



FULCARE

TEL: +86-28-87888521

WEB: www.fulcare.cn

EMAIL: contact@fulcare.cn

ADD: Rm. 1908 Bldg. 1, No.6 Shuangbai Rd., West High Tech Zone, Chengdu, China, 611730

All product drawing & function-instruction are for reference only. There will be no further notice for the further improvements of specifications or designs.

FULCARE



Ultrasond Wound Debridement Device

International Leading Technology

Professional

Efficient

Durable





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Intelligent Rehabilitation Medical System

Ultrasound Wound Debridement Device

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- Professional
- Efficient
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Overview

The ultrasound wound debridement device is a medical equipment which is developed for complicated wound debridement by using ultrasonic cavitation effect and mechanical effect of high frequency vibration.

Compared with normal debridement, the ultrasonic wound debridement system increases debridement efficiency, reduces damage to the normal tissue during debridement, eases pain of patients, and is portable to move.

With the functions of ultrasonic debridement, pulse flushing and vacuum suction, the debridement device can sterilize bacteria by destroying the biomembrane; increase antibiotic activity, promote fibrin decomposition, improve blood circulation and make blood vessels become wider; the debridement device can also remove the necrotic tissue inside the wound, and protect new granulation tissue. It is an advanced surgical debridement technique at present.

Application Range

- 1
- Trauma, surgical injury and infected wound: such as freshly contaminated open soft tissue injury, burn, scald, superficial infection wound, diapyetic wound, sinus tract and fistulous tract, etc.

- 2

Hard agglut wounds: such as diabetic wounds, bedsore, neuro-trophic ulcer, traumatic ulcer, etc.
- 3

Soft tissue trauma, and compound fracture, etc.
- 4

Wounds of orthopaedics joint replacement and fracture fixations, etc.
- 5

First aid injury debridement.

Application Departments

Departments of Trauma Surgery	Hands and Feet Surgery
Bone Surgery	Vascular Surgery
Burn	Dermatology
Endocrinology	Rehabilitation Physiotherapy
Emergency Surgery	Operation Room
General Surgery	Dressing Room
Proctology	etc.

Advantages

Safe & painless debridement

The device has independent liquid medicine pipeline which can be replaced quickly to meet the continuous use of the host machine, and avoid cross infection as well. During debridement, the pain of patient can be greatly reduced, the nerve and blood vessels around the wound will be not damaged, and there are no damage to the normal tissue and the granulation tissue.

Efficient debridement

The debridement fluid is radiated into fog under ultrasound, the utilization of debridement fluid is increased, the debridement area becomes wider, and the debridement time is shorten.

Complete debridement

During debridement, suitable ultrasonic treatment handpieces can be replaced for different wounds according to actual situation, so the wound positions, which cannot be reached by normal debridement instrument, can be debrided completely by adjusting the location of debridement handpiece.

Healing promoting

The device can improve the wound environment, promote the effect of drug treatment, activate the fiber cells, promote the synthesis of fibrin layer, and enhance the wound healing ability.

High bacterial removal rate

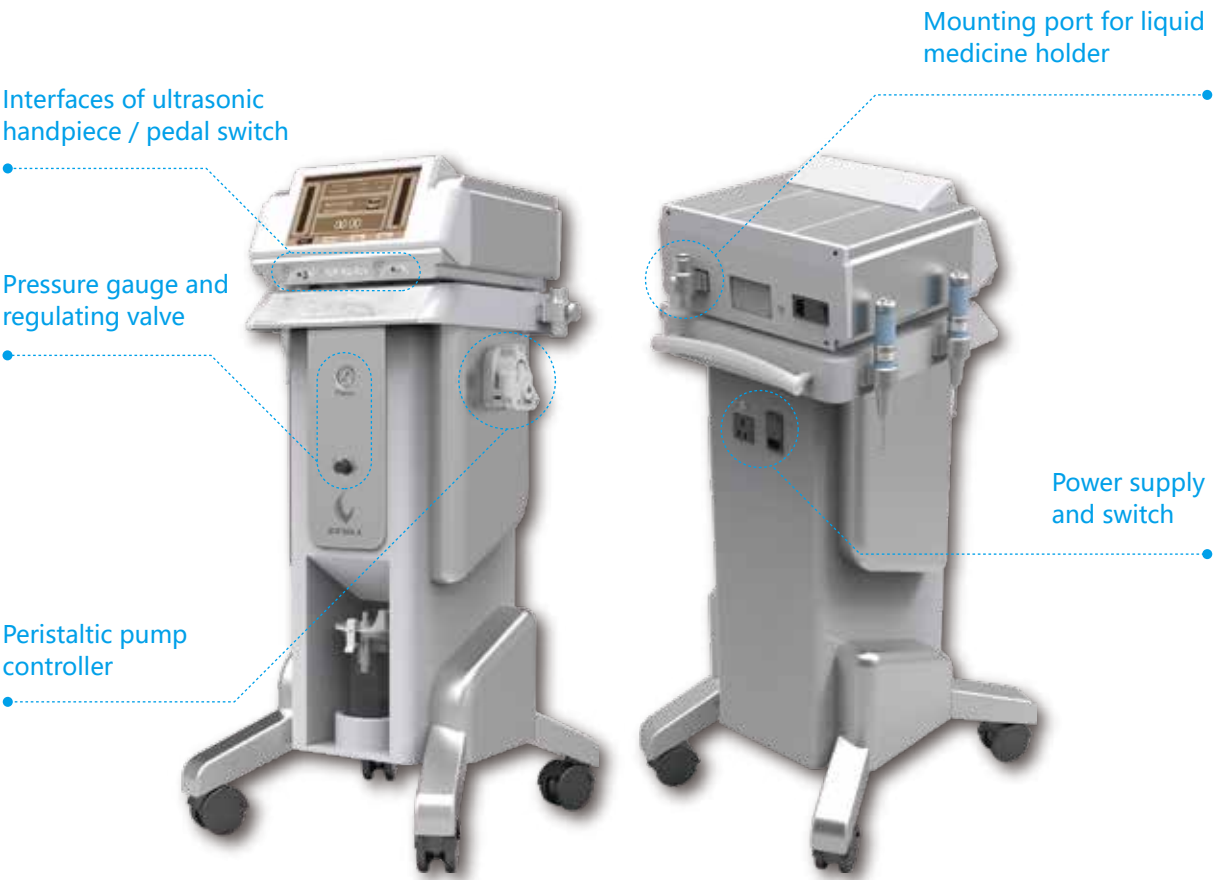
The bacteria, fungi and viruses adhered on the wound can be removed and destroyed by using ultrasound, the rate of sterilization is more than 96%.

Intelligent &user friendly design

The device has independent and adjustable vacuum drainage system and pulsating flushing system, a high-type dividable main machine which can be moved conveniently or used independently, touch screen interface control, friendly human-computer interaction interface, and simple operation. The handpiece is light and small, and the operation is convenient and flexible, which can greatly reduce the workload of medical staff.



Parameters



Model	CF/Q-C1	CF/Q-C2	CF/Q-C3	CF/Q-C4
Function	ultrasonic debridement, pulse flushing, vacuum suction	ultrasonic debridement, pulse flushing	ultrasonic debridement, vacuum suction	ultrasonic debridement
Power	≤300VA			
Input Voltage	AC100~240V, 50/60Hz			
U. Frequency	20KHz~40KHz			
U. Power	≤100W			
Noise	≤60dB			
P. Flush vol.	≤1200mL/min	≤1200mL/min	—	—
Vac. Suction	≤-67KPa	—	≤-67KPa	—

Main Accessories: Ultrasonic debridement handpieces



QHD-01
Double-ball Tip
for sinus wound



QHD-02
Spatula Tip
for gap wound

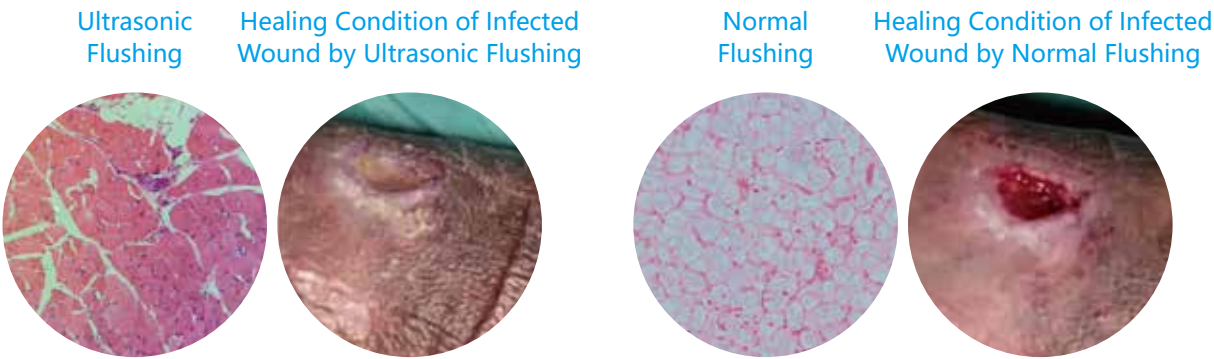


QHD-03
Hoof Tip
for surface wound

Handpiece Type	Tip Type	Length	Tip (Φ)	Weight	Injection Mode
QHD-01	Double-ball	54mm	6mm	200g	Central Injection
QHD-02	Spatula	54mm	6mm	200g	Central Injection
QHD-03	Hoof	54mm	6mm	200g	Central Injection

Experimental Data

Sterilization Effect of Ultrasonic Flushing for Infected Wound			
Mode	C. F. U. Before Flushing	C. F. U. After Flushing	Bacteria Removal Rate (%)
Ultrasonic (n=8)	$3.13 \pm 2.75 \times 10^9$	$3.78 \pm 2.85 \times 10^7$	98.9
Normal (n=8)	$3.75 \pm 2.45 \times 10^9$	$3.18 \pm 1.45 \times 10^7$	16.5



Safety of Ultrasonic Debridement Device

No obvious change in the microstructure of muscle tissue after ultrasonic flushing.

No obvious change in the ultrastructure of muscle tissue after ultrasonic flushing, no mitochondrial swelling.

