

bms

Innovation in bloodcare technologies

Leading by **Innovation**

Focus on safe and modern blood transfusion
Focus on anti-dry eyes & anti-aging eyes

bms

Focus on safe and modern blood transfusion

Leading by **Innovation**



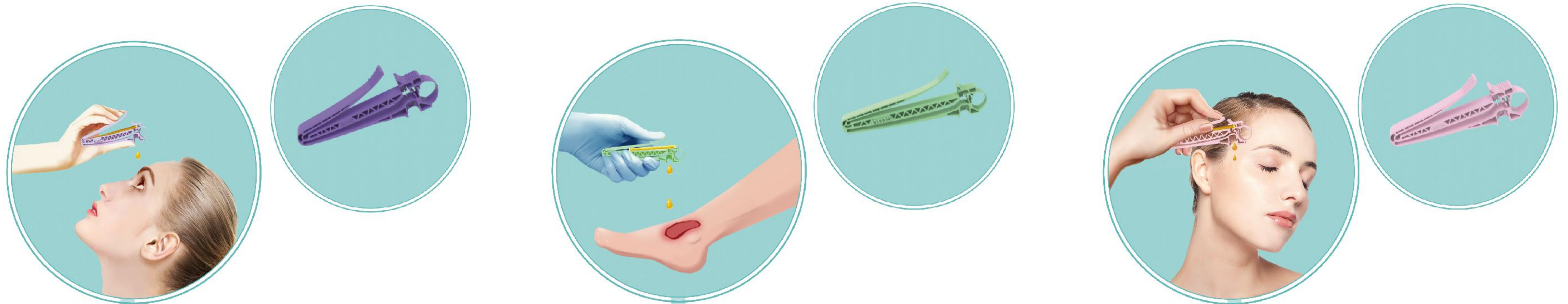
Leading by innovation Excellent through quality

Focus • Innovation • Sustainability

bms

Focus on anti-dry eyes & anti-aging eyes

Leading by Innovation



Leading by innovation Excellent through quality

Focus • Innovation • Sustainability

Vision

bms Vision

Not to be the first, but to be the unique

bms Strategy

Leading by innovation
Excellent through quality

bms Quality

Not to be the second, but to be the first

bms Value

Innovation Focus Sustainability

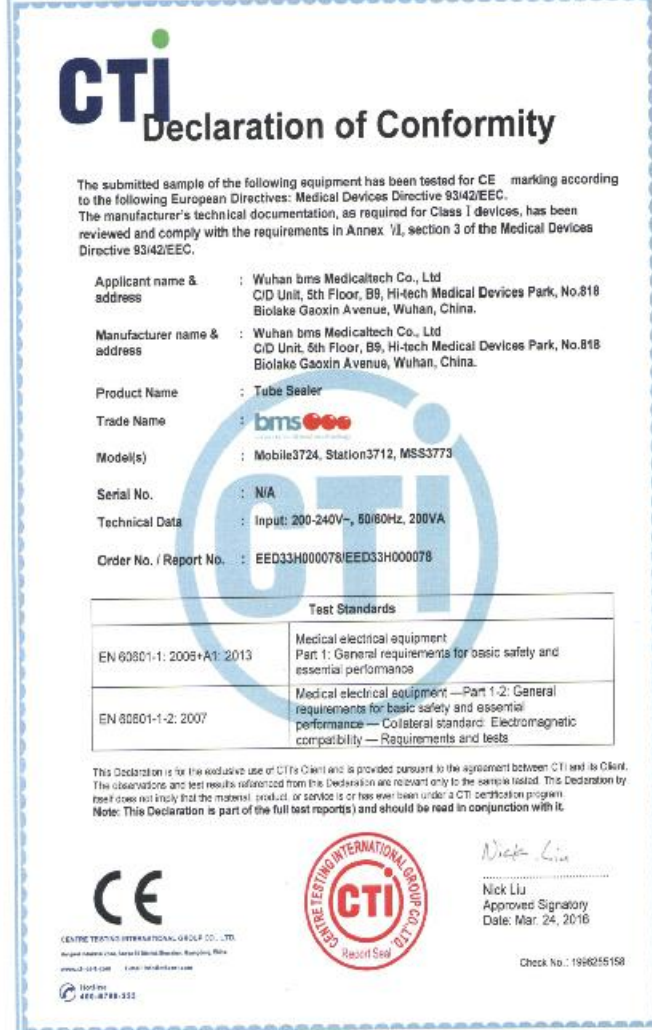
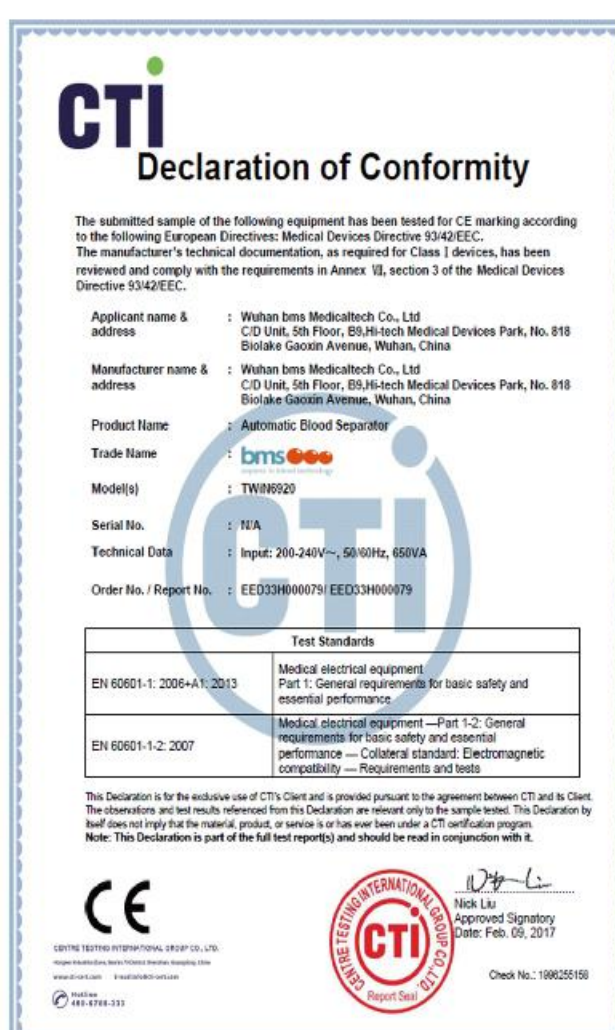
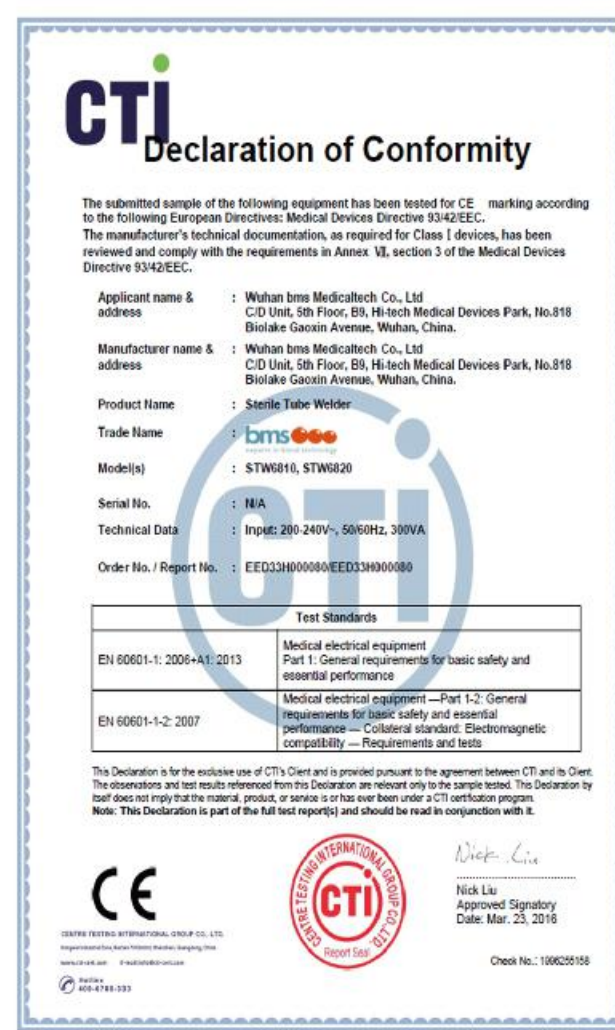
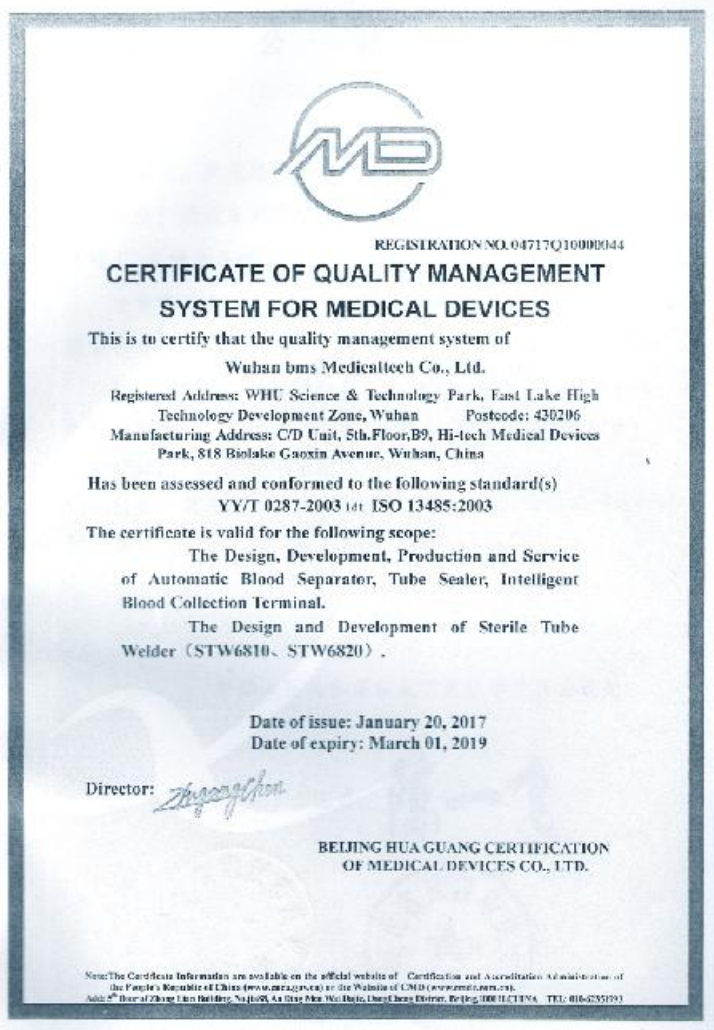
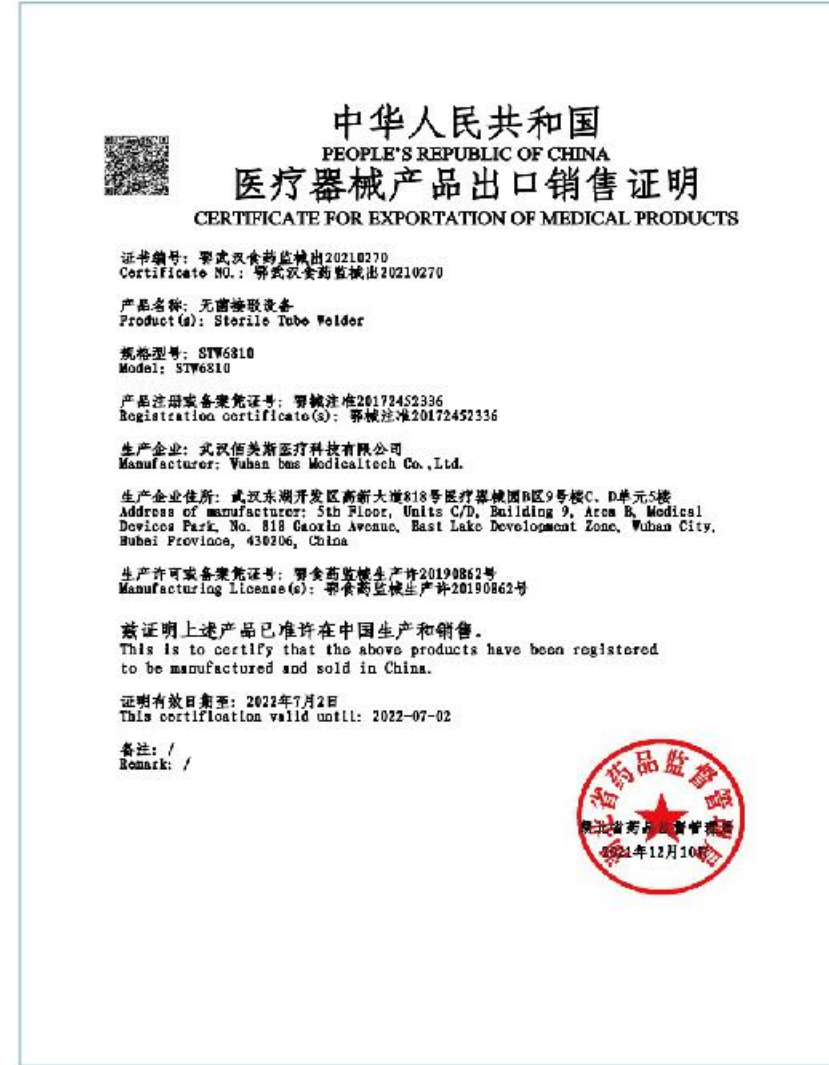
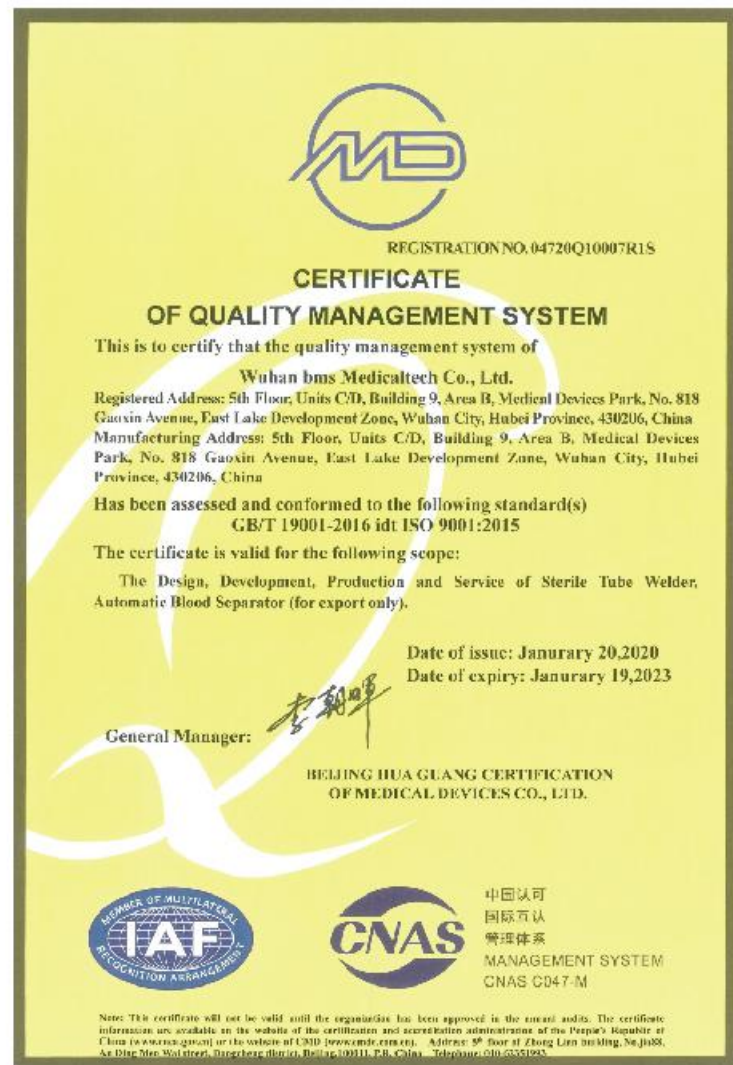
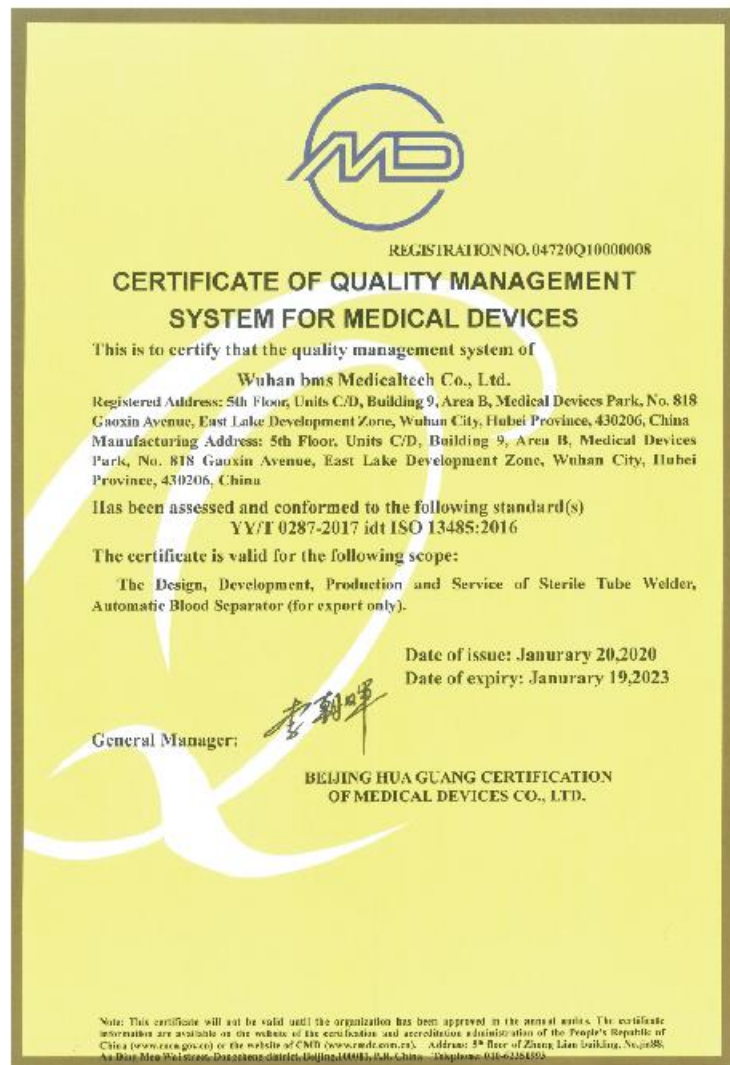
bms Service

Not to be good, but to be the best

bms Mission

Every drop of blood used to treat patient
contains the effort and dedication of bms team

bms Culture



Content

01 Blood sterile tube welder series



Blood sterile tube welding digital workstation
Plasma virus inactivation
STW6810VIP- I



Blood sterile tube welding digital workstation
Red blood cell washing
STW6810VIP- II



Blood sterile tube welding digital workstation
Buffycoat platelet pooling
STW6810VIP- III



Blood sterile tube welder
Smart type
STW6810-RFID



Blood sterile tube welder
General type
STW6810



Data management
D-soution



Blood sterile tube opener
WTO3610

02 Blood separator series



Automatic blood separator
Luxury TWiN machine
TWiN6920



Blood separating AI robot
Robotic6960

03 Intelligent blood donation units



Intelligence blood donation unit
BCT3800



Intelligence blood donation unit
BCT3890



Blood bag carrier
MSS3771



Mobile sealing set
MSS3773



Mobile blood-collecting robot
BCT3880



Automatic portable tube sealer
Mobile3724



Automatic station tube sealer
Station3712

04 High value-added medical consumables



Sterile drop doser for dry eyes
ASE80s



Sterile drop doser for wound
PRP90s



Sterile drop doser for anti-aging
EVA70s



Blood sampler with high precision and safety
BDS60

Directory

Directory



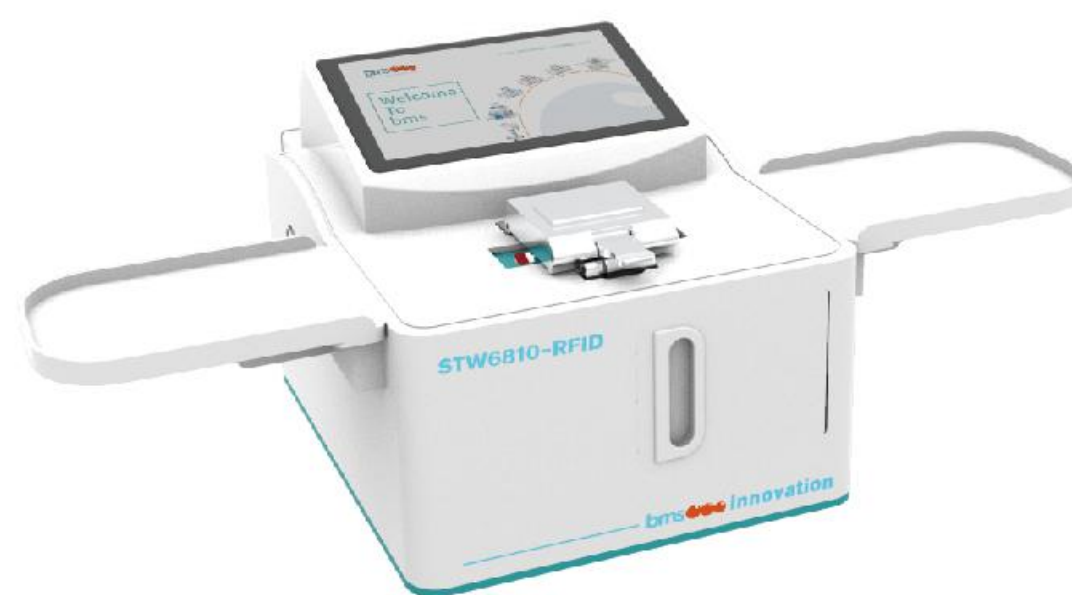
Blood sterile tube welding digital workstation
Plasma virus inactivation
STW6810VIP- I



Blood sterile tube welding digital workstation
Red blood cell washing
STW6810VIP- II



Blood sterile tube welding digital workstation
Buffycoat platelet pooling
STW6810VIP-III



Blood sterile tube welder
Smart type
STW6810-RFID



Blood sterile tube welder
General type
STW6810



D-soution
Data management



Blood sterile tube opener
WTO3610

Blood sterile tube welder series

Digital Workstation of Sterile Tube Welding

High Innovation

Plasma virus
inactivation
STW6810VIP-I



Red blood cell
washing
STW6810VIP-II



Buffycot platelet
pooling
STW6810VIP-III



Digital Workstation of Sterile Tube Welding

Blood sterile tube welding digital workstation

Plasma virus inactivation

STW6810VIP-I

Standard
Efficient
Security
Digital
Intelligence

Standardization: Replace traditional 5 single steps and integrate all the steps to one workstation.

High efficiency: Save time and improve efficiency by 30%.

Security: Read bar code on line, print bar code, check bar code and make sure 100% secure data.

Digitization: Collect data, analyze data, and output data to make data traceable.

Intelligence: wire cassettes with RFID label, real-time monitoring and data management. Prevent piracy or reuse.

Configuration		Weighing scale:	0.3-6kg
1. Central monitoring module	1 set	Weighing tolerance:	±1g
2. Scanning module	2 sets	Bar code reading window:	2 pcs
3. Weighing module	2 sets	Welding tube diameter:	inner diameter ≥ 2.7mm
4. Sterile tube welding module	1 set		wall thickness ≥ 0.5mm
5. Bar code printing module	1 set		outer diameter ≤ 5.5mm
		Welding strength:	≥ 60N
Ethernet port	2 pcs		Tensile strength better than
RS485 port	2 pcs		ISO3826.1:2003 standard
Dimension: L800*W550*H191(mm)		Nominal voltage:	200~244 VAC
			50/60Hz



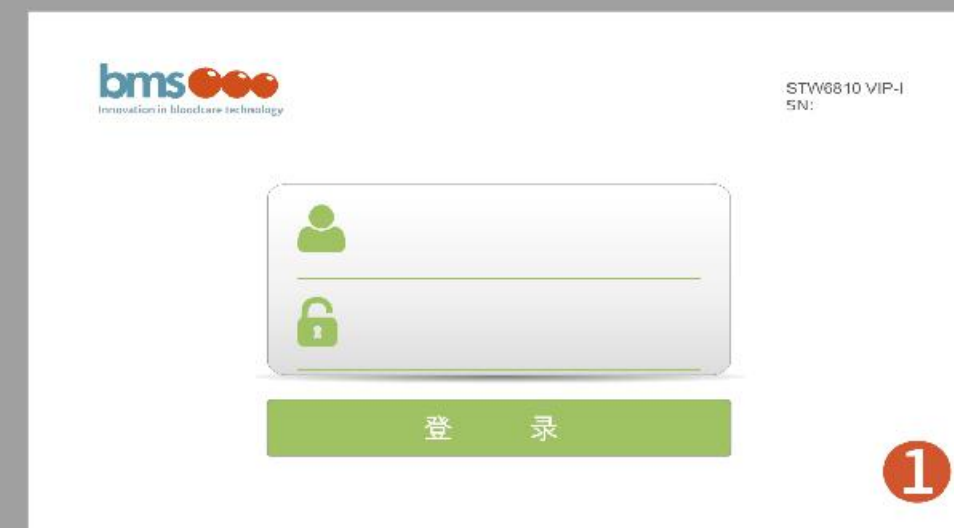
Blood sterile tube welding digital workstation
Plasma virus inactivation
STW6810VIP-I

Six operating steps for plasma virus inactivation



Data inquire Data statistics Data analysis

Visual screen with 10 inches UI operating demonstration



Open the cover and put blood bag on weighing and scanning modules at the left.



Device recognizes bar code on the bag and bag's weight automatically and then prints relating bar code.



Put consumable bag on weighing module at the right and weigh it.



System compares the weight with specification datas and chooses correct type.



If bar code comparison is correct, close top cover and welding starts automatically.



After welding, squeeze the tube connection joint.

Digital Workstation of Sterile Tube Welding

Blood sterile tube welding digital workstation

Red blood cell washing

STW6810VIP-II

Standard

Standardization: Replace traditional 5 single steps and integrate all the steps to one workstation.

Efficient

High efficiency: Save time and improve efficiency by 30%.

Security

Security: Read bar code on line, print bar code, check bar code and make sure 100% secure data.

Digital

Digitization: Collect data, analyze data, and output data to make data traceable.

Intelligence

Intelligence: wire cassettes with RFID label, real-time monitoring and data management. Prevent piracy or reuse.

Configuration

1. Central monitoring module	1 set
2. Scanning module	2 sets
3. Weighing module	2 sets
4. Sterile tube welding module	1 set
5. Bar code printing module	1 set

Ethernet port	2 pcs
RS485 port	2 pcs
Dimension: L800*W550*H191(mm)	

Weighing scale:	0.3-6kg
Weighing tolerance:	±1g
Bar code reading window:	2 pcs
Welding tube diameter:	inner diameter ≥ 2.7mm wall thickness ≥ 0.5mm outer diameter ≤ 5.5mm
Welding strength:	≥ 60N Tensile strength better than ISO3826.1:2003 standard of ISO3826.1:2003
Nominal voltage:	200~244 VAC 50/60Hz



Digital Workstation of Sterile Tube Welding

Blood sterile tube welding digital workstation

Red blood cell washing

STW6810VIP-II

Six step process for safe and efficient red blood cell washing

Data inquire Data statistics Data analysis



Digital Workstation of Sterile Tube Welding

Blood sterile tube welding digital workstation Buffycoat platelet pooling STW6810VIP-III

Standard

Standardization: Replace traditional 5 single steps and integrate all the steps to one workstation.

Efficient

High efficiency: Save time and improve efficiency by 30%.

Security

Security: Read bar code on line, print bar code, check bar code and make sure 100% secure data.

Digital

Digitization: Collect data, analyze data, and output data to make data traceable.

Intelligence

Intelligence: wire cassettes with RFID label, real-time monitoring and data management. Prevent piracy or reuse.

Configuration

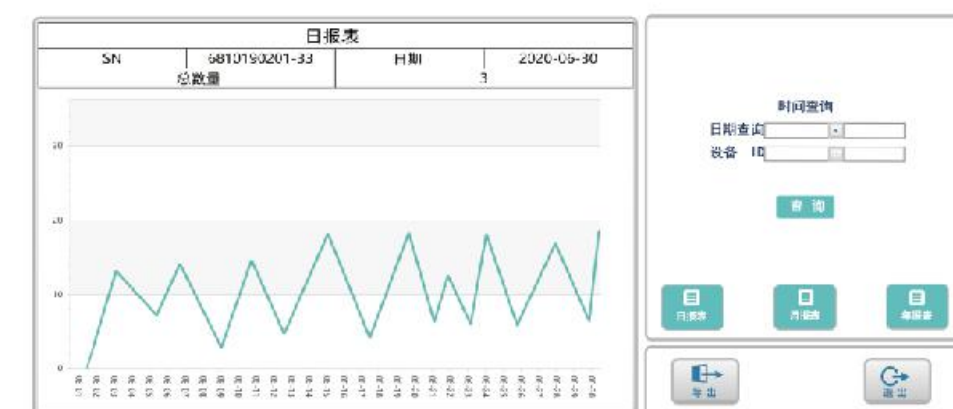
- | | |
|--------------------------------|--------|
| 1. Central monitoring module | 1 set |
| 2. Scanning module | 2 sets |
| 3. Weighing module | 2 sets |
| 4. Sterile tube welding module | 1 set |
| 5. Bar code printing module | 1 set |

- | | |
|-------------------------------|-------|
| Ethernet port | 2 pcs |
| RS485 port | 2 pcs |
| Dimension: L800*W550*H191(mm) | |

- | | |
|--------------------------|---|
| Weighing scale: | 0.3-6kg |
| Weighing tolerance: | ±1g |
| Bar code reading window: | 2 pcs |
| Welding tube diameter: | inner diameter ≥ 2.7mm
wall thickness ≥ 0.5mm
outer diameter ≤ 5.5mm |
| Welding strength: | ≥ 60N
Tensile strength better than
ISO3826.1:2003 standard
of ISO3826.1:2003 |
| Nominal voltage: | 200~244 VAC
50/60Hz |

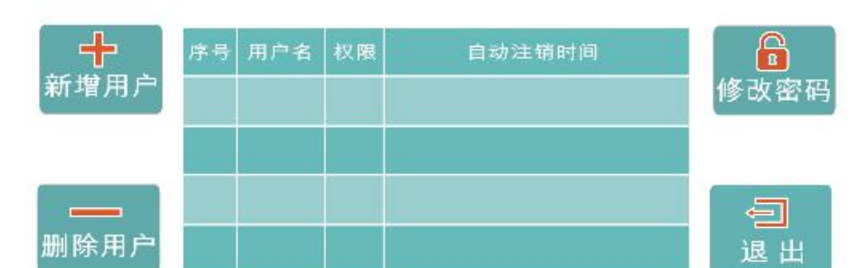
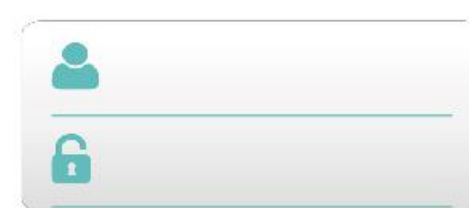


Blood sterile tube welding digital workstation
Buffycoat platelet pooling
STW6810VIP-III

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Data inquire Data statistics Data analysis

34.



Visual screen with 10 inches UI operating demonstration



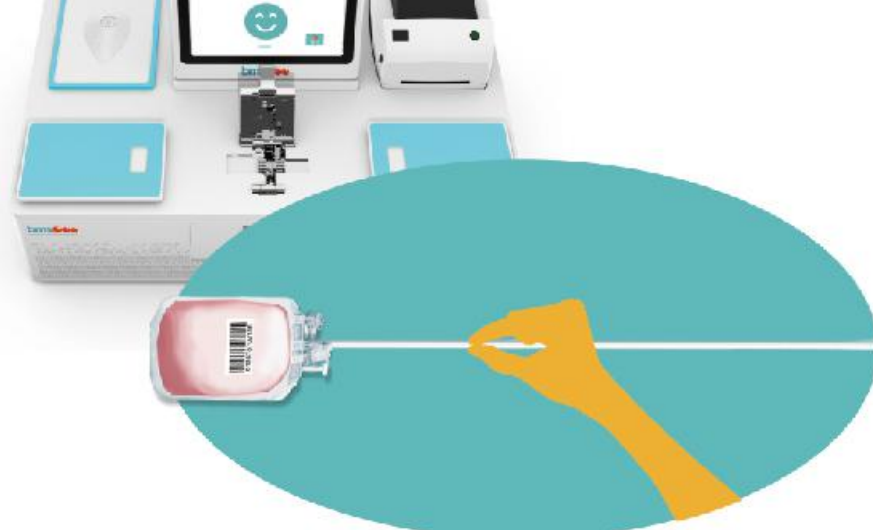
Weigh blood platelet bag and scan bar code on the bag.



Do tube welding between blood platelet bag and collecting consumable bag.



Process 5-7 pcs blood platelet bags per weighing, scanning and welding flows.



After welding, squeeze the tube connection joint.

Four operating steps for blood platelet pooling

Blood sterile tube welder

STW6810-RFID

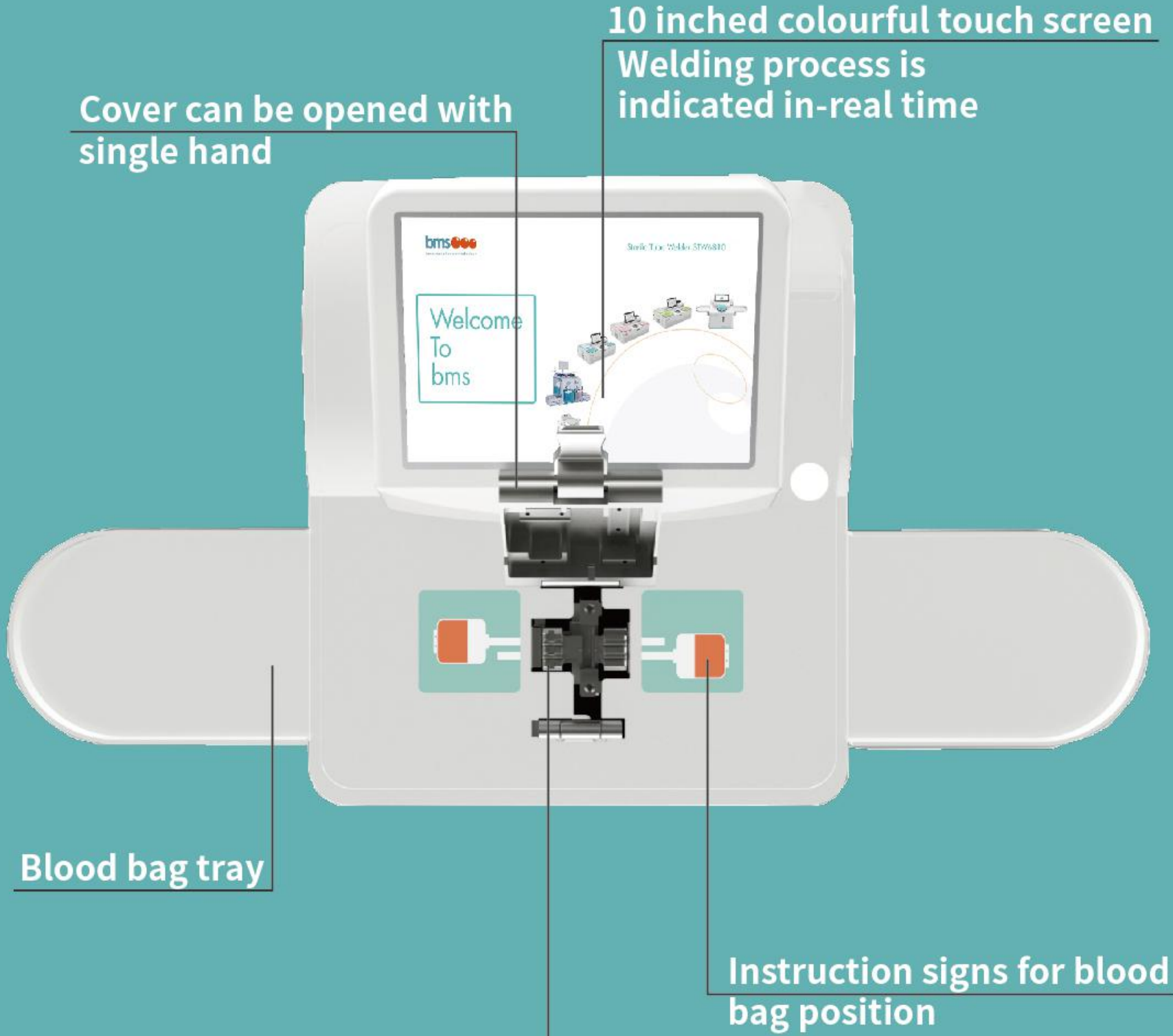
The products have been sold to 30 countries and areas.
The markets of Asia,Europe,America and Africa are opened. The products are highly accepted and evaluated as good quality by our international customers.

- As original patent for invention, welding with cassettes technique makes welding times recognized smartly
- Whole welding process is indicated in real time by animation on 10 inches colourful touch screen
- Welding force and quality are stable and reliable which absolutely meet Chinese standard GB14232.1-2020
- RFID chips are installed in body of cassettes which make residue welding times be recognized correctly
- Data are managed by information and traceability
- Smart gateway can monitor device running status in real-time and long-distance

SMART TYPE



STW6810-RFID has the capability to guarantee stable sterile welding with secure tubes



All types of welding request can be met: wet tube-wet tube,wet tube-dry tube and dry tube-dry tube

Welded tube inner diameter $\geq$ 2.7mm,outer diameter $\leq$ 5mm, wall thickness $\geq$ 0.5mm



RFID Intelligent chip

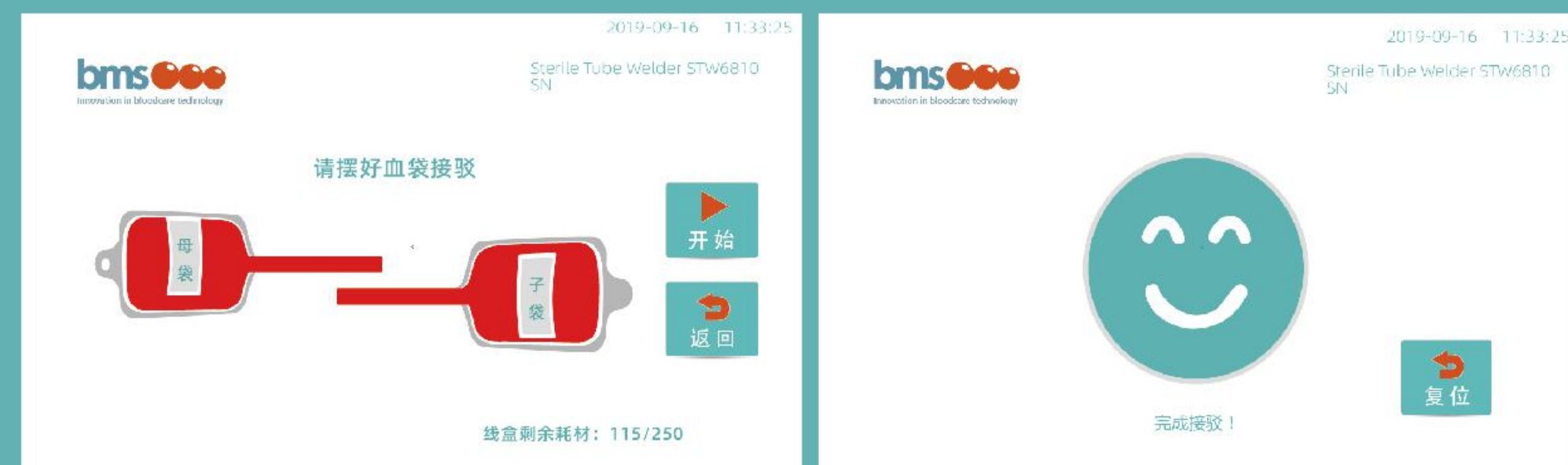


- **Recognize residue times of each cassette**
Record original usable times of each cassette and recognize time value after installing cassette. System read RFID chip to know residue usable times.
- **Continuous warnings are found if cassette can not be installed**
If RFID cassette is not installed, continuous warning on screen of device will not stop until new cassette is installed.
- **Prevent cassette being used repeatedly**
If RFID cassette is used out, the information of residue time:0 is indicated on the screen to remind user to install a new cassette.



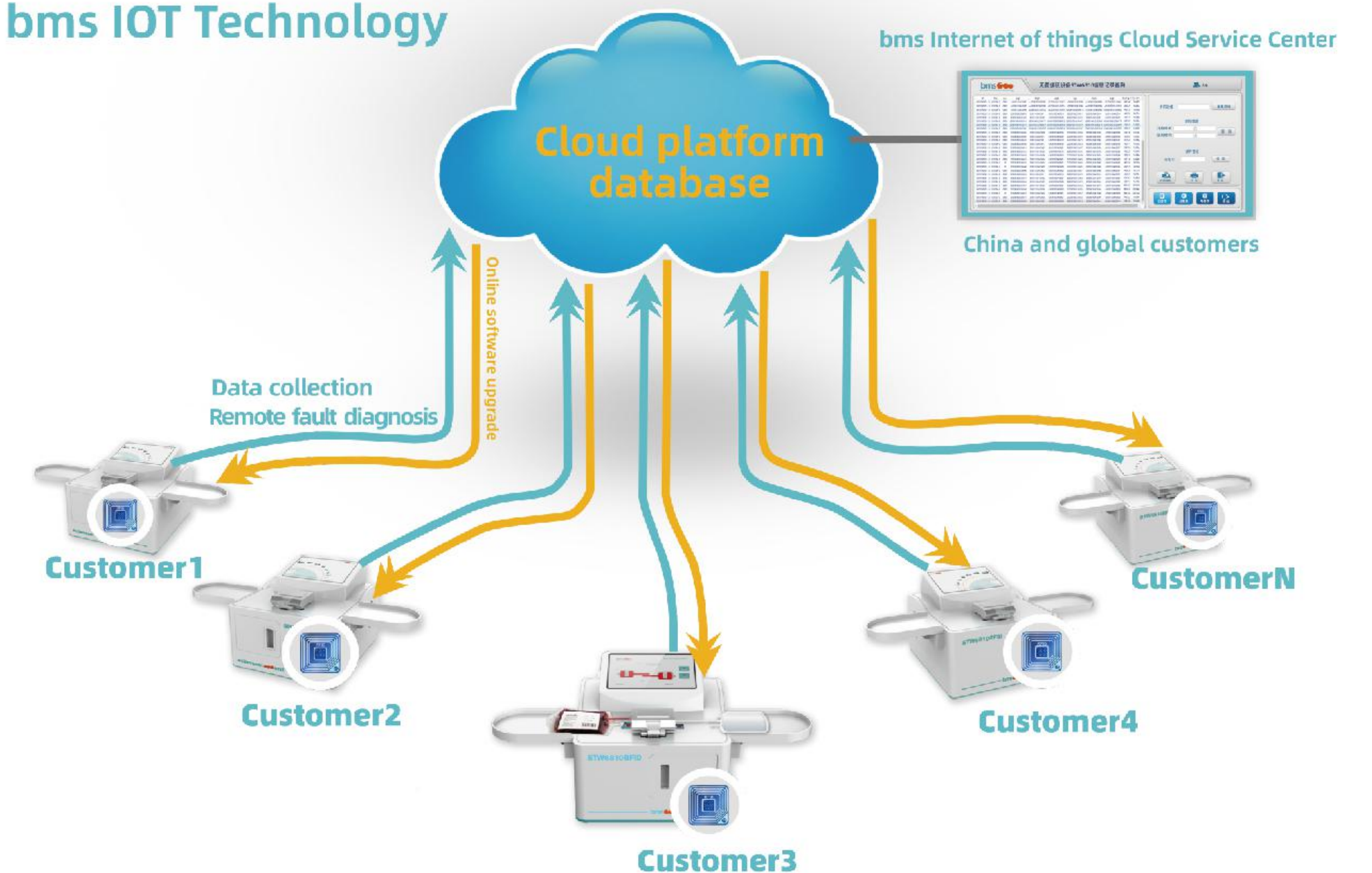
Each welding time 18 seconds
300 times welding times
L116mm*W90mm*H21mm

Software demonstration



- Welding data are transmitted in long-distance through smart gateway
- Smart gateway transmit data and monitor each device's working status.
- Data can be seen from cloud platform of bms
- Device breakdown in long-distance can be rapidly diagnosed and customer complaint can be processed in time.

bms IOT Technology



STW6810-RFID can be connected with D-Solution data management to collect and analyze welding data.



Connecting diagram of D-Solution

STW6810-RFID Product description

- 1 Sterile tube welding for PVC tubes or blood bag tubes can be made in common environment (Non-sterile environment).
- 2 Accepted PVC tube welding types: dry tube-wet tube, dry tube-dry tube, wet tube-wet tube.
- 3 Welding strength: $\geq 50N$ which meets requirement of standard GB14232.1-2004/ISO3826-1:2003
- 4 Welding time: 18 seconds
- 5 Tube specification: outer diameter $\leq 5mm$, inner diameter $\geq 2.7mm$, wall thickness $\geq 0.5mm$
- 6 Welded tube length: $\geq 45mm$
- 7 Welding time of single metal wire cassette: 300 times
- 8 Operating: 10 inches colourful liquid crystal touch screen
- 9 Appearance dimensions :L370*W405*H290mm (without tray) L760*W405*H290mm (with tray)
- 10 Working rated power: 300VA
- 11 Electrical safety: GB4793.1-2007, EN 60601-1:2006+A1 2013/EN 60601-1-2:2007
- 12 Classification: CFDA Active Class 2

Data management of bms sterile tube welder D-solution



-solution

High innovation product from STW6810. D-solution is specially researched for data management of sterile tube welder

Collect and record each piece of welding data and make data 100% traceable
Two-way controlling can be done between D-solution and sterile tube welder.
Analyze data ,summarize data and indicate data in real-time on the screen.
Manage data of multiple sterile tube welders simultaneously

D-solution can manage data of multiple sterile tube welders



Example images

Product parameters

Product module : D-Solution 6810
Input power : AC100V~240V, 50Hz~60 Hz
Screen dimension: 12.1 inch high precision capacitive touch screen
Port: USB port*3 Ethernet port*5
Weight: ≤8KG Weight



High Innovation

Tube opener of bms sterile tube welding WTO3610

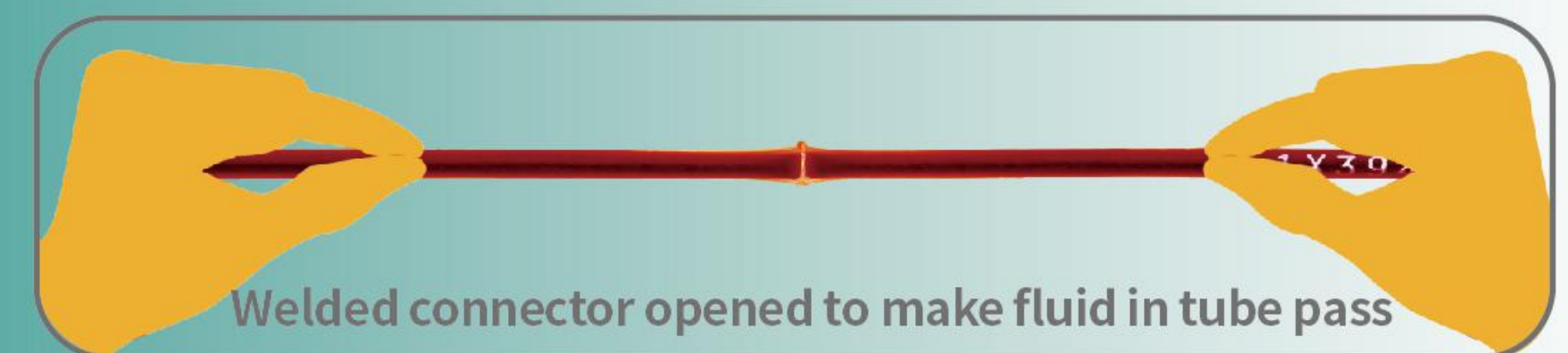
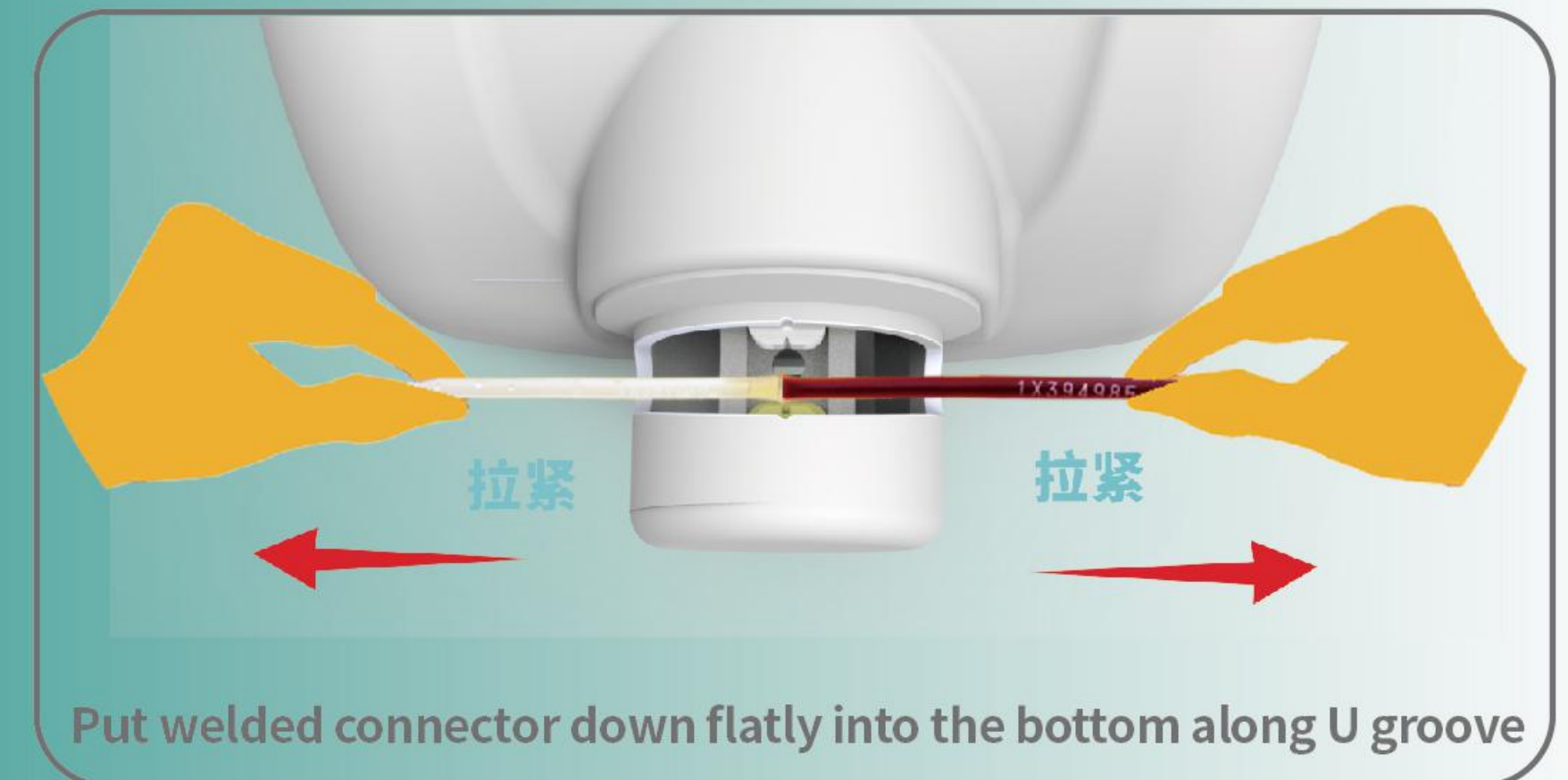


Automatically open the welded connector
to replace extruding with finger

Don't touch blood to make operating securer

Tube opener of sterile tube welder WTO3610 operating instruction

Check extruding head of the device and make sure there is no foreign matter in it. Connect power and start up tube opener.



Directory



Automatic blood separator
Luxury TWiN machine
TWiN6920



Blood separating AI robot
Robot6960

Blood separator series

Automatic blood separator

Luxury twin machine TWiN6920

Efficient separation of blood preparation solutions
Automatic blood separation(Suitable for Top-top & Top-bottom bags)



**Highly Innovation
Integrated System
Ergonomics**

Automatic breakers

Unique twin separation systems

Three plate press structure

IoT Technology

Cost effectiveness

- Independent dual separation system for efficient separation of blood components
- New liquid level sensor for precise control
- Highly innovation automatic breakers
- Unique three plate press structure for buffycoat extract
- Unique shaking function, Automatic shaking and homogenizing SAGM & red blood cells
- Data management software, capitable with blood bank's system

1 Dual operation

TWIN 6920 has Dual Core, all in one tech, the left and right sides can work separately according to the different needs of customers

2 Liquid sensor

New liquid sensor, detect blood accurately, achieve any volume of blood air extractionDD

3 Automatic breaker

Fully automatic breaking technology, greatly reducing the difficulty of work, the success rate of breaking is 100%.

4 Buffycoat extraction

Innovative three plate press structure extrusion technology for buffycoat extract. Automatic operation of the entire process, greatly improving the efficiency of platelet preparation

5 Automatic shaking

Unique shaking function, Automatic shaking and homogenizing SAGM & red blood cells, save operation time.

6 Data management

By connecting with D-solution, Data can be translated from 6920 to D-solution to achieve data storage management and analyze.

Design The use of modern industrial design, the perfect combination of function and art

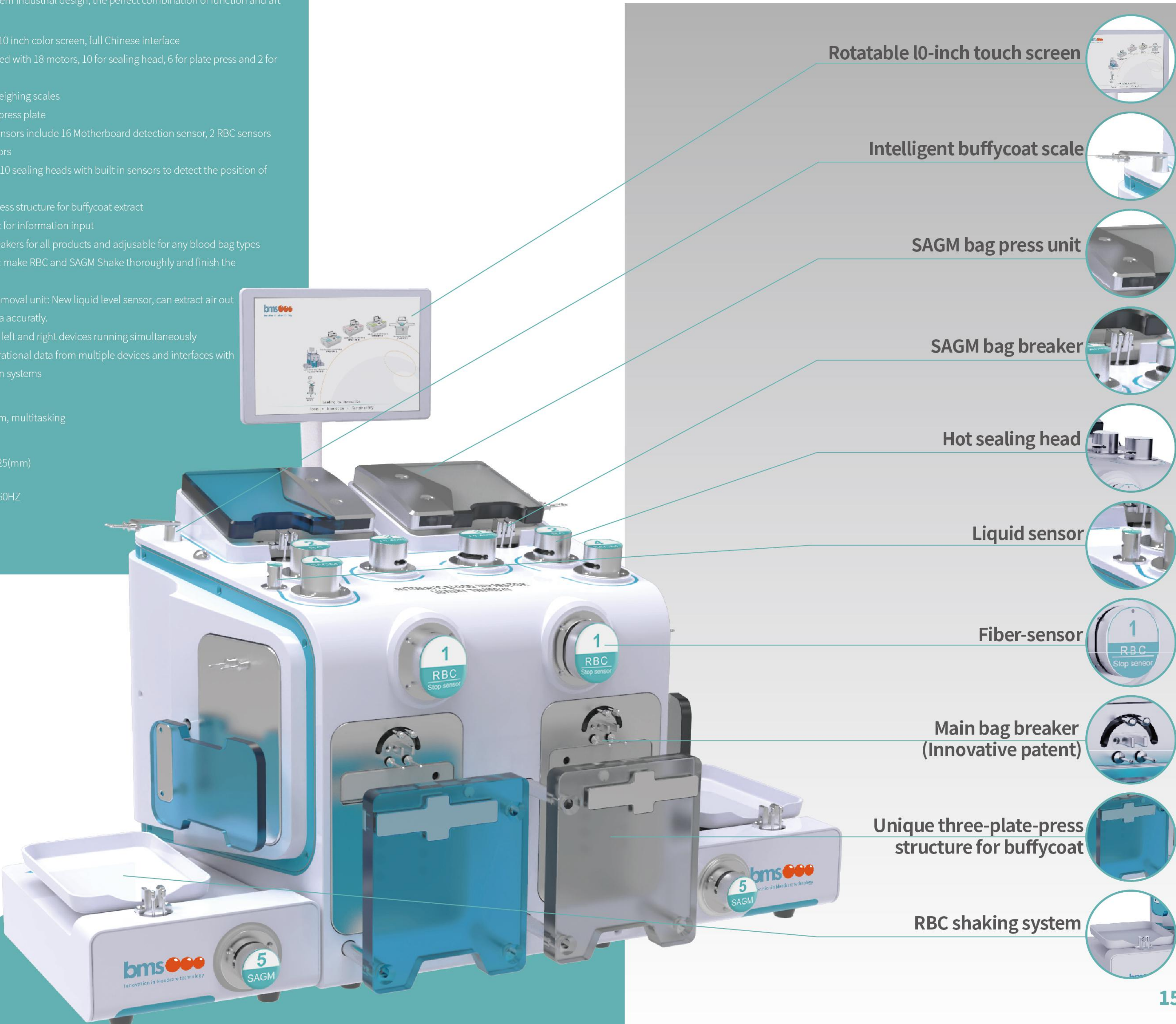
- Specification
- 1 Color screen: 10 inch color screen, full Chinese interface
 - 2 Motors: Equiped with 18 motors, 10 for sealing head, 6 for plate press and 2 for RBC shaking
 - 3 Weighing: 8 weighing scales
 - 4 Press plate: 6 press plate
 - 5 Sensors: 20 sensors include 16 Motherboard detection sensor, 2 RBC sensors and 2 air sensors
 - 6 Sealing head: 10 sealing heads with built in sensors to detect the position of tubes.
 - 7 Three plate press structure for buffycoat extract
 - 8 Scanning gun: for information input
 - 9 Automatic breakers for all products and adjustable for any blood bag types
 - 10 RBC shaking: make RBC and SAGM Shake thoroughly and finish the weighing.
 - 11 Plasma air removal unit: New liquid level sensor, can extract air out of the plasma accurately.
 - 12 Multitasking, left and right devices running simultaneously
 - 13 Collects operational data from multiple devices and interfaces with blood station systems

Operation system Dual-core system, multitasking

Dimension L615*W910*H525(mm)

Power supply 90-250V/AC,50/60HZ

Weight 68KG



High Innovation

Automatic Blood Separation Robot

Blood separating AI robot **Robot6960**



Directory



Intelligence blood donation unit
BCT3890



Intelligence blood donation unit
BCT3800



Mobile blood-collecting robot
BCT3880



Blood bag carrier
MSS3771



Mobile sealing set
MSS3773



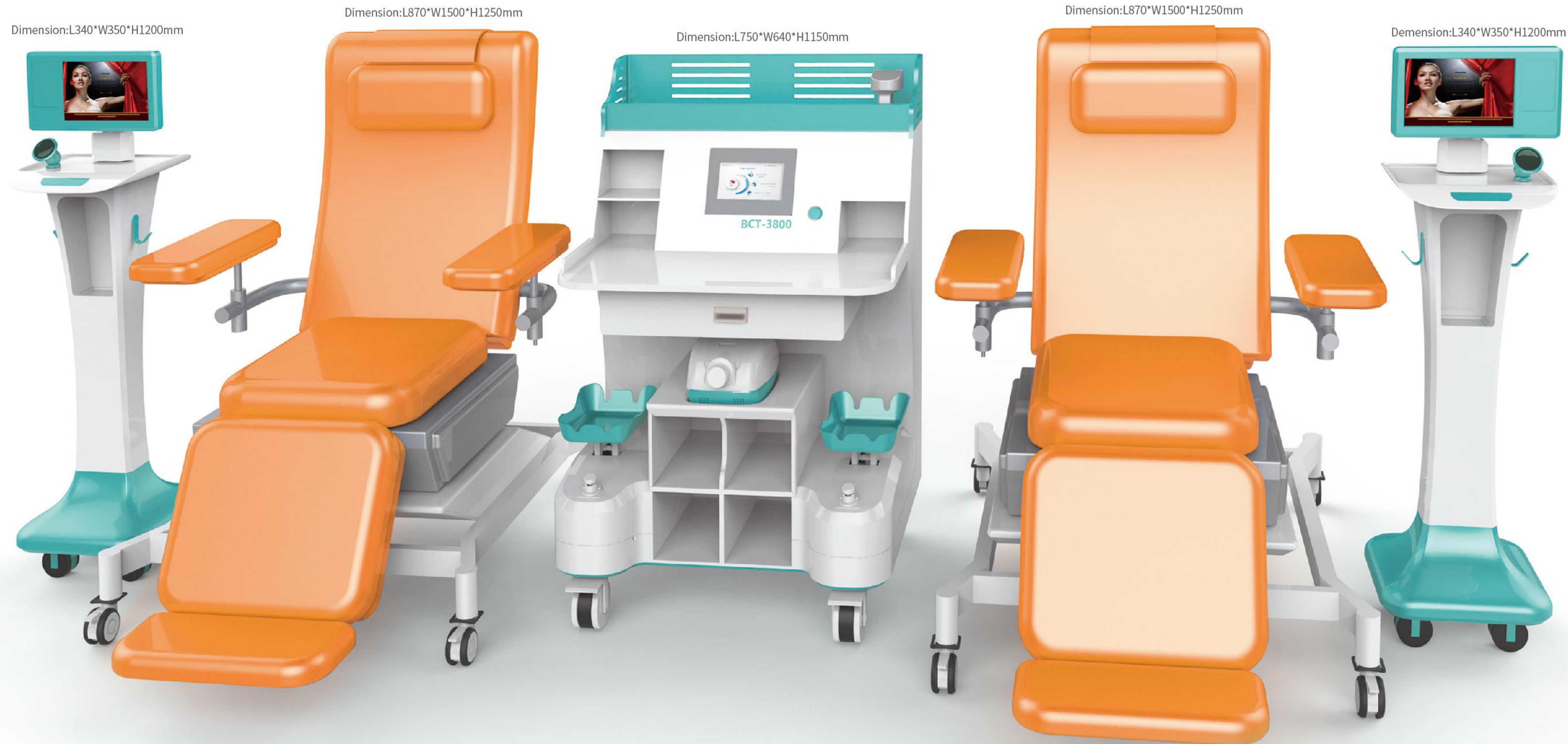
Automatic station tube sealer
Station3712



Automatic portable tube sealer
Mobile3724

Intelligent blood donation units

bms “internet of Things” +smart blood donation unit - system solution



Kind service solution

Streamline design. Multiple functions such as multimedia demonstration, mobile telephone holder, mobile telephone charge, pothook. Strengthen blood donor's experience, improve service to donors, and demonstrate donating blood knowledge.



Voluntary blood donation integrated solution

Multiple functions such as all-in-one workstation, collecting blood, weighing, rocking, sealing, recording blood information, gathering, transmitting, demonstrating, and donating blood chair are integrated.



Easy and convenient operating

7 inch colored touch screen. Humanized UI operating interface design in Chinese. Screen is put in dead ahead of operators which make them work easily and comfortably.



Initiative blood quality monitoring to begin from blood collecting source.

Monitor blood collecting process in real-time. Warn when blood flowing speed is too slow. Warn when collected blood flowing speed is too quick. Warn when collecting time is too long and record data.



Internet of Things management for whole information of voluntary blood donation

Two-way data transmission is built between bms blood donation data management software and blood center data system. Data such as blood donor identity, donated blood quantity, blood type, blood collecting time, weight of blood bags are automatically transmitted through web in real-time.

High Innovation

IoT Smart Blood Donation Unit

Blood Donation Wisdom Project BCT3800-Total Solution

One-stop solution, Optimize blood donation services

IoT of Blood Donation+Management, Blood quality control starts at the beginning

Enhance the image of blood donation

Blood traceability management



BDC3810

BDC3810 Electrically controlled lifting, Back lift, hip lift, leg lift, foot lift, providing a comfortable environment for blood donors.

MMT3820

- 1.MMT3820 One-stop blood donation terminal, Integrated multimedia promotion, workstation, mobile phone charging and other functions.
- 2.Equipped with a 10" display that can show movies, pictures, ads and more and can be managed in the background.

BCT3890

- 1.Integrated two blood collection units, multi-functional table, sealing equipment, control system and ID card information system.
2. 7 inch touch screen, display the information of blood donor: name, blood type, bar code, blood volume, time etc
- 3.IoT: Self-developed embedded operating system, It can realize the remote transmission of data.
4. Remote monitoring services: Products real-time positioning, monitoring and maintenance.
5. ID card entry to ensure the safety of blood donors(Optional)
- 6.Blood Donation Card Activation(Optional)
- 7.Automatic sealer, can make immediate and fast tube sealing.
- 8.Operation system: Touch operation, Chinese interface, clear instruction, easy and convenient to use.
- 9.Automatic alarms for end of blood collection, low flow rate, high flow rate and excessive time.
- 10.Standard design: When the collection volume reaches the calibration, the device automatically clamps the blood bag to complete the blood collection.

Dimension: L3380*W1500*H1200

Weight: 3820: ≥180kg

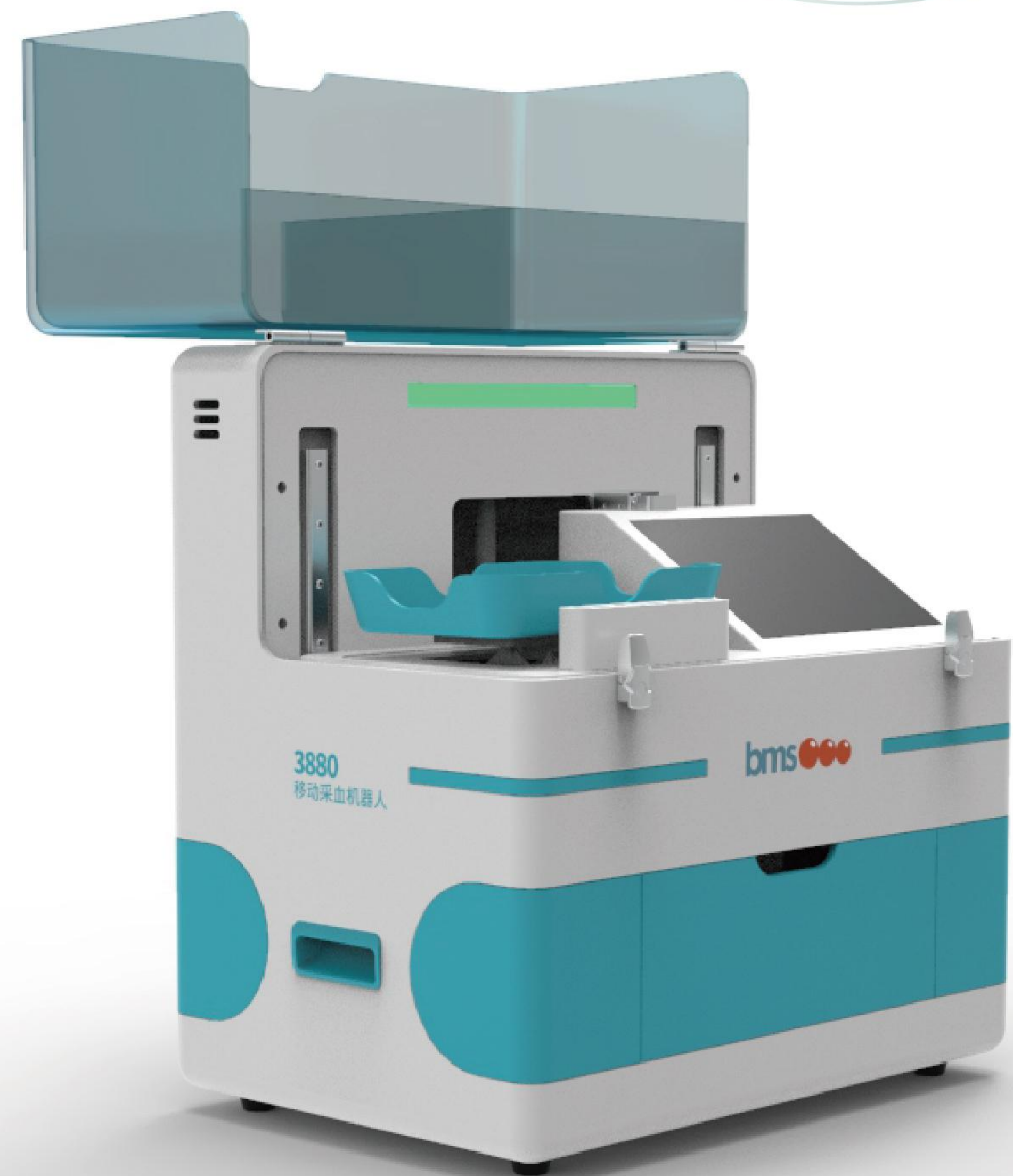
3890: ≥64kg

High Innovation

Mobile Blood Collection Robot 3880



1. Cabinet design, Mobile use available
2. Lifting blood collection scales
3. Signal lights report the status of the equipment at all times
4. Extra large storage space



Blood bag carrier MSS3771

Movable
Blood bag carrier



Mobile Sealing Set MSS3773

Optimal Application Scenarios

- Apheresis platelets
- Whole blood collection
- Apheresis Plasma
- Production and preparation of blood components
- Cytokine therapy



Innovative advantage: integration of six technologies Mobile Sealing Set

- 1 Movable integrated design
easy transportation of blood bags with a worktable
- 2 Reliable hand-held and fixed sealing ensures quality
sealing of PVC tubing in various applications
On-screen display of sealing data
- 3 High Capacity Lithium Battery, Up to 8000 sealing/charge.
Real time data display on screen
Sufficient for high frequency use and long term use
- 4 With drawer for blood collection items and accessories



Innovative advantage: integration of six technologies

Optimal Application Scenarios

- Apheresis platelets
- Whole blood collection
- Apheresis Plasma
- Production and preparation of blood components
- Cytokine therapy

Equipment dimensions:
L586*W497*H923mm



1 Screen

4.3" screen with real time display of sealing data and lithium battery status

2 Hand-held sealing gun

Sealing for various blood tubes to ensure the sterility

3 Desktop

Mobile desktop 350mm*350mm
Carry enough blood bags of all types

4 Drawer

Drawer for blood collection accessories such as scissors, gauze, cotton swabs etc.

5 Fixed sealing head

Man-machine lighting interaction, blue light in standby mode, green light in working mode, to meet the needs of all kinds of offline sealing.

6 Mobile rollers

4 rollers allow for the most comfortable transport on the blood collection site.



Mobile3724

Automatic Handheld tube sealer

Best choice of Blood Donation Centre



Demension:L260MM*W164MM*H110MM

Weight:2.5KG

Sealing time:1-3seconds

1 Light and easy to carry

Station 3712 is a device that provides rapid sealing of medical PVC tubes, powered by battery. It provides up to 1,500 sealings per charge.

2 User-friendly handle

Excellent feel in the hand, up to 150 mm long cord provides flexibility of use.

- 1.Multifunctional hand-held device
- 2.High frequency heating method
- 3.Up to 1500 sealings per charge
- 4.Sealing time:0.6-3sec
- 5.Sealing tubes with up to 6mm outer diameter.
- 6.LED indicator

1 Joint R&D Sino-German Technology team

8 years Joint R&D Sino-German team ensure fast and reliable product quality

2 Modern design

Ergonomic design offers rounded edges for comfortable handling.

- 1.High frequency heating method
- 2Automatic sealing
- 3.Sealing time:0.6-3sec
- 4.Up to 1000 sealings per hour
- 5.Sealing tubes with up to 6mm outer diameter.
- 6.Adjustable tensile strength

Demension:L295MM*W180MM*H130MM

Weight:3.0KG

Sealing time:1-3seconds



Station3712 Automatic Sealing Station 3712

Best choice of Apheresis center

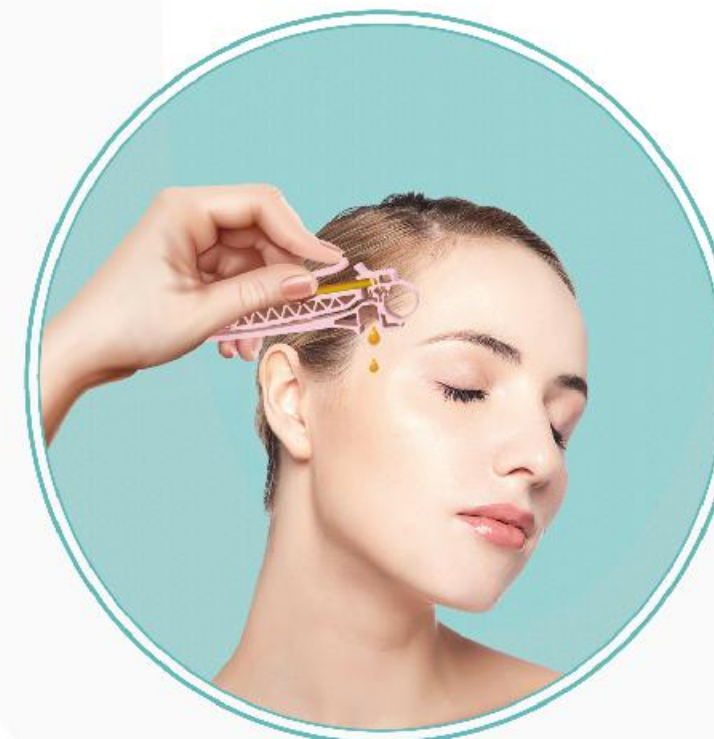
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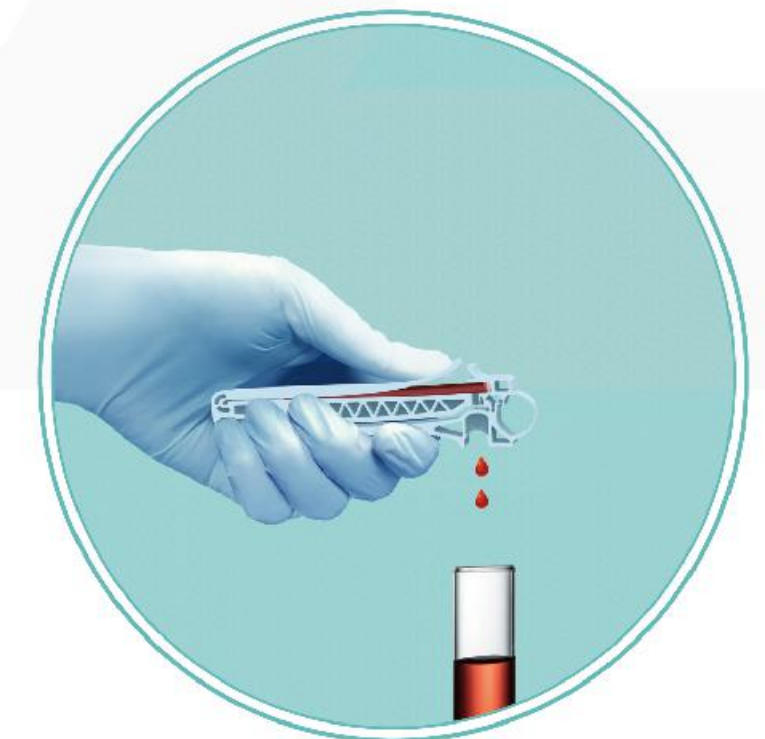
Sterile Doser for eyes
ASE80s
Specialized in dry eyes



Sterile Doser for wounds
PRP90s
Specialized in Wound healing



Sterile drop doser for anti-aging
EVA70s
Specialized in anti-eyes aging

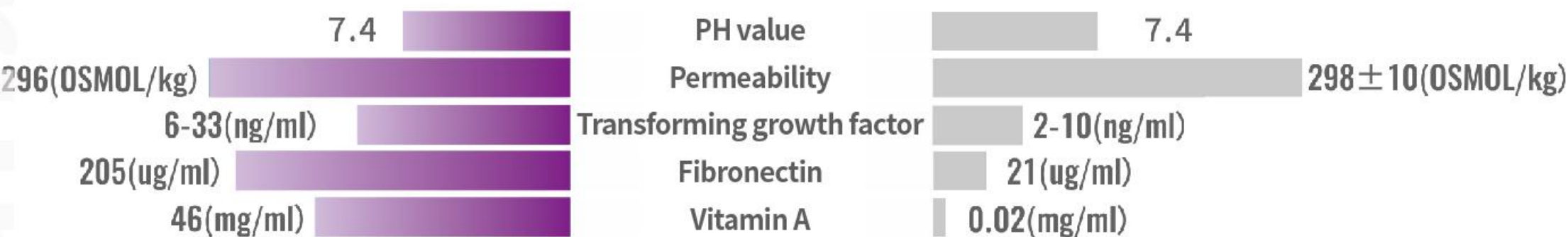


Blood Sampler
BDS60
Clinical blood cross-matching

High value-added medical consumables

High Innovation Sterile doser for eyes ASE80s

- ▶ The serum can be taken out drop by drop.
- ▶ The serum can be directly dripped into the eyes.
- ▶ Easy to operate, sterile blood collection.



Best treatment for dry eyes

1. Collect 200ml of blood from the patient, use bms self-developed ASE Workstation STW 6810VIP-V to prepare serum, tubing, each one is 7cm long.
2. Use ASE Pen ASE80s, the matched consumables of Autologous serum therapy, to efficiently extract the serum from the tubing, drip it into the eyes for treatment

Classification in CFDA: Class II medical devices
Application: Install a tube containing serum prepared by a medical institution onto the product, for patients with dry eyes, promotes recovery of dry eyes
Materials: Handle: Medical PVC, No fluorescent agents
Needle: Austenitic stainless steel

Droplet volume: 10uL/drop

Package: 8pcs/box 20boxes/carton
Net weight: 0.25kg/box 5kg/carton

Sterile doser for eyes ASE80s

Easy

Accurate

Sterile



High InnovationSterile doser for wounds PRP90s

- ▶ Accurate drip of plasma
- ▶ Direct drip plasma on wound
- ▶ Easy to operate, sterile blood collection

Best treatment of refractory wounds

1. Collect 200ml blood from the patient, prepare platelet-rich plasma, tubing, each one is 10cm long.
- 2.Extract plasma efficiently, and drip it on the wounds.



Classification in CFDA : Class II medical devices
 Application: Install a tube containing platelet-rich plasma prepared by a medical institution onto the product, for patients with wounds, promotes recovery of wounds

Materials: Handle:Medical PVC, No fluorescent agents
 Needle: Austenitic stainless steel

Droplet volume: 10uL/drop

Package: 8pcs/box 20boxes/carton
 Net weight: 0.25kg/box 5kg/carton



High innovation Blood Sampler BDS60

- ▶ Accurate sampling drop by drop
- ▶ Extraction for sufficient sample
- ▶ Safe, accurate and easy operation

Best solution for Blood test and cross-matching of blood

1. Prepare sterile blood tube, each one is 10cm long.
2. Safe, efficient and accurate blood extraction.

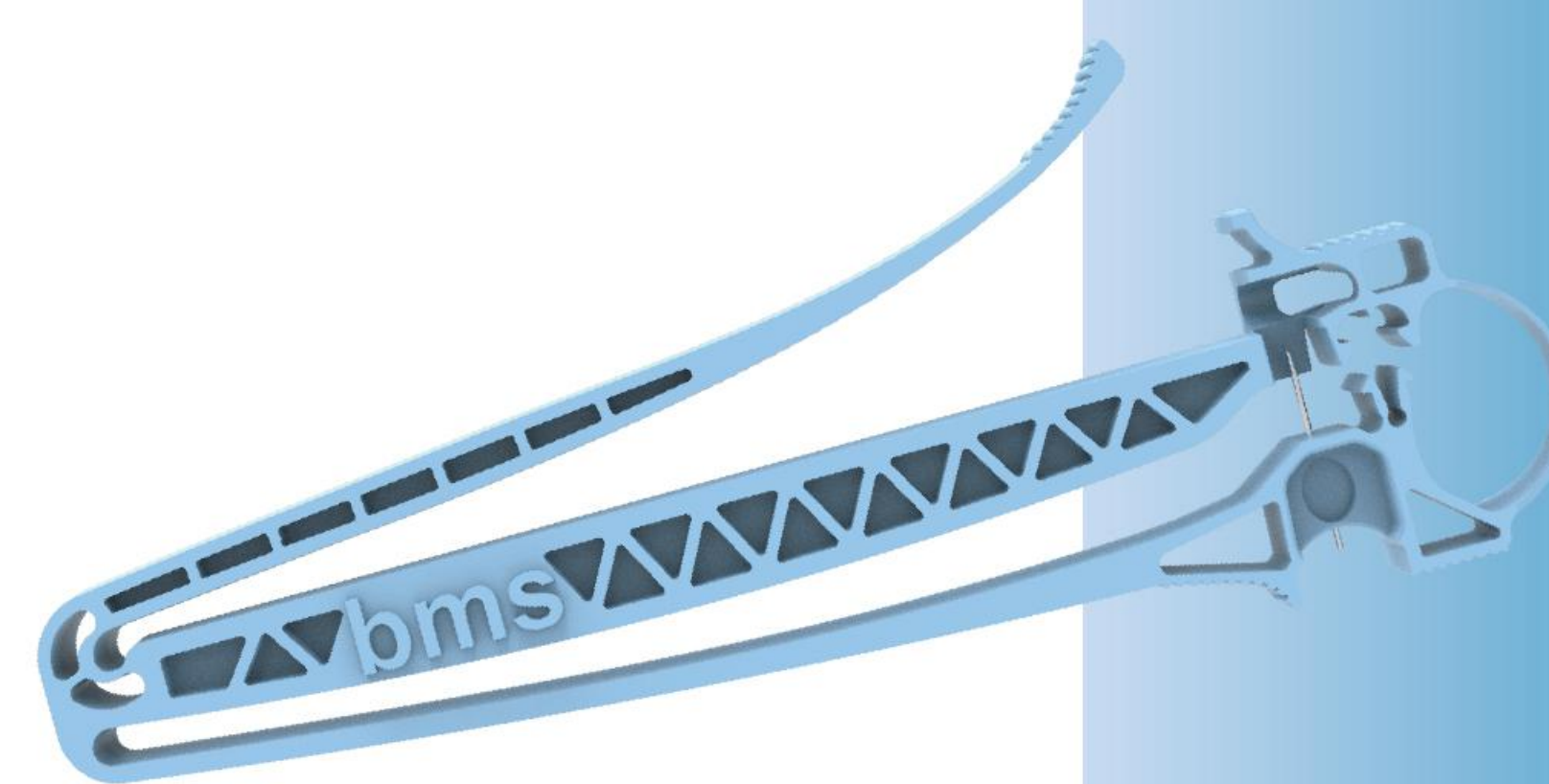
High Innovation High Innovation
BDS60

Classification: Non-medical devices
Application: Safe, efficient and accurate blood extraction

Materials: Handle: Medical PVC, No fluorescent agents
Needle: Austenitic stainless steel

Droplet volume: 10uL/drop

Package: 8pcs/box 20boxes/carton
Net weight: 0.25kg/box 5kg/carton

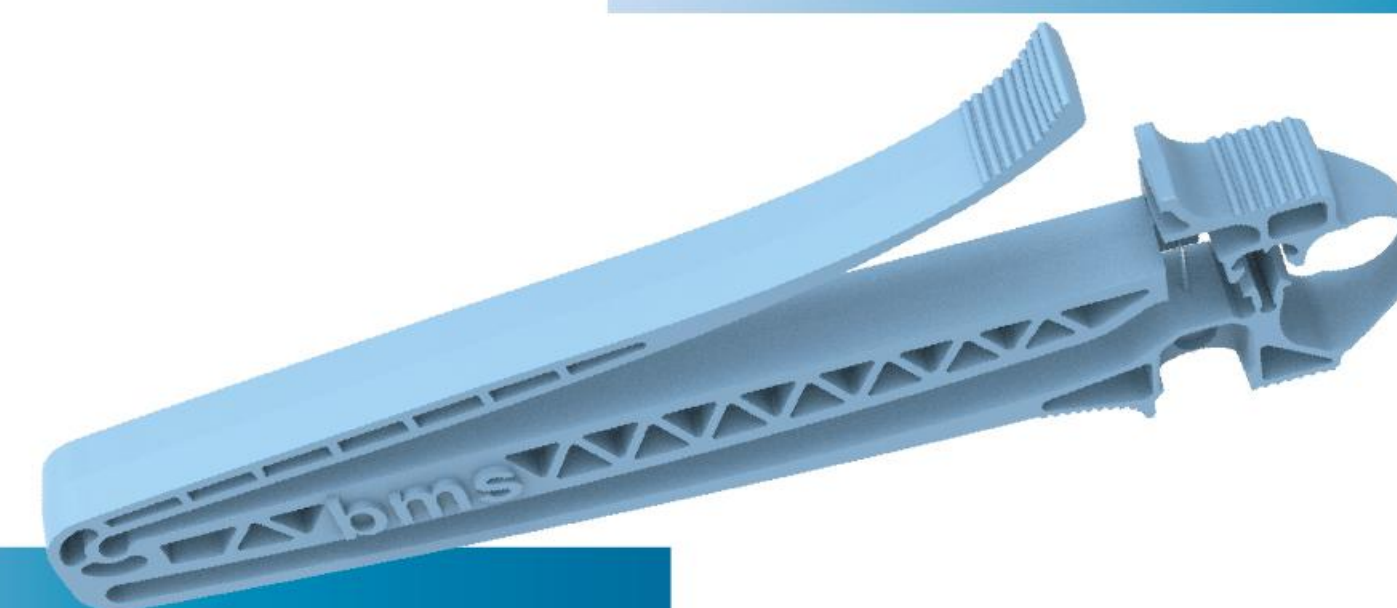
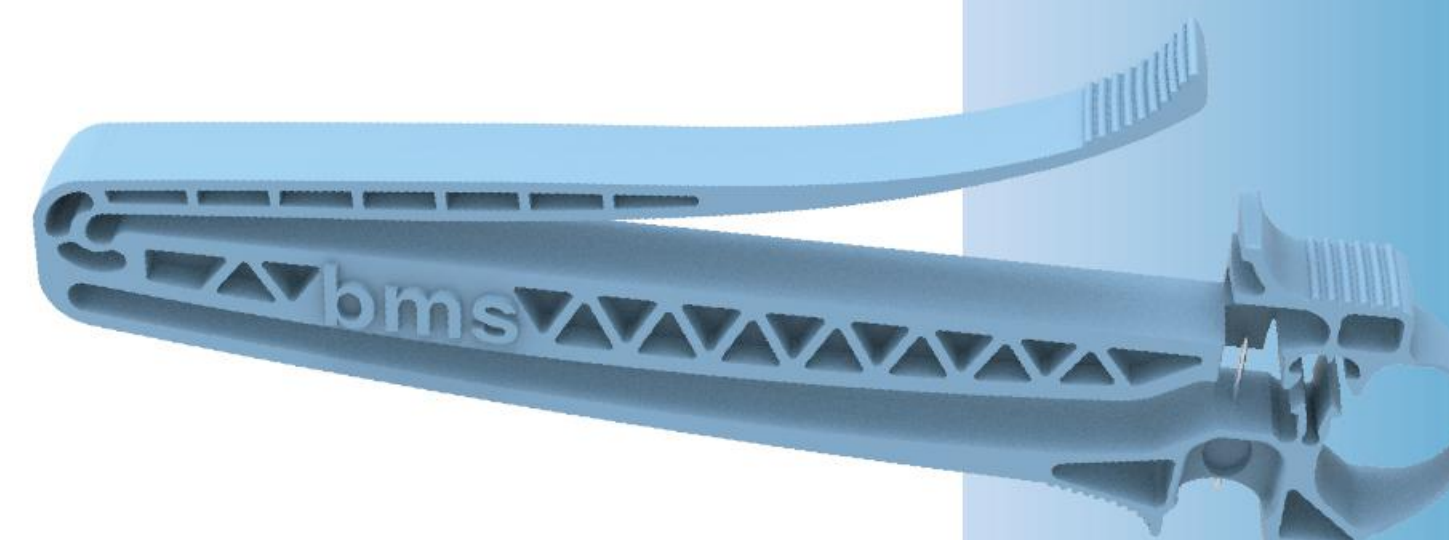


Blood sampler BDS60

Easy

Accurate

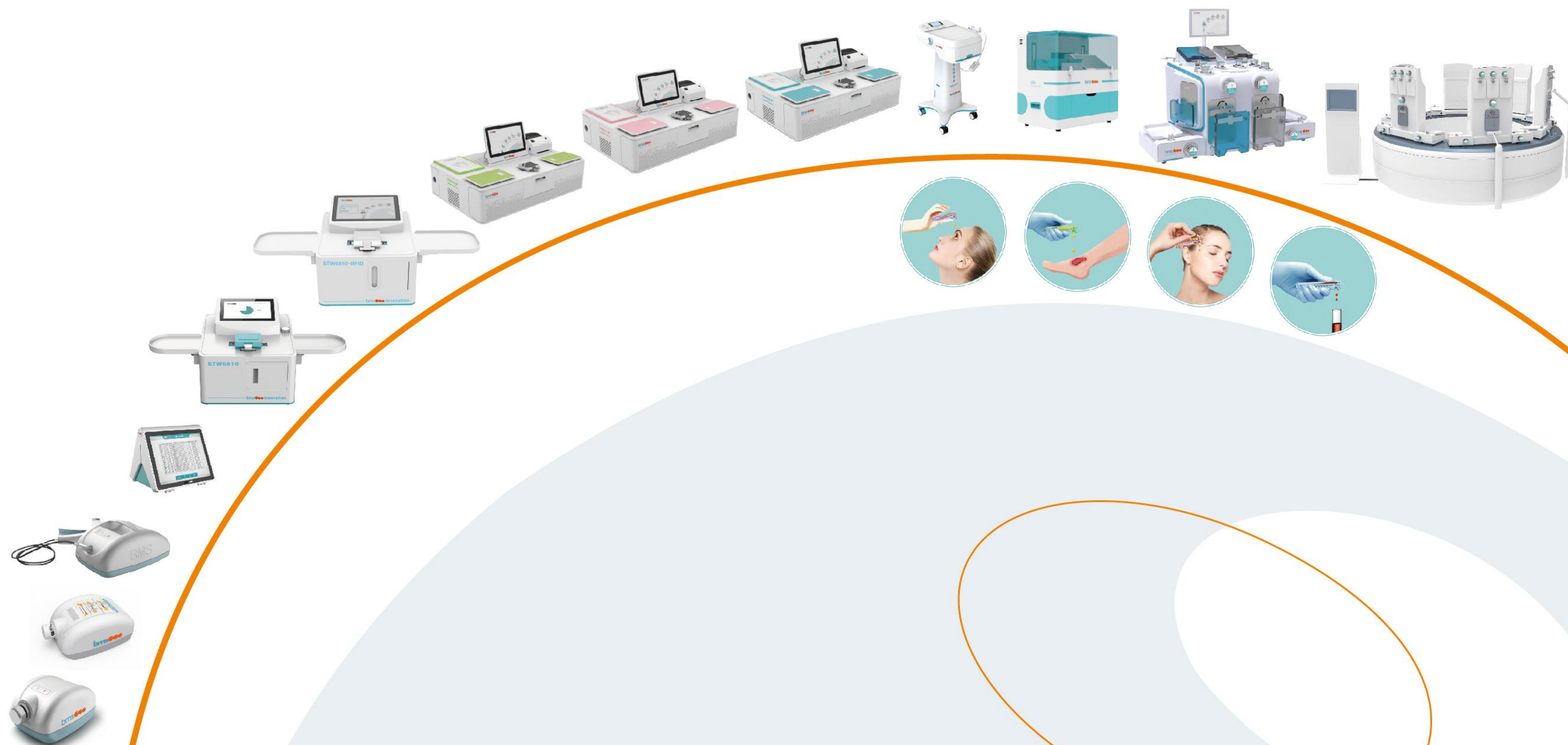
Safe





Focus on safe and modern blood transfusion

Focus on anti-dry eyes & anti-aging eyes



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