

HITSA

WE SUPPLY OUTDOOR SPACES

BORCH

Compressor Pump

TECHNICAL MANUAL



Rev. B-08022022, RNH

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INTRODUCTION

Thank you for choosing a HITSA product from our range of Urban Cycling Solutions.

BORCH Compressor Pump is an automatic air pump designed for use with bicycles. The pump features an electrical compressor to make filling bicycle tires with air simple and easy. The pump head accommodates the three common valve types used on bicycle tires: Dunlop, Schrader, and Presta.



The pump can be used for any tire with these valve types and in addition to bicycles can be used for tires on items such as mopeds or children's carriages.

The pump compressor is factory set to a pressure of 8bar. During inflation of a tire, users are expected to manually regulate the desired inflation pressure of the tire if a lower pressure is specified on the tire or is desired by the user.

The purpose of this manual is to provide guidance on operation, installation, maintenance, and other general information about your HITSA product to ensure optimal performance. We recommend that this manual is reviewed, kept for reference, and passed on to any future owner of the product.

PRODUCT OVERVIEW

External Components

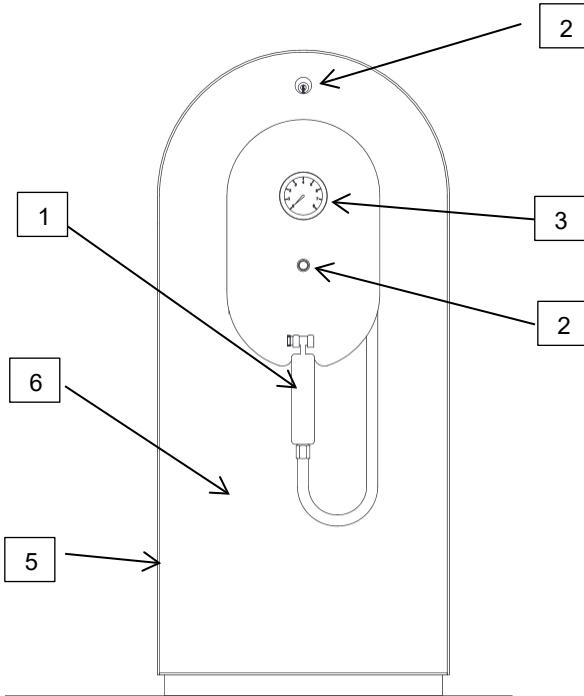


Figure 1: Product overview

Table 1: Part description

No.	Description
1	Pump Handle and hose
2	Start button
3	Manometer (pressure gauge)
4	Lock to remove cabinet front plate
5	Cabinet
6	Cabinet front plate (removeable)

Internal Components



Figure 2: Internal view

Table 2: internal Components

No.	Description
1	Cabinet
2	Control box and timer
3	Electrical socket for compressor
4	Oil filler neck
5	Air filter
6	Compressor and air tank
7	Cabinet front plate
8	Manometer/pressure gauge and T-connector
9	Quick connector for pump handle hose
10	Start button connector
11	Solenoid valve with timer and PGA connector
12	Air hose with quick connectors from compressor

SAFETY INFORMATION

IMPORTANT: Read these instructions before product installation and operation

Before product installation and operation, please read the following safety information and sections in this manual concerning operation and installation. In addition to addressing safety concerns, reading this material will also help prevent damage to the product.

Failure to install and operate this product in accordance with this information or using unauthorized spare parts could cause damage to the product and could result in severe bodily injury, including death in extreme cases.

GENERAL SAFETY INFORMATION

- If this product has been damaged, the power supply should be turned off immediately by a qualified service technician or electricity provider.
- Only qualified service technicians should carry out service on this product.
- Wear safety glasses, when servicing this product.
- Compressed air can be dangerous; do not direct airflow at a person's head or body.

TO REDUCE RISK OF ELECTRIC SHOCK

- Do not use this product with electrical voltages other than those stated under Technical Specifications.
- Do not install this product in any area where it will be subjected to above-normal amounts of rainfall, other liquids, moisture, or areas subject to above-normal flood risk.
- Do not attempt to service this product if it submerged in water. A qualified service technician or electricity provider should turn off the power supply to the product.

TO REDUCE RISK OF EXPLOSION OR FIRE

- Service and operate this product only in well ventilated areas.
- During spraying with combustible liquids risk of explosion may arise, particularly in closed rooms.
- Do not use this product in or near explosive atmospheres or where aerosol products are being used.
- Do not use this product in or near areas with combustible or explosive liquids or vapors.
- Do not use this product near naked flames.
- Do not pump any other gases other than atmospheric air.
- Do not pump combustible liquids or vapors with this product.

COMPRESSOR SYSTEM SAFETY INFORMATION

- Ensure compressor system is always protected against direct rain and dust.
- Ensure all openings on compressor system are kept free of restriction and never blocked. Keep all openings free from dust, dirt and other particles.
- Never insert fingers or any other objects into fans of compressor system.
- The compressor system is not thermally protected. It will not automatically turn off if overheating and may not run continuously for more than 15minutes. Electronic protection ensure that a leak will not result in continuous operation.
- This product may only be connected to units or tools with a maximum pressure higher or equal to that of the compressor.
- The surface of the compressor can get hot. Do not touch compressor motor during operation.
- The compressor is constructed and approved for a maximum pressure as stated under Technical Specifications.
- Do not operate compressor at ambient temperatures exceeding 45°C/113°F or falling below -10°C/14°F.
- Do not remove the protection covers on the compressor during operation as doing so may cause electric shock or other personal injury.
- All AC compressors are designed for 100% duty but 50% operation is recommendable to prolong the lifetime of the compressor.
- The compressor motor does not require oil. Do not lubricate the motor with oil, as it will destroy important components.

OPERATION

General use

Before turning on the pump, ensure the compressor is correctly installed by a certified electrician and an external fuse is used.

Check if the oil level is sufficient in the compressor. A visual sight-glass is placed on the side of the compressor. Oil level should be in the middle of the sight-glass.



Turn on the compressor by moving the circuit breaker to the ON position. The pump is now ready for use.

The pump handle (table 1, item 1) is used to fill tires with air. The pump head accommodates the three common valve types used on bicycle tires: Dunlop, Schrader, and Presta. The pump can be used for any tire with these valve types and in addition to bicycles can be used for tires on items such as mopeds or children's carriages.

1. Push the start button (table 1, item 2) on the front of the air pump to start the air pump system.
2. Wait until the manometer (table 1, item 3) shows sufficient desired air pressure. The manometer will display available pressure in the air-tank.
3. Press the pump handle down on the valve and the air will float in to the tire. The manometer pressure will now show the tire pressure. Keep pressing the pump handle down on the valve until the desired pressure is reached.
4. After 5 minutes. the air pump system will stop refilling the tank and wait for another push on the start button to activate the air pump system for a new sequence of 5 minutes operation.
5. **IMPORTANT:** Do not run the compressor continuously for more than 15minutes, as this silent compressor type will overheat. Allow 10 minutes break after each 15 minutes continuous operation.

After using the air pump system, place the pump handle on the hook of the side of the cabinet

INSTALLATION

ATTENTION: During installation, ensure that the frame is positioned in the concrete foundation in a level position. This should be done using appropriate measurement tools, and will ensure that the mounted air pump system will be installed in the correct vertical position.

HANDLING AND TRANSPORTATION:

- Important: Always Keep the pump upright and do not place it on any side during transportation, installation or handling.
- The electric compressor is oil-filled and will leak when lying down.
- If the pump has been on its side, it must be checked for leaks, cleaned inside and oil must be topped off if need. See section on Maintenance.

REMOVING CABINET FRONT PLATE

Using a correct key (supplied from HITSA), turn 90degrees counter clockwise. If resistance is detected, press the top of the front plate gently inward. When the key is turned, pull the top of the front plate free of the cabinet (approx. 10mm), and lift the front plate upwards to free it from the bottom catch.

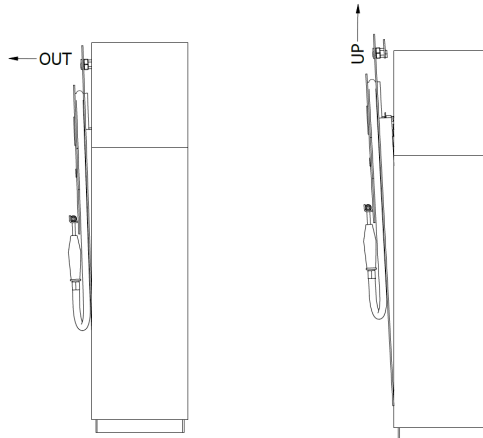


Figure 3: Removing cabinet front plate

Foundation

To install your air pump system the base must be embedded by casting it into a concrete foundation (Figure 3). The size of the cast concrete is approximately 300 x 300 x 900 mm. Alternatively an Ø300 drill can be used.

Make sure that the top plate of the base is level in all directions. We recommend to mount the pump cabinet before concrete hardening using the cabinet to get desired height and leveling. Fix it in this position until the concrete is hardened.

If the electrical wire is available at installation, it can be routed inside the base (solution 1 marked with red). Alternatively it is possible to route a cable just beside the foundation/base (solution 2 marked with blue)

We recommend that an electrical hollow pipe is led to the foundation and casted into the concrete following solution 1.

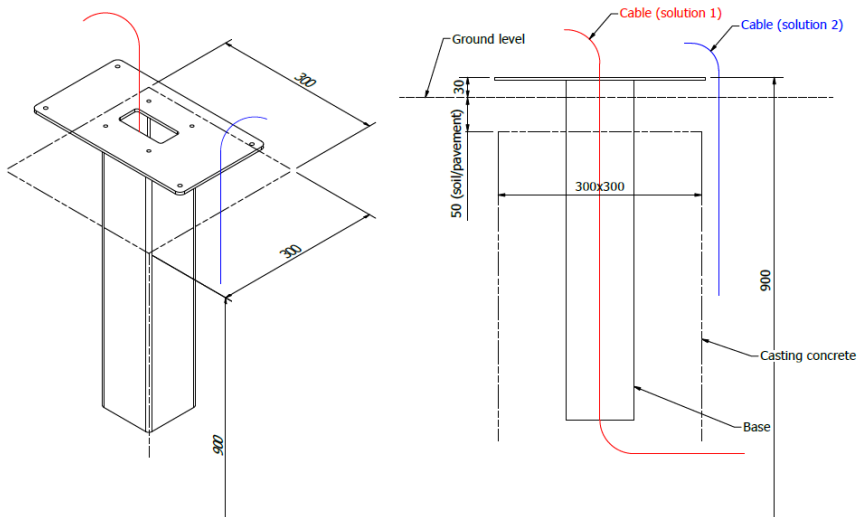


Figure 3: Casted concrete foundation

Mounting

The air pump system is mounted on top of the base (Figure 4). It is secured in place with four M8 x 25mm bolts and 4 M8 washers which connect into the base.

ATTENTION: Be aware not to crush the cable. It is recommended to use a M20 PG gland if cable is routed as solution 2 on the previous page.

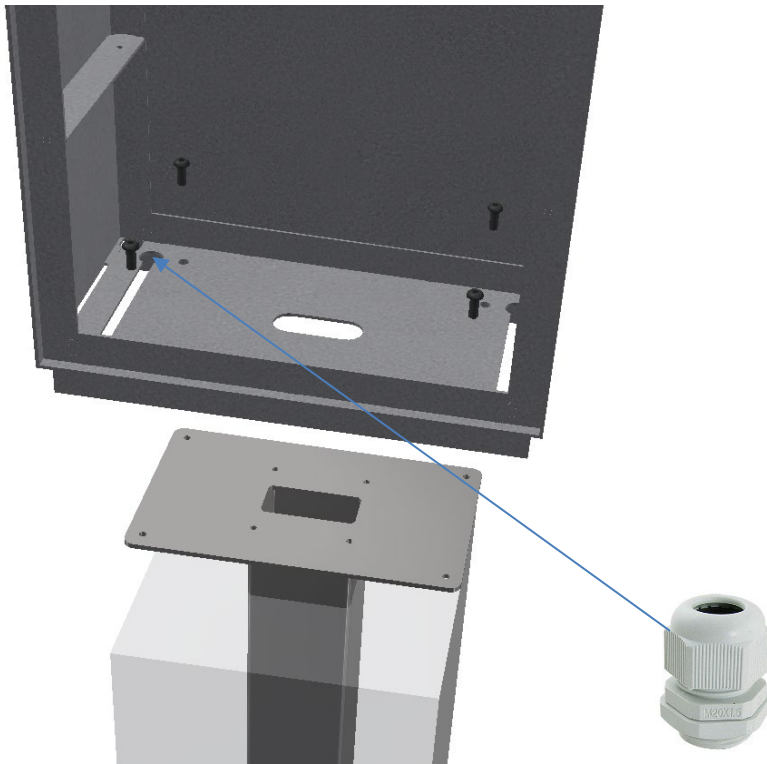


Figure 4: Mounting air pump system onto the frame

INSTALLATION

Install the electrical pump ensuring that the airfilter and oil-fillage nozzle is facing outward. Fix the pump using the 30x3mm bracket and two M6x40 bolts. (Figure 5a)

Connect the electrical connector from the pump to the socket on the electrical board above. (table 2, no. 3)

Install the cabinet front plate by connecting the air hose from the compressor (table 2, no. 12) to the manometer T-connector ensuring it is fitted correctly by pulling lightly.

The installation process must now be continued by an authorized electrician.

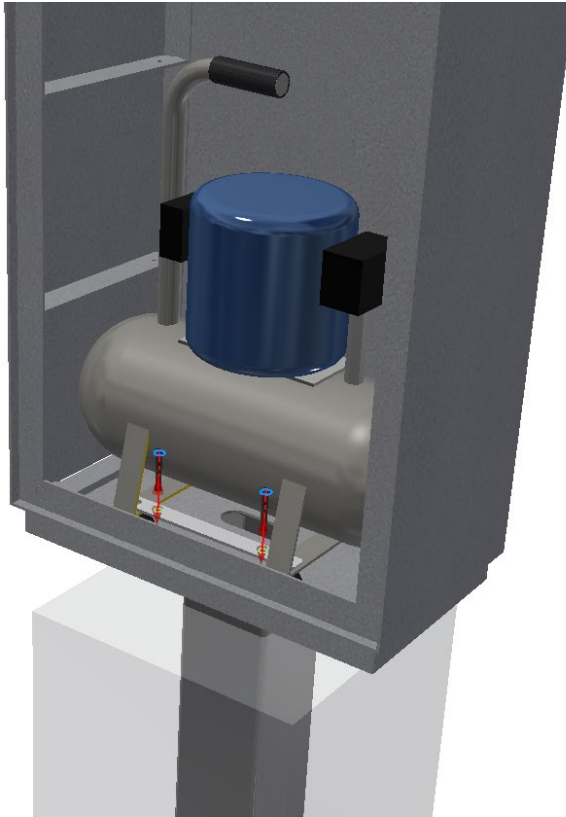


Figure 5a: Installing the electrical pump

Electrical

SAFETY WARNING: Incorrect electrical connection may result in electric shock. The electrical connection must be carried out in accordance with local electrical regulations and by qualified electricians.

ATTENTION: Make sure that your air pump system is disconnected from the external power supply by turning off the Circuit breaker before changing, plugging or unplugging any component inside your air pump system.
All plug/Unplug operations must be done with POWER OFF.

Table 3: Electrical connections

From		To	
Description	Cable	Description	Terminal
External Power Cable	230Vac 50/60Hz (3x1,5mm ²)	Circuit breaker	N
			2
			Ground

Main diagram of the air pump system internal components

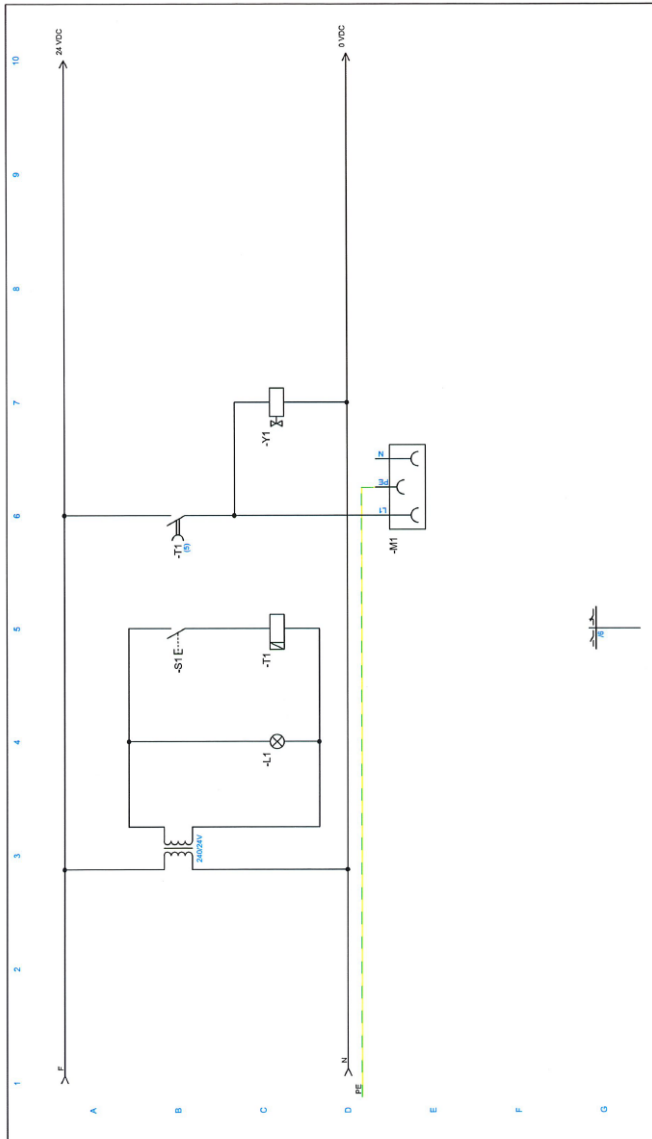


Figure 5: Main diagram of the air pump system components

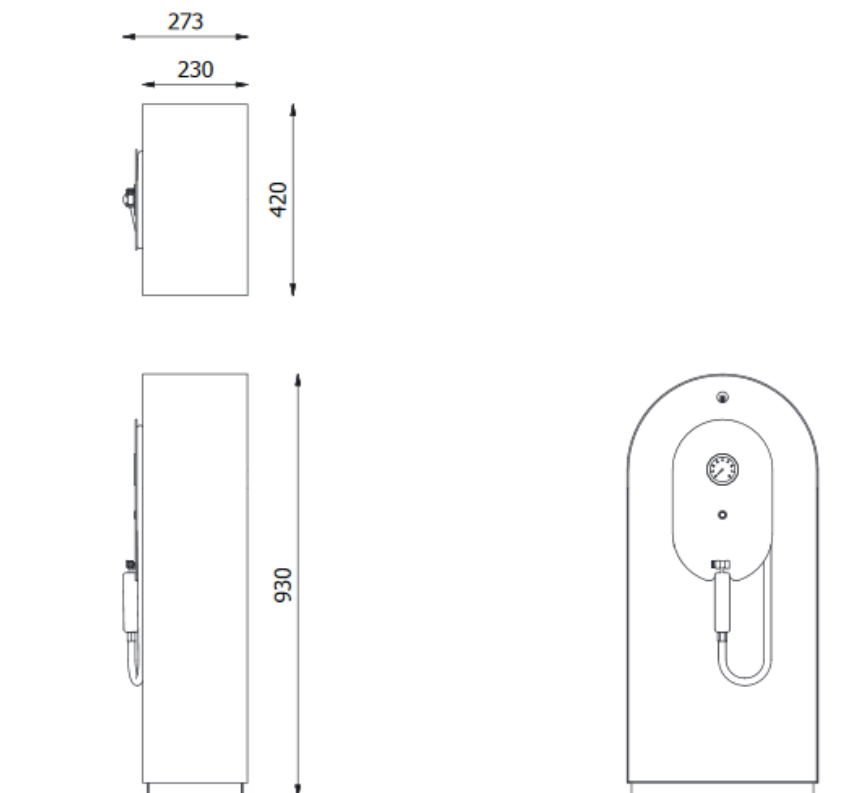



TECHNICAL SPECIFICATION**Overall Dimensions**

Figure 6: Overall dimensions

Table 4: Technical specification

Model	
Model no.	545155124, 545155125
Materials and finish	
Outer casing	3mm S235 steel Hot dip Galvanized or powder coated
Hose	Pneumatic unarmored air hose.
Pump handle	Accommodates Dunlop, Schrader, and Presta valve types.
Weight	30kg
Compressor	
Max pressure	8bar/116psi (Factory setting 8bar)
Noise in application	40dB
Run time (down time)	Max. 15min (10min)
Tank capacity	4L
Filling rate	18,5 L/min.

The compressor contains oil and drains humidity automatically.

Electrical data	
External fuse (Max.)	10A Combi HPFI
Internal fuse	N.A.
Voltage	230Vac
Frequency	50/60Hz
Ampere	230V/0,85A
Power	200W
Consumption	30kwh (Estimated annual electricity consumption based on used 40 times a day)
Protection degree	IP45 Type 3R enclosure
Temperature range	-10°C - +45°C
Class	Class 1 
WEEE	
CE	

FAQ – TROUBLE SHOOTING

In this section common faults and possible solutions will be described.
 If the fault is not listed or keeps recurring, please contact Hitsa at info@hitsa.dk

Subject	Fault	Possible solution
Electrical	The pump starts when pushing the start button, but turn off before max pressure is achieved.	The timer is not set correctly. Allow a technician to adjust the timer to approximately 5minutes.
	The pump does not start when pushing the start button.	The external HPFI relay may have been turned off. Check that the ON/OFF switch on the compressor is set to "ON".
Pressure	The pump fills up the tire aggressively/fast, and does not allow time enough to read the tire pressure on the manometer.	The internal flow-restrictor might be malfunctioning or need recalibrating. Try to recalibrate by turning the restrictor knob clockwise until it is completely closed. Then counterclockwise 1,5-2 revolutions. If this does not work, it might need replacement.

MAINTENANCE

Regular maintenance will prolong the life of your HITSA product and also ensure optimal operating performance.

HITSA recommends that the air pump system should be maintained according to the following maintenance schedule.

Table 5: Maintenance list

Maintenance list	Monthly	Semi Annual	Annual
Check the pump handle and rubber gaskets for proper functioning. Replace gaskets if necessary.	•		
When the HPFI switch located in the fuse box (Figure 1, item 2) is switched on (1) it must trip when the test button (Test) is pressed.		•	
Remove dirt from the cabinet with detergent. For regularly cleaning, detergent should not contain abrasives or solvents.		•	
Check Oil level: On the side of the compressor body is a 'seeing' glass. The oil level must be in the middle.		•	
Change Oil and air filter: Remove compressor from cabinet and drain oil using proper tools and avoiding spillage and contamination. Fill up with correct grade oil (0,5L), until oil can be seen in the "viewing-glass". Run compressor for 5min and top off if necessary. Change air filter.			•

Graffiti:

Graffiti can be removed with benzene, turpentine or in difficult cases with metyletylketon (MEK)*.

Cleaning must be followed by a wax treatment.

*By using metyletylketon (MEK) the surface may not be rubbed more than maximum 4-5 times during each application.

Repairing minor damage:

1. Gently sand damaged area, without damaging coating further.
2. Remove loose particles.
3. Apply refinish.

Recommended products:

Refinish: Standard paint in machining RAL color.

Cleaner: Neutral pH detergent; value from 5 to 8

Wax: General-purpose wax used to protect painted metal surfaces

SPARE PARTS & WEAR PARTS

Table 5 identifies spare parts available for this product which may be installed by a HITSA Service Partner or by a certified professional.

Wear parts are identified in the table by an asterisk (*). Wear parts, are those parts which will need to be replaced on a regular basis due to normal product use. Frequency of replacement depends on use patterns specific to each product installation location.

To order spare parts or enquire about service options, please contact HITSA through the contact information found on the back page of this manual.

Table 6: Spare parts

Description	Part no.
Pump handle gasket kit (B, 2xD)	545155134
Pump handle spare parts kit (A, B, C, 2xD, 2xE, F, G)	545155135
Pump handle and hose	545155132
Manometer (pressure gauge)	545155133
Internal hose (compressor -> manometer)	Contact HITSA
Start button	545155137
Service pack: Oil and air filter, gasket kit	545155136



TERMS & CONDITIONS OF SALE

This product has a 2-year warranty covering manufacturing defects. Warranty coverage does not include damage due to vandalism. Warranty coverage does not include replacement of parts which require replacement due to normal product use. To maintain warranty coverage, all product servicing must be completed by a HITSA Service Partner or by a certified professional.

HITSA reserves the right to modify technical specifications and offer alternative models of this product.

CONTACT INFORMATION & SERVICE SUPPORT

Please contact HITSA if you have questions about your product, require service support, or would like to enquire about other products and services.



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