Altrasonic

Ultrasonic Sewing Machine

35Khz Automatic Ultrasonic Sealing Machine , Heat Sealing Equipment CE

Description

The work method of Seamless sewing part is completely imitating traditional sewing machine. The biggest characteristic is the ultrasonic transmit horn work direction is same with the sewed cloth. Which will make the sewed point of the cloth are even, flat and fastness. Through suitable design, it can reach perfect sewing effectiveness.

Applications

Apply to lace clothing, ribbon,trim,Filter, Lacing and quilting,decoration products, handkerchief, tablecloth, curtain, bedspread, pillowcase, quilt cover, tent, raincoat, disposable operating coat and hat, disposable mask, non-woven fabric bags and so on.

Model	W-35R
Frequency	35KHz
Power	800W
Rotary Welding Horns Width	12mm
The horn' s surface hardness	More than HRC60
Real-time Display	Working frequency and working current
Synchronizing wheel specifications	46XL Trapezoidal Tooth, Width 16mm
Synchronizing Belt Matched	Length 730mm / Width 12mm
Allowable Rotation Speed	100r/min
Power Supply	Analog and Digital Generator for selection
Rotary Wheel	Titanium material and Ceramic finish, more wear-resisting

Ultrasonic Metal Welding Machine

Description

ultrasonic metal welding machine is the high frequency vibration between the work piece surface, until the contact surface heating and welding together.

Principle

By using the ultrasonic high frequeccy vibration principle, the ultrasonic metal welder converts the ultrasonic vibration energy into friction energy to transfer the metal' s surface. Under condition of producing the heat by the friction and putting a pressure to the metal, The metal pieces will be fused.

Applications

Welding solar plate, welding thin metal materials, and other rotary welding application.

Frequency	20Khz
Output Power	2000W
Voltage	220V
Switch	Handle or foot switch
Power Adjusting	Step or continuous
Working Time Control	24 Hours
Weight	20-30KG (determined by the size of the horn)
Generator	Digital Generator

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ULTRASONIC WELDING APPLICATION

Description

Ultrasonic welding equipment can be easily customized to fit the exact specifications of the parts being welded. The parts are sandwiched between a fixed shaped nest (anvil) and a sonotrode (horn) connected to a transducer, and a ~20 kHz low-amplitude acoustic vibration is emitted. (Note: Common frequencies used in ultrasonic welding of thermoplastics are 15 kHz, 20 kHz, 30 kHz, 35 kHz, 40 kHz and 70 kHz). When welding plastics, the interface of the two parts is specially designed to concentrate the melting process. One of the materials usually has a spiked energy director which contacts the second plastic part. The ultrasonic energy melts the point contact between the parts, creating a joint. This process is a good automated alternative to glue, screws or snap-fit designs. It is typically used with small parts (e.g. cell phones, consumer electronics, disposable medical tools, toys, etc.) but it can be used on parts as large as a small automotive instrument cluster.

Applications

Toy industry: such as toy gun, water gun, telephone and rag baby etc.
Electronic industry: The gum case of watch, nylon watch band, calculator, sound box wraps hull, cell phone battery etc.
Auto industry.
Packing industry: Disguise box, PVC packing box, toothpaste tube etc.
General business: The typewriter color take, video cassette rack, tape box, computer disk etc.

Item No	HS-X20P	HS-X15P
Frequency	20Khz	15Khz
Power	1500W	3300W
Voltage	200-240V, Alternating current	200-240V,Alternating current
	50-60hz, Single phase	50-60hz, Single phase
Electric current	10A	20A
Range of welding time	0.05-10/sec	0.05-10/sec
Environment Temperature	5-50℃	5-50℃
Air supply requirements	Clean dry compressed air	Clean dry compressed air
	maximum pressure 7kg	maximum pressure 7kg
Maximum pressure	1.96KN	2.89KN
Maximum stroke	100MM	100MM
Beats	80/Min	50/Min
Triggered Dynamic range	67-890N	135-960N
Weight	68Kgs	68Kgs
Dimension	476mm(L)*736mm(W)*1524mm(H)	476mm(L)*736mm(W)*1524mm(H)

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Thermoplastic Material Amplitude Reference Guide (microns)

Resin	Frequency			
Amorphous Type	15KHz	20KHz	30KHz	40KHz
ABS	36-84	30-70	24-56	18-42
ASA	36-85	30-71	24-57	18-43
Polycarbonate（PC）	48-96	40-80	32-64	24-48
PC/ABS Alloy	72-120	60-100	48-80	36-60
Polycarbonate/Polyester alloy	60-120	50-100	40-80	30-60
Polyetherimide（PEI）	84-120	70-100	56-80	42-60
Polyether Sulfone（PES）	84-120	70-100	56-80	42-60
PMMA	48-84	40-70	32-56	24-42
Polyphenylene Oxide (PPO)	60-108	50-90	40-72	30-54
polystyrene (PS)	36-84	30-70	24-56	18-42
Polysulfone (PSU)	84-120	70-100	56-80	42-60
Polyvinyl Chloride（PVC）	48-96	40-80	32-64	24-48
Acrylonitrile-styrene Copolymer（SAN）	36-84	30-70	24-56	18-42
Semi-crystalline	15KHz	20KHz	30KHz	40KHz
Cellulose(CA,CAB,CAP)	72-120	60-100	48-80	36-60
Liquid Crystal Polymer(LCP)	84-144	70-120	56-96	42-72
Copolyester	84-144	70-120	56-96	42-72
Polyformaldehyde (POM)	84-144	70-120	56-96	42-72
Polyamides (PA)	84-144	70-120	56-96	42-72
Thermoplastic Polyester (PBT)	84-144	70-120	56-96	42-72
Polythylene Terephthalate(PET)	96-144	80-120	64-96	48-72
Polyether-ether-ketone(PEEK)	84-144	70-120	56-96	42-72
Polyethylene (PE)	108-144	90-120	72-96	54-72
Polyphenylene Sulfide (PPS)	96-144	80-120	64-96	48-72
Polypropylene (PP)	108-144	90-120	72-96	54-72

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Thermoplastic Intermiscibility of Ultrasonic

	ABS	ABS/PC Alloy	Polyformaldehyde (POM)	Acrylonitrile (PMMA)	Acrylic Copolymer	Butadiene-styrene (BS)	Fluoropolymers	Nylon	The Phenyl Oxide based Resin	Polyamide Imide(Torlon)	Polycarbonate (PC)	Thermoplastic Polyester PBT/PET	Polyethylene PE	Polymethylpentene (TPX)	Polyphenylene Sulfide PPS	Polypropylene (PP)	Polystyrene (PS)	Polysulfone (PSU)	Polyvinyl Chloride (PVC)	SAN/NAS/ASA
ABS	■	■		■	○														○	○
ABS/PC Alloy	■	■		○							■									
Polyformaldehyde(POM)			■																	○
Acrylonitrile(PMMA)	■	○		■	○				○		○						○			○
Acrylic Copolymer	○			○	■												○			
Butadiene-styrene(BS)						■														
Fluoropolymers							■													
Nylon								■												
The Phenyl Oxide based Resin				○					■		○						■			○
Polyamide Imide(Torlon)										■										
Polycarbonate(PC)		■		○					○		■							○		
Thermoplastic Polyester (PBT/PET)												■								
Polyethylene(PE)													■							
Polymethylpentene(TPX)														■						
Polyphenylene Sulfide(PPS)															■					
Polypropylene(PP)																■				
Polystyrene(PS)																	■			
Polysulfone(PSU)					○	○			■									■		○
Polyvinyl Chloride(PVC)	○										○			○					■	
SAN-NAS-ASA	○			○	○				○								○			■

■-Miscibility ○-Miscibility in some cases