

# **iReceptal Digital Surgical Suction System**

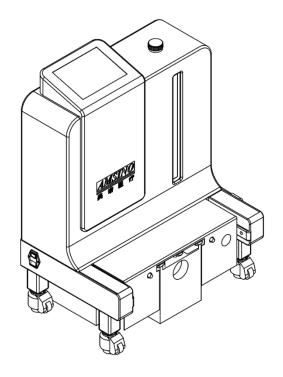
## Site Preparation, Installation, and Maintenance Guide

100 $\sim$ 240 VAC Docking Station

REF iRD301

Instructions For Use

R<sub>x</sub> ONLY



## Contents

Introduction
Conventions
Contact Information3
Indications For Use
Contraindications For Use
Intended patient
For Use With4
Accessories4
Description4
User/Patient Safety5
General5
Electrical Safety5
Environmental/Biological6
Features7
Symbols
Instructions9
To Install the Docker9
1. To Install the Docker and Connect Utilities10
2. To Apply Power, Water, and Detergent11
To Test the Docker11
1. To Prepare the Rover12
2. To Prepare the Docker12
3. To Perform a Wash Cycle13
To Shut Down the Docker14
Inspection and Cleaning Maintenance14
Add the Detergent15
To Wipe Down the Docker16
Storage and Handling16
Disposal/Recycle
Troubleshooting17
Error Messages
Specifications
Electromagnetic Compatibility

## Introduction

This Instructions For Use manual is the most comprehensive source of information for your product. Keep and consult this reference manual during the life of the product.

The iReceptal Digital Surgical Suction System Manifold is non-patient contacting, non-sterile, disposable device that provide a fluid path from the suction tubing lines of a iReceptal Digital Surgical Suction System to the receiving collection canisters of this system.

## Conventions

The following conventions are used in this manual:

WARNING: A warning highlights a safety-related issue. ALWAYS comply with this information to prevent patient or healthcare staff injury.

CAUTION: A caution highlights a product reliability issue. ALWAYS comply with this information to prevent product damage.

NOTE: A note supplements and/or clarifies procedural information.

## **Contact Information**

For additional information, including safety information, or in-service training, contact your AMSINO sales representative or call AMSINO iReceptal Customer Service at XXXXXX.

## **Indications For Use**

The iReceptal Digital Surgical Suction System is intended to be used in the operating room, pathology, surgical centers, and doctor's offices to collect and dispose of surgical fluid waste as well as collect smoke generated from electrocautery or laser devices.

# **Contraindications For Use**

The iReceptal Digital Surgical Suction System is contraindicated against:

- Connection directly to chest tubes.
- Connection to closed wound drainage systems.

## **Intended patient**

The general patient population is anyone excluding newborn subject to general surgery or diagnostic procedures where the device can be used.

# For Use With

The following components are required to be used with the equipment described in this manual to create a complete system:

Description	REF
iReceptal 3 Rover	iRR301 100~120V
	iRR302220~240V
iReceptal 3 Docking Detergent	iRC003

#### Accessories

This section describes system components that may be ordered to replace original equipment that is damaged, worn, or must be replaced. This section may also contain optional components used with the system.

The following AMSINO-approved accessories are sold separately:

Description	REF
iReceptal 3 Docking Detergent	iRC003
Power Cord (US)	iRA105-01
Power Cord (UK)	iRA106-01
Power Cord (EU)	iRA107-01

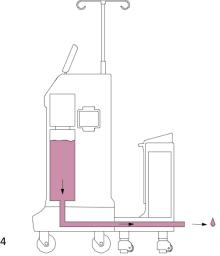
NOTE: For a complete list of accessory information, contact your AMSINO sales representative or call AMSINO iReceptal Digital Surgical Suction System Customer Service.

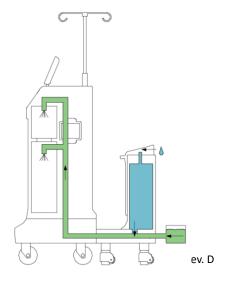
## **Description**

The iReceptal Docking Station (docker) is a component of the iReceptal Digital Surgical Suction System. The Stryker Rover (rover), another component of the system, is a mobile unit used to suction and collect fluid waste and surgical smoke from a surgical site in an operating room.

After collection, the rover is relocated and mated to the docker. Once the rover is connected to the docker, the emptying of the fluid waste and cleaning of the canisters occurs automatically (Figure 1).

The rover chambers are rinsed with clean water and iReceptal Docking Detergent REF iRC003 to clean the chambers of any residual fluid waste (Figure 2).





Δ

# **User/Patient Safety**

▲ WARNINGS:

## General

- Before using any system component, or any component compatible with this system, read and understand the instructions. Pay particular attention to WARNING information. Become familiar with the system components prior to use.
- Only trained and experienced healthcare professionals may use this equipment.
- Healthcare professionals should be thoroughly familiar with the instructions for use, handling characteristics, and the indicated and intended uses of this equipment. Contact your AMSINO sales representative or AMSINO iReceptal Digital Surgical Suction System Customer Service for in-service training.
- DO NOT disassemble, modify, service, or repair any system component or accessory, unless otherwise specified. Call AMSINO iReceptal Digital Surgical Suction System Customer Service.
- Upon initial receipt and before each use, inspect each component for damage. DO NOT use any equipment if damage is apparent or the inspection criteria are not met. See the Inspection and Maintenance section for inspection criteria.
- ALWAYS operate the equipment within the specified environmental condition values. See the Specifications section.
- MANUFACTURER will provide circuit diagrams, component part lists, descriptions, calibration instructions to assist to SERVICE PERSONNEL in parts repair.
- Do not use iReceptal Digital Surgical Suction System in the presence of magnetic resonance imaging (MRI) devices.

## **Electrical Safety**

- Use only AMSINO-approved system components and accessories, unless otherwise specified. Using other
  electronic components and accessories may result in increased electromagnetic emissions or decreased
  electromagnetic immunity of the system.
- Take special precautions regarding electromagnetic compatibility (EMC) when using medical electrical
  equipment like this system. Install and place this system into service according to the EMC information
  contained in this manual. See the Specifications section. Portable and mobile radio frequency (RF)
  communications equipment can affect the function of this system.
- ELECTRICAL SHOCK HAZARD-ALWAYS connect this equipment to a hospital-grade, facility power receptacle with protective earth (ground). Failure to comply may cause electrical shock and result in patient

or healthcare staff injury.

- Please take attention that changes or modification not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:
   (1) This device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

 This device complies with Industry Canada licence-exempt RSS standard(s). Operation is subject to the following two conditions:

(1) this device may not cause interference, and

(2) this device must accept any interference, including interference that may cause undesired operation of the device.

- Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radioexempts de licence. L'exploitation est autorisée aux deux conditions suivantes :
- (1) l'appareil ne doit pas produire de brouillage, et
- (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.
- This equipment complies with FCC/IC RSS-102 radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.
- ce matériel est conforme aux limites de dose d'exposition aux rayonnements, FCC / CNR-102 énoncée dans un autre environnement.cette eqipment devrait être installé et exploité avec distance minimale de 20 entre le radiateur et votre corps.
- Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
- Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peutfonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée équivalente (p.i.r.e.) ne dépasse pas l'intensité nécessaire à l'établissement d'une communication satisfaisante.

## Environmental/Biological

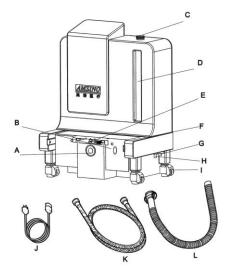
- FIRE HAZARD DO NOT use this equipment in areas in which flammable anesthetics or flammable agents are mixed with air, oxygen or nitrous oxide. Failure to comply may cause a fire and result in burn injury or property damage.
- BLOODBORNE PATHOGEN HAZARD
  - The Bloodborne Pathogens Standard provided by the United States Occupational Safety and Health Association (US OSHA 29 CFR 1910.1030) requires those with employees having occupational exposure to potentially infectious materials to establish a written Exposure Control Plan. The Exposure Control Plan is designed to eliminate or minimize employee exposure through use of personal protective equipment (PPE), appropriate vaccinations (e.g. hepatitis B), and other control measures.

- ALWAYS wear PPE when operating or handling this equipment.
- ALWAYS follow local regulations regarding proper handling and disposal of biohazard waste.

Failure to comply may cause infection and result in healthcare staff injury.

 CONTAMINATION HAZARD-ALWAYS follow local regulations for safe handling, recycling, and disposal of biohazard fluid waste and equipment. See Disposal/Recycle section. Failure to comply may cause environmental contamination and result in injury.

## Features



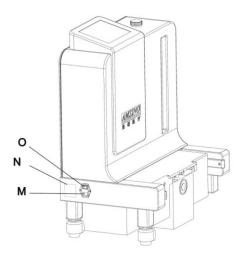


Figure 3 Docking Station Front view

Figure 4 Docking Station Back view

А	Magnet- Provide for the automatic connection of the rover to the docker.
В	Infrared Communication Port – Allow infrared data transfer between the docker and rover. Data
	transfer is necessary during the docking procedure.
С	Detergent canister lid – Allows add detergent into the canister
D	Detergent canister- Stores the detergent
Е	Fluid Connectors (two) –One connector allows fresh water to enter the rover. The other connector
	provides for the disposal of waste water from the rover.
F	Guides (two) – Facilitate the alignment of the rover to the docker.
G	Waste Outlet Port - Allows for the disposal of fluid waste from the rover when the rover is connected
	to the docker.
н	Water Inlet Port – Allows fresh water to enter the rover when the rover is connected to the docker.
I	Fixing Casters (four)Allows adjust the height of each docking station to align with the rover.
	Increase caster height by turning the dial counterclockwise. Decrease caster height by turning the
	dial clockwise.
J	Power Cord – Allows for the connection of facility electrical power to the docker. Power cord
	configurations may vary. See the Accessories section for options.
К	Water Inlet Hose – Allows fresh water to flow from the facility water source to the docker water inlet
	port.
L	Waste Outlet Hose - Allows fluid waste to flow from the docker waste outlet port to the drain of the
	facility waste disposal system.

Μ	Power Cord Receptacle – Allows for the connection of facility power using the docker power cord.
0	Power Switch – Allows for the application or removal of facility power.
Ν	Specification Label –
	AMSINO
Image: Construction manual/booklet       Image: Construction manual/booklet       Image: Construction manual/booklet         Image: Construction manual/booklet       Image: Construction manual/booklet       Image: Construction manual/booklet         Image: Construction manual/booklet       Image: Construction manual/booklet       Image: Construction manual/booklet	
	iRecental 3.0 100V-240V ~ 50/60Hz 3A REF iRD301
	DT DD L GTIN(01): 00704411016819
	Refer to instruction manual/booklet
	Refer to instruction manual/booklet
	Refer to instruction manual/booklet         Imp         GTIN01:         00704411016819           Imp         Imp<

# Symbols

The following symbols appear on the device and/or its labeling. For more information, see "Technical specifications"

Symbol	Description
	ON (POWER)
	OFF (POWER)
	ALTERNATING CURRENT (AC)
	General warning
	Consult instructions for use
8	Follow instructions for use
	This symbol is located near the protective ground locations on this device
	DETERGENTADD PORT
	WASTE OUTLET PORT
H_20 345 bps	WATER INLET PORT

# Instructions

## To Install the Docker

WARNING: HEAVY EQUIPMENT – ALWAYS have more than one person unpack and move this equipment from the shipping pallet. See the Specifications section for rover weight. Failure to comply may result in personal injury.



Figure 5 Docker Lift Points

#### CAUTIONS:

- Make sure the pressure and temperature values of the facility water supply are within the required specified ranges. See the Specifications section.
- If mounting the docker to a wall, make sure no gap exists between the docker mounting bracket and the wall. ALWAYS align the mounting hardware (not supplied) with the wall studs to make sure the docker is mounted to the wall securely. Failure to comply may cause inadvertent docker movement and result in wall or product damage.
- ALWAYS use the correct power cord. Configurations may vary. See the Accessories section for power cord options

#### NOTES:

- Only individuals trained and experienced in the maintenance of reusable medical devices should install, inspect, and test this equipment.
- The docker is installed in a utility closet or disposal area with access to electrical power, a water supply, and a fluid waste drain. The healthcare facility is responsible for the preparation of the installation site and the availability of utilities. See the Specifications section for electrical power, water, and drainage requirements. Make sure the installation area meets utility and space requirements.
- If the installation site does not meet local ventilation requirements, obtain and install a ventilation device that will meet the necessary local requirements.
- The docker is equipped with an internal backflow prevention device. See the Specifications section for details. Refer to local plumbing codes to determine whether an external backflow prevention device is also

required.

- Make sure the plumbing configuration is NOT susceptible to water hammer conditions.
- Make sure the waste outlet hose is connected properly to minimize the escape of noxious fumes and odors.

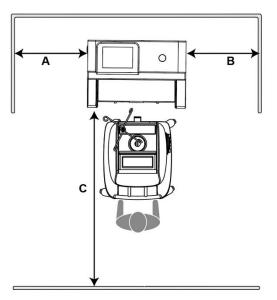


Figure 6 Minimum Floor Space Requirements

А	Left-Side Clearance	No minimum requirement
В	Right-Side Clearance	15 cm
С	Front Clearance	120cm

### 1. To Install the Docker and Connect Utilities

a. Place the docker on the floor and against a wall with access to electrical power, water, and a fluid waste disposal drain.

b. Recommended: Install mounting screws (not supplied) through the mounting bracket of the docker and secure the docker to the wall.

NOTE: If allowed by current local building and electrical codes, mounting the docker to the wall is strongly recommended. The docker is not to be installed in a patient environment.

c. Connect the water inlet hose between the water inlet port of the docker and the facility water supply.

d. Connect the waste outlet hose to the waste outlet port of the docker and the drain emptying into the fluid waste disposal system.

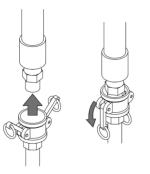


Figure 7 To Connect the Waste Outlet Hose

e. Connect the power cord between the electrical receptacle of the docker and the facility electrical power source.

### 2. To Apply Power, Water, and Detergent

a. Press the power switch ON. Make sure the power switch illuminates.

b. Open the facility water valve to allow water to flow to the docker. Inspect the water supply connections for any leaks. Repair any plumbing to stop leakage if necessary.

c. Unscrew the lid of the detergent canister and pour the detergent into the detergent canister. see the instructions for use supplied with the Docking Detergent REF iRC003. See the Accessories section

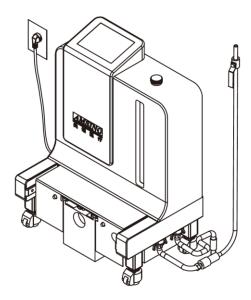


Figure 8 To Apply Power, Water, and Detergent

### To Test the Docker

WARNING: ALWAYS keep hands out and away from the mating surfaces of the rover and docker during the docking procedure to avoid a pinch point hazard.

CAUTIONS: 11

- DO NOT put any objects, including hoses, tubes, towels or detergent bottles, on or over the docker enclosure. Failure to comply may cause corrosion.
- DO NOT allow fluid of any kind to spill directly onto the exterior surface of the electrically-powered docker. Failure to comply may cause corrosion or product failure.

NOTES:

- Only individuals trained and experienced in the maintenance of reusable medical devices should install, inspect, and test this equipment.
- Make sure the rover is operating properly. See the instructions for use supplied with the rover.
- While the rover is docked, DO NOT lock the rover casters.

### 1. To Prepare the Rover

- a. Connect the rover to facility electrical power using the power cord.
- b. Push the power switch to the ON position.
- c. Read the WARNING message on the user interface, then tap the OK key to access the CONTROL screen.
- d. Install a disposable manifold into manifold port.
- e. Attach a suction tube to one manifold port on manifold. Make sure all the other manifold ports are capped.
- f. Place the attached suction tube into a sink filled with water.
- g. Push the rover SUCTION button to start the vacuum pump.
- h. Adjust the SUCTION SETTING to initiate suction and transfer about two liters of water into the canister.
- i. After the canister is filled with two liters of water, push the rover power switch to the OFF position.
- j. Disconnect the rover from facility electrical power. Wrap the power cord around the cord bracket.
- k. Remove the disposable manifold and suction tube.



Figure 9 To Prepare the Rover

### 2. To Prepare the Docker

a. Make sure the power switch is in the ON position and illuminated.

b. Make sure the canister of Detergent has enough detergent to perform a wash cycle.

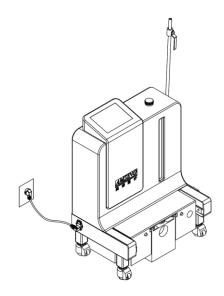


Figure 10 To Prepare the Docker

### 3. To Perform a Wash Cycle

- a. Push the rover toward the docker and between the guides until the rover and docker attach automatically.
- b. As the rover and docker attached together, the Wash Cycle View will display automatically and "Docking in place" voice message will be heard. From the Wash Cycle View select a cycle by tapping the related BUTTON. For the wash cycle options, refer to the wash cycle options table.

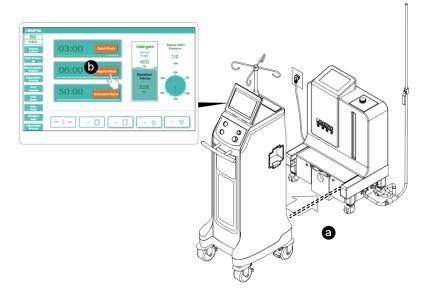


Figure 11 To perform a wash cycle

### NOTES:

- During the first rover docking procedure, the information on the user interface display may appear inconsistent. The procedure may also take a few more minutes than specified in the Wash Cycle Options table. Both conditions are normal and temporary.
- If a specific wash cycle is not selected within ten seconds, the "Wash" cycle will be performed automatically. See the Wash Cycle Options table.

• To exit the current wash cycle, push the "Stop Suction/Stop Docking" button to terminate the current a wash cycle and the rover detaches from the docker automatically. Pull the rover away from the docker. And dock again, select the needed wash cycle.

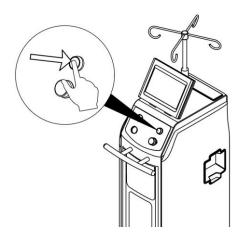


Figure 12 To cease the current wash Cycle

### Wash Cycle Options

CYCLES	DESCRIPTION	TIME (approx.)
Wash	Cycle drains the contents, applies detergent to the	6 minutes
	interior walls of both chambers, and rinses the	
	detergent with water.	
Quick Drain	Cycle drains the contents of both chambers.	3minutes
Extended Wash	Cycle drains the contents, applies detergent to the	50 minutes
	interior walls of both chambers and rinses the	
	detergent with water. Intermittent periods of soaking	
	occur during the cycle.	

- c. During the wash cycle, inspect all the docker plumbing and connections for any leakage. If leakage occurs, repair as required.
- d. After the cycle is complete, the rover detaches from the docker automatically. Pull the rover away from the docker.

NOTE: After successfully testing, the docker is ready for use.

### To Shut Down the Docker

The docker does not need to be shut down between uses. To remove facility power from the docker, push the power switch to the OFF position.

## **Inspection and Cleaning Maintenance**

MARNINGS:

• Upon initial receipt and before each use, inspect each component for damage. DO NOT use any equipment if damage is apparent or the inspection criteria are not met.

 DO NOT disassemble, modify, service, or repair any system component or accessory, unless otherwise specified. Call AMSINO iReceptal Customer Service.

NOTES:

- Only individuals trained and experienced in the maintenance of reusable medical devices should install, inspect, and test this equipment.
- For service, contact your AMSINO sales representative or call AMSINO iReceptal Customer Service. Outside the US, contact your nearest AMSINO subsidiary.
- Maintenance documentation for this equipment is available upon request to AMSINO-authorized service personnel only.

INTERVAL	INSPECTION CRITERIA	ACTION
Before initial use	Make sure the equipment has	See the To Test the Docker
	been tested before first use.	section.
Before each use and after each	Check equipment for damage or	If damage is apparent, replace the
cleaning	missing components.	equipment.
	Check power cord for cuts.	
	Check power cord receptacle for	
	bent pins or bent contacts.	
Six months	Check the plumbing connections	Repair any plumbing to stop
	and hoses for leaks.	leakage as required. Replace
		leaking hoses as required.
As required	Check the two infrared	Remove any obstruction covering
	communication ports for any	the infrared communication ports,
	obstructions.	including hoses, tubes, and
		towels.
	Check the level of the detergent in	Add the detergent into the
	the detergent canister.	detergent canister as required.

NOTE: If any component must be discarded, see the Disposal/ Recycle section.

### Add the Detergent

### 

- The iReceptal Detergent REF iRC003 is an irritant to eyes and skin. ALWAYS wear protective gloves and eye protection to avoid contact with skin and eyes.
- In case of contact with eyes, rinse eyes immediately with plenty of water. See the Material Safety Data Sheet (MSDS) supplied with the iReceptal Docking Detergent for first aid information.
- DO NOT spill the detergent. Spills will be slippery and may result in a slip/fall hazard.
- ALWAYS follow the current local regulations governing environmental protection to recycle or dispose of the bottle. DO NOT reuse the empty container.

CAUTION: Use only AMSINO iReceptal Detergent REF iRC003 with the docker. Failure to comply will result in damage to rover and docker internal components.

- 1. Remove the detergent canister lid tube from the docker.
- 2. Pour the detergent into the detergent canister from the detergent bottle and dispose of the container properly.

### **Cleaning Maintenance**

#### CAUTIONS:

- DO NOT immerse any system component in liquid. DO NOT allow liquids or moisture to enter any electrical connection.
- DO NOT sterilize any system component.
- DO NOT use solvents, lubricants, or other chemicals, including glutaraldehyde or similar chemical cleaners, unless otherwise specified.
- Use of unapproved disinfectants may cause system damage.

### **Recommended Equipment**

- Personal Protective Equipment (PPE) as recommended by the disinfectant supplier (minimum: gown, gloves, face/eye shield)
- Soft, lint-free cloth
- Environmental Protection Agency (EPA) registered disinfectant with a claim for activity against Hepatitis B.
   The following disinfectants have been validated for use with the AMSINO iReceptal 3 Waste Management System:
  - Sodium Hypochlorite Based Clorox Clean-Up. Disinfectant Cleaner with Bleach (EPA Reg. #67619-1)
  - Quaternary Ammonium Based CaviCide. (EPA Reg. #46781-6)

### To Wipe Down the Docker

- 1. Wipe the external surfaces of the docker with a soft, lint-free cloth moistened with a non-abrasive, hospital disinfectant prepared according to the manufacturer's instructions. Make sure all surfaces remain visibly wet at room temperature.
- 2. Remove any excess disinfectant solution using a soft, lint-free cloth moistened with water if required by the instructions supplied by the disinfectant manufacturer.
- 3. Thoroughly clean the docker's infrared communication ports to make sure the rover and docker can communicate and function properly.
- 4. Inspect the docker. See the Inspection and Maintenance section.

# **Storage and Handling**

### CAUTIONS:

- ALWAYS store and transport the equipment within the specified environmental condition values throughout its useful life. See the Specifications section.
- ALWAYS call AMSINO iReceptal Customer Service before transporting or storing this equipment in freezing conditions. Failure to comply will cause the expansion of frozen internal fluid to damage the equipment.

To ensure the longevity, performance and safety of this equipment, use of the original packaging material is recommended when storing or transporting this equipment.

# Disposal/Recycle

### MARNING:

BLOODBORNE PATHOGEN AND CONTAMINATION HAZARDS -

- ALWAYS follow local regulations for safe handling, recycling, and disposal of biohazardous fluid waste and Neptune equipment.
- Call iReceptal Customer Service for docker decontamination procedures.
- Discarded electromedical equipment must not be disposed together with waste but must be collected separately to guarantee ecologically correct disposal to prevent dispersion of potential pollutants into the environment. Please hand in the device at the end of its useful life to the local collection and recycling point for electrical and electronic devices.

Failure to comply may cause environmental contamination or infection and result in personal injury.



Per the European Community (EC) Waste Electrical and Electronic Equipment (WEEE) Directive 2012/96/EC, product must be collected separately. DO NOT dispose of as unsorted municipal waste. Contact local distributor for disposal information. Ensure infected equipment is decontaminated prior to recycling.

# Troubleshooting

NOTE: For service, contact your AMSINO sales representative or call AMSINO iReceptal Customer Service. Outside the US, contact your nearest Stryker subsidiary.

PROBLEM	CAUSE	SOLUTION
Power switch does not illuminate	Power cord is not connected or is	Make sure the power cord is
in the ON position.	loosely connected.	connected securely.
The rover will not dock or an error	The facility water valve is shut off.	Turn on the facility water valve.
has occurred during the docking		
procedure.	The docker is damaged.	Contact Customer Service.
Water inlet hose is leaking.	Water inlet hose connection is not	Make sure the water inlet hose
	secure.	connection is secure.
	Water inlet hose is damaged.	Replace the water inlet hose.
Waste outlet hose is leaking.	Waste outlet hose connection is	Make sure the waste outlet hose
	not secure.	connection is secure.

	Waste outlet hose is damaged.	Replace the waste outlet hose.
The docker does not dispense	The canister of detergent is	Add detergent
detergent during the cleaning	empty.	
cycle.	If the problem persists, the docker	Contact Customer Service.
	detergent pump may be damaged.	
Sporadic electrical interference is	Electrical noise is present.	Turn off all the electrical
experienced.		equipment not in use in the room.
		Relocate the electrical equipment
		to maximize the distance between
		the equipment. Increase spatial
		distance.
		Plug equipment into different
		outlets.

# **Error Messages**

NOTE: For error message information, see the instructions for use supplied with the rover.

# **Specifications**

Model:	iRD301	
REF	iRD301-01	
Electrical Power Requirements:	100V-240V~, 50/60 Hz, 3 A	
Power inlet module	Power switch with 250V fuses on neutral and line connection	
European Conformity:	CE	
Product Safety Certification:	EU Medical Device Directive 93/42/EEC and Directive 2007/47/EC	
	IEC 60601-1:2005, IEC 60601-1:2005/AMD1:2012 Medical electrical	
	equipment – Part 1:	
	General requirements for basic safety and essential performance	
	IEC 60601-1-2:2014 Collateral Standard: Electromagnetic disturbances	
	- Requirements and tests	
Dimensions:	Width: 63.3cm	
	Height: 86.3cm	
	Depth: 43.7cm	
Mode of Operation:	Continuous	
Mass	46kg—detergent empty	
	56kg—detergent full	
Equipment Classification:	Class I Medical Electrical (ME) Equipment	
Ingress Protection (IP):	IPX0	
Light Emitting Diode (LED)	WARNING: INVISIBLE LED RADIATION	
Classification (infrared	DO NOT VIEW DIRECTLY WITH OPTICAL INSTRUMENTS CLASS	
communication windows):	1M LED PRODUCT — Viewing the laser output with certain optical	
	instruments (for example, eye loupes, magnifiers and microscopes)	
	within a distance of 100 mm may pose an eye hazard.	

Ground Type:	Protective Earth (ground); when connected to facility power		
Water Requirements:			
Pressure Range:	345 kPa to 827 kPa [50 to 120 psi]		
Temperature Range:	4.4 to 43.3 °C [40 to 110 °F] NOTE: For optimal cleaning of the rover		
	canisters, use 37	'.8 to 43.3 °C [100 to 110 °F].	
Fitting Connection:	Facility source is	equipped with a 3/4" Male (garde	en) Hose Thread
	(MHT) fitting and	has a dedicated shutoff valve.	
Water Quality:	Potable tap wate	r	
Water Usage:	Approximately 34	4 liters [9 gallons] per rinse cycle	at default settings on
	standard cycle; v	vater usage fluctuates due to sele	ected cycle and facility
Facility Backflow Prevention	flow.		
Device:	Refer to local plumbing codes to determine whether an external		
	backflow prevention device is required.		
Drainage Requirements:	Floor drain or permanent service connection per local plumbing codes;		
	2.44 m [8 feet] connection distance (maximum)		
Water Inlet Hose:	inner diameter: 25 cm [0.50 inch]		
	length: 3m		
Waste Outlet Hose:	inner diameter: 1.27 cm [0.50 inch]		
	length: 3m		
Waste Pump Outlet Flow:	23L/min		
Environmental Conditions:	Operation	Storage and Transportation	Storage and
	Transportation	(before initial use)	(after initial use)
Temperature Limitation	∬,∕- 40 °C	∬,~ 40 °C	∬,~ 40 °C
	10 °C -	-20 °C	10 °C
Humidity Limitation	20 %	10 % <sup>75</sup> %	75 %
Atmospheric Pressure Limitation:	70 kPa	10 %	10 % - 106 kPa
	70 kPa 2	50 kPa 7~~	50 kPa 🦯

## **Electromagnetic Compatibility**

## **Guidance and Manufacturer's Declaration**

Below cables information are provided for EMC reference.

Cable	Max. cable length, Shielded/unshielded		Number	Cable classification
AC Power Line	3.0m	Unshielded	1 Set	AC Power

### Important information regarding Electro Magnetic Compatibility (EMC)

This electrical medical equipment needs special precautions regarding EMC and put into service according to the EMC information provided in the user manual; The equipment conforms to this IEC 60601-1-2:2014 standard for both immunity and emissions. Nevertheless, special precautions need to be observed:

The equipment with no ESSENTIAL PERFORMANCE is intended used in Professional healthcare facility environment

> WARNING: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally".

The use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation.

➢ WARNING: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of this product, including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result."

➢ WARNING: If the use location is near (e.g. less than 1.5 km from) AM, FM or TV broadcast antennas, before using this equipment, it should be observed to verify that it is operating normally to assure that the equipment remains safe with regard to electromagnetic disturbances throughout the expected service life.

### EMI Compliance Table (Table 1)

Phenomenon	Compliance	Electromagnetic environment
RF emissions	CISPR 11 Group 1, Class A	Professional healthcare facility environment
Harmonic distortion	IEC 61000-3-2 Class A	Professional healthcare facility environment

### Table 1 - Emission

Voltage fluctuations
and flicker

**NOTE** The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

### EMS Compliance Table (Table 2-4)

Phenomenon	Basic EMC standard	Immunity test levels		
Phenomenon	Basic Elvic Stanuaru	Professional healthcare facility environment		
Electrostatic	IEC 61000-4-2	±8 kV contact		
Discharge	IEC 01000-4-2	±2kV, ±4kV, ±8kV, ±15kV air		
		3V/m		
Radiated RF EM field	Radiated RF EM field IEC 61000-4-3	80MHz-2.7GHz		
		80% AM at 1kHz		
Proximity fields from				
RF wireless	IEC 61000-4-3	Refer to table 3		
communications	IEC 01000-4-5			
equipment				
Rated power frequency		30A/m		
magnetic fields	IEC 61000-4-8	50Hz or 60Hz		

### Table 2 - Enclosure Port

### Table 3 – Proximity fields from RF wireless communications equipment

Test frequency	Band	Immunity test levels	
(MHz)	(MHz)	Professional healthcare facility environment	
385	380-390	Pulse modulation 18Hz, 27V/m	
450	430-470	FM, ±5kHz deviation, 1kHz sine, 28V/m	
710			
745	704-787	Pulse modulation 217Hz, 9V/m	
780			
810			
870	800-960	Pulse modulation 18Hz, 28V/m	
930			
1720			
1845	1700-1990	Pulse modulation 217Hz, 28V/m	
1970			
2450	2400-2570	Pulse modulation 217Hz, 28V/m	
5240	E100 E200	Pulse modulation $217H_7 $ $0V/m$	
5500	5100-5800	Pulse modulation 217Hz, 9V/m	

5	7	8	5
9	1	o	-

Dhamamanan	Desis 5046 standard	Immunity test levels		
Phenomenon	Basic EMC standard	Professional healthcare facility environment		
Electrical fast	IEC 61000-4-4	±2 kV		
transients/burst	IEC 01000-4-4	100kHz repetition frequency		
Surges	IEC 61000-4-5	±0.5 kV, ±1 kV		
Line-to-line	120 01000-4-5	10.5 KV, 11 KV		
Surges	IEC 61000-4-5	±0.5 kV, ±1 kV, ±2 kV		
Line-to-ground	120 01000-4-5	±0.3 kV, ±1 kV, ±2 kV		
Conducted		3V, 0.15MHz-80MHz		
disturbances induced	IEC 61000-4-6	6V in ISM bands between 0.15MHz and 80MHz		
by RF fields		80%AM at 1kHz		
		0% Uτ; 0.5 cycle		
Voltage dips		At 0º, 45º, 90º, 135º, 180º, 225º, 270º and 315º		
	IEC 61000-4-11	$0\% U_T$ ; 1 cycle		
	120 01000-4-11	and		
		70% U⊤; 25/30 cycles		
		Single phase: at 0⁰		
Voltage interruptions	IEC 61000-4-11	0% UT; 250/300 cycles		

Table 4 – Input a.c. power Port