cleaning and improve surface cleanliness
- Uses eco-friendly water-based solvents as cleaning fluids, which are green and safe
- The whole process is operated programmatically by the PLC control system
- Working continuously without interruption
- Equipped with an automatic detection and alarm system, which will alarm immediately in case of any abnormality
- Customizable different cleaning baskets and cleaning programs according to the size and needs of the cleaned products

#### **Process (Customized according to customer needs)**

**Cleaning processes:** ultrasonic cleaning, high-pressure spraying, soaking, electrolytic, etc. **Drying processes:** hot air drying, wind cutting, vacuum drying, centrifugal drying, etc. **Additional processes:** filtration, agitator, lifting, bubbling, rolling, stirring, etc.

#### **Cleaning Objects**

Auto parts, engines, exchangers, bearings, hardware, machined parts, aluminum alloy products, semiconductor products, stainless steel products, solar panels, monocrystalline/polycrystalline silicon wafers, PCB boards, etc.

# Fully Automatic Hydrocarbon Vacuum Cleaning Equipment





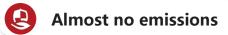
Multi Stage Hydrocarbon Vacuum Cleaning Equipment



Single-station Vacuum Hydrocarbon Cleaning Equipment









#### **Features**

- Equipped with a filtration system to separate hydrocarbon solvents from dirty liquids
- Equipped with a distillation regeneration system, the hydrocarbon solvent recovery rate is as high as 98%
- Vacuum ultrasonic cleaning, the cleaning effect on the workpiece with blind holes is obvious
- Configurable with various additional systems (agitator, roller, filtration, etc.) to speed up workpiece cleaning and improve surface cleanliness
- Operating fully automatically with real-time monitoring, featuring advanced technology ensures stable operation
- Equipped with carbon dioxide automatic fire extinguisher, safe and reliable
- Only one person can work with it, labor saving.

#### **Process (Customized according to customer needs)**

Vacuum ultrasonic cleaning, vacuum ultrasonic rinsing, steam bath & vacuum drying, etc.

#### **Cleaning Objects**

Electronic metals, auto parts, nuclear power components, valve assemblies, hardware parts, precision components, aluminum alloy die castings, blind hole complex machined parts, etc.



# PART THREE.

# Cleaning Machines for Special Applications

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Special Function Equipment & Additional Equipment | 18

### **Explosion-proof Ultrasonic Cleaner**



#### **Applicable**

Zone 1 and Zone 2 hazardous gas places IIA, IIB groups of strong gas or vapor environments

#### **Implementation Standards**

GB/T 3836.1-2021 "Explosive Atmospheres Part 1: Equipment - General Requirements"
GB/T 3836.2-2021 "Explosive Atmospheres Part 2: Equipment Protected by Flameproof
Enclosure 'd'"

#### **Features**



- Compliant with explosion-proof standards, suitable for flammable and explosive solvents, gas, or dust environments
- Adopts explosion-proof motors, explosion-proof circuits/pipelines, and anti-static materials to avoid dangerous situations caused by electric sparks or high temperatures
- Uses explosion-proof electrical cabinets to prevent internal circuits from contacting external hazardous environments
- Equipped with a water chiller and a built-in refrigeration and constant temperature system to control solvent temperature and inhibit volatilization

#### **Cleaning Media**

Alcohol, acetone, aviation kerosene, alcohol solvents, alkane solvents, trichloroethylene, hydrocarbons, etc.

#### **Application**

Aerospace, pharmaceutical, military industry, petrochemical industry, 3D printing













## Ultrasonic Cleaner with Lifting System







#### **Features**

- Convenient for draining water
- Reduces labor intensity and improves work safety
- Large load capacity, suitable for taking and placing workpieces in deep tanks or heavy workpieces
- Manually controlled (button/ handle) or automatically controlled (PLC system)
- Drives the cleaning basket to move up and down with the help of a motor, hydraulic, or pneumatic device
- Avoid direct contact with high-temperature or corrosive liquids to reduce the risk of burns or chemical injuries

#### **Application**

Engine components, molds, gears, auto parts, etc.









### **Electrolytic Ultrasonic Cleaner**



Single Tank Electrolytic Ultrasonic Cleaner

Ultrasonic Cleaning & Electrolytic Cleaning



Three Tank Electrolytic Ultrasonic Cleaner

#1 Ultrasonic Cleaning & Electrolytic Cleaning

#2 Ultrasonic Rinsing

#3 Soaking in Anti-rust Liquid

#### **Features**



- Complete complex cleaning work in a short time with dual action of electrolysis and ultrasonic
- Remove various dirt, it can clean thoroughly for products with complex shapes and dead corners
- Special electrolytic cleaning fluids and anti-rust agents are non-corrosive to workpieces and can protect metal surfaces
- Built-in filtration system, extending the replacement cycle of the cleaning fluid
- Easy to operate, various parameters can be easily set on the panel

#### **Application**

Carbon deposits, sulfides, gas, mold release agents, oil stains, rust, and other dirt on the surface of various precision molds, modules, mold cores, inserts, and inserts for injection molding, blow molding, stamping, etc.

Model	Tank Size (mm)	Ultrasonic Power (W)	Frequency (kHz)
JTS-1018T	300*480*260	0-1080	40
JTS-1024T	400*500*260	0-1440	40
JTS-1030T	500*600*260	0-1800	40
JTS-1036T	600*650*260	0-2160	40

#### **Cleaning Conditions of Mold & Plastic**

Material	PA	PBT	LCP	PC	PP	PPS	ABS	POM	FR	ACRYLIC	CR	EPDM	NBR	HNBR	SILANE	THERMOSET TING RESIN
<b>Cleaning Temp</b>	Room temp	50°C	50°C	50°C	50°C	50°C	50°C	50°C	50°C	50°C						
<b>Cleaning Time</b>	10min	40min	30min	10min	30min	30min	10min	30min	30min	30min						

# **High-pressure Spray Cleaning Machine**







#### **Rotary Spraying Cleaning Machine**

#### **Features**

- 360° rotating spray cleaning
- Adjustable rotation speed
- Detachable cleaning basket
- Large-capacity heating storage tank
- Equipped with a filtration system

Model	Basket Diameter (mm)	Working Height (mm)	Load Capacity (KG)	Motor Power	Rotating Speed	Storage Tank (L)	Heating Power (KW)	Pump Power (KW)	Spraying Pressure (MPa)
JP-0500ZP	500	300	50	Spray drives	-	40	3	0.55	0.25
JP-0600ZP	600	350	50	Spray drives	-	65	3	0.55	0.25
JP-0500P	500	300	80	Motor/ 0.15KW	10-50R/MIN	50	3	0.55	0.25
JP-0600P	600	350	80	Motor/ 0.15KW	10-50R/MIN	70	3	0.55	0.25-0.3
JP-0700P	700	350	80	Motor/ 0.15KW	10-50R/MIN	85	3	0.75	0.25-0.3
JP-0800P	800	500	250	Motor/ 0.15KW	10-50R/MIN	100	6	0.75	0.25-0.3
JP-0900P	900	500	250	Motor/ 0.15KW	10-50R/MIN	130	6	1.5	0.25-0.3
JP-1000P	1000	720	250	Motor/ 0.37KW	10-50R/MIN	145	6	2.2	0.3-0.5
JP-1200P	1200	730	350	Motor/ 0.37KW	10-50R/MIN	160	9	2.2	0.3-0.5
JP-1500P	1500	850	400	Motor/ 0.37KW	10-50R/MIN	200	9	3	0.3-0.5
JP-2000P	2000	1000	600	Motor/ 0.37KW	10-50R/MIN	450	12	3	0.3-0.5

### **High-pressure Spray Cleaning Machine**





# 3 IN 1 Automatic Multifunctional Cleaning Equipment

#### **Process**

Ultrasonic Cleaning + Spray Cleaning + Drying
(Hot air drying/ Vacuum drying/ Wind cutting)

#### **Features**

- 360° flip spray cleaning
- Microcomputer and touch screen control
- Automatic liquid replenishment with precise metering and addition
- Constant temperature heating
- Built-in filtration function
- Strong compatibility, can replace tooling to adapt to products of different specifications

Model	Tank Size (mm)	Spraying Pressure (MPa)	Ultrasonic Power (W)	Heating Power (W)	Drying Power (W)	Frequency (kHz)
JMB-018PHZ	500*350*300	0.3	0-900	1500	3000	28/40
JMB-030PHZ	550*450*400	0.3	0-1500	3000	3000	28/40
JMB-036PHZ	600*500*450	0.5	0-1800	4500	9000	28/ 40
JMB-048PHZ	700*500*500	0.5	0-2400	6000	9000	28/ 40
JMB-072PHZ	1000*600*600	0.8	0-3600	9000	12000	28/ 40
JMB-096PHZ	1200*500*800	0.8	0-4800	12000	12000	28/ 40

# **Special Function Equipment**





Ultrasonic Cleaner with Bubbling System



Ultrasonic Cleaner with Roller System



Ultrasonic Cleaner with Cooling System

# **Additional Equipment**





Pure Water Equipment Tunnel Drying Furnace



# PART FOUR.

# **Immersible Transducer**

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### **Immersion Transducer Box**



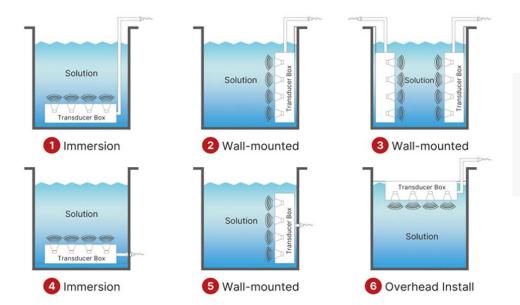




Square Transducer Box

**Round Transducer Box** 

#### Installation method



#### **Features**

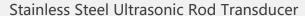
- Made of SUS304 or 316L stainless steel, the surface can be chrome-plated according to requirements to improve corrosion resistance
- Special bonding technology ensures that the transducer is firmly connected to the steel plate, enabling the vibrating plate to work stably for a long time
- Adopts a split structure, and the vibrating plate and the ultrasonic generator are connected by a high-frequency line
- It can be made into bottom-vibrating, side-vibrating, and top-vibrating types according to needs to meet various cleaning requirements
- Customizable with various sizes, powers, frequencies, and more, it can also enable PLC control

Model	Unit Size (mm)	Transducer No. (pcs)	Ultrasonic Power (W)	Frequency (kHz)	Discharge method
JP-1006I	305*205*100	6	0-300	28/40	Hard pipe/ hose
JP-1012I	355*305*100	12	0-600	28/40	Hard pipe/ hose
JP-1018I	340*280*100	18	0-900	28/40	Hard pipe/ hose
JP-1024I	430*280*100	24	0-1200	28/ 40	Hard pipe/ hose
JP-1030I	460*370*100	30	0-1500	28/40	Hard pipe/ hose
JP-1036I	550*450*100	36	0-1800	28/40	Hard pipe/ hose
JP-1048I	600*450*100	48	0-2400	28/40	Hard pipe/ hose

### Ultrasonic Rod Transducer







Model	Diameter (mm)	Length (mm)	Ultrasonic Power (W)	Frequency (kHz)
JP-1003M	57	180	0-150	28/40
JP-1006M	57	300	0-300	28/40
JP-1012M	57	550	0-600	28/40
JP-1018M	57	750	0-900	28/40
JP-1024M	57	1000	0-1200	28/40
JP-1036M	57	1520	0-1800	28/40

#### **Features**

- Made of corrosion-resistant materials such as stainless steel and titanium alloy, it can be used in various harsh working environments
- Designable in different shapes and sizes to meet various container and material handling requirements
- Easy to install and does not require a complicated assembly process
- Adopts a split structure, the vibrator and ultrasonic generator are connected by a high-frequency line
- Suitable for cleaning, emulsification, extraction, mixing, crushing, defoaming, etc.

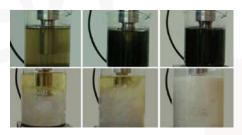


#### Energy Concentrated Ultrasonic Rod Transducer

Model	Diameter (mm)	Length (mm)	Ultrasonic Power (W)	Frequency (kHz)
JP-300N-70	53	70	0-300	20
JP-500N-140	53	140	0-500	20
JP-1000N-210	53	210	0-1000	20
JP-1000N-350	53	350	0-1000	20
JP-1500N-490	53	490	0-1500	20
JP-2000N-630	53	630	0-2000	20

#### **Application**







# SKYMEN **ULTRASONIC**

Focus on Ultrasonic Cleaning Solution Manufacturer

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