

# **WASTE MANAGEMENT SYSTEM**

**АССЕНИЗАЦИОННО-  
САНИТАРНОЕ  
УСТРОЙСТВО**

THE SOYUZ SPACECRAFT WASTE MANAGEMENT SYSTEM IS DESCRIBED  
HERE. PRESENTED ARE THE SYSTEM COMPONENTS, THE FUNCTION  
OF ITS UNITS AND ASSEMBLIES AND THEIR USE IN VARIOUS MODES.

THE WASTE MANAGEMENT SYSTEM is designed for collection, isolation and storage of the body waste.

The waste management system is installed in the Orbital Module. It consists of the following elements:

- a fecal and urine canister;
- a urine receptacle;
- porous bags;
- a deodorant filter;
- WMS blowers;
- WMS panel;
- hoses.

The waste management system also includes;

- a urine receptacle/transfer valve assembly (standby);
- a urine bladder.

THE CANISTER consists of a cup where a porous bag is inserted and a liquid suction neck.

A selector valve is fitted to the canister. It has three positions:

"CLOSE"

"OPEN"

" 2 ".

- 2 -

When turning the valve switch into position "OPEN" the hose is simultaneously connected with the neck and cup.

In position "2" it is connected with the canister cup only.

The cup has two positions: I and II.

In position I the cup is not connected with the selector valve as it is separated from the air line.

In position II the cup is connected with the selector valve and is held in place by a snap.

THE URINE RECEPTACLE is a tank filled with a liquid-absorbing material. The air is separated from the liquid here.

THE POROUS BAG is made of linen with the bottom permiable to air. In the upper part of the porous bag there is a metallic ring securing it in the cup and elastic shutters isolating the bag interior.

Each porous bag is placed into a sealing.

Liquid wastes are collected in the receptacle.

The liquid is drawn into the neck by an airflow and goes through the hose into the receptacle where it is held by the liquid-absorbing material.

From the receptacle the air goes first into the deodorant filter (where it is cleansed of

odors) and then is sent into the cabin by the blowers.

USE OF THE WMS CANISTER.

TO URINATE, proceed as follows:

- take the canister, remove the cover from the neck, press the snaps and put the cup into position I;
- turn the valve switch into position "OPEN";
- switch on the blowers;
- proceed now, leaving some clearance between the penis and the neck;
- turn the valve switch into position "CLOSE";
- switch off the blowers;
- put the cup into position II;
- clean the neck with a dry cloth; then put it into the waste packet;
- put the cover back on the neck;
- put the canister in its place.

TO URINATE AND DEFECATE, proceed as follows:

- remove the covers from the cup and the neck;
- take a porous bag with sealings from the container;
- take the porous bag out of the sealing;
- take the covers and cloth out of the porous bag and put them together with the sealing into the packet;

- 4 -

- take the canister;
- put the porous bag into the cup;
- turn the valve switch into position "OPEN";
- switch on the blowers;
- proceed now, placing the cup securely on the buttocks;
- turn the valve switch into position "2";
- remove the canister from the buttocks;
- put the used cloth into the porous bag;
- close the porous bag with the cover;
- release the elastic shutters by pulling the strap;
- put the valve switch into position "CLOSE";
- switch off the blowers;
- take the porous bag out of the cup;
- secure the canister;
- put the porous bag into the sealing;
- clean the neck and cup with the cloth;
- put the used cloth into the sealing together with the porous bag;
- remove air from the sealing by lightly pressing the latter;

- tighten the sealing with the rubber tie;
- put the porous bag into the second sealing and tighten it with the tie;
- put the porous bag into the third sealing and tighten it;
- put it into the waste packet;
- put the covers back on the cup and neck;
- put the canister in its place.

TO DEFECATE, IF THE BLOWERS ARE OUT OF OPERATION, use the porous bag and cup without switching on the blowers.

TO URINATE, use the urine receptacle/transfer valve assembly and observe the following procedure:

- take the assembly;
- turn the valve switch into position "CLOSE";
- squeeze the bulb;
- put the elastic tubing ring on the tapered tip and roll the tubing down;
- remove the elastic tubing from the tip;
- remove the tapered tip from the assembly;
- screw the elastic tubing ring onto the assembly;
- roll the elastic tubing onto the penis;

- 6 -

- turn the valve into position "OPEN";
- proceed now;
- remove the elastic tubing from the assembly and put it into the waste packet;
- clean the assembly with the cloth; put it into the waste packet;
- squeeze the bulb several times;
- turn the valve switch into position "CLOSE";
- put the assembly into its place.

THE URINE BLADDER IS USED AS FOLLOWS:

- take the urine bladder;
- fix the tapered tip onto the bladder;
- put the elastic tubing ring on the tapered tip and roll down the tubing;
- remove the elastic tubing from the tip;
- remove the tapered tip from the bladder;
- screw the elastic tubing ring onto the bladder;
- roll the elastic tubing onto the penis;
- proceed now;
- remove the elastic tubing from the bladder and put it into the waste packet;
- clean the bladder with a cloth; put it into the waste packet;
- put the bladder into its place.



# АССЕНИЗАЦИОННО-САНИТАРНОЕ УСТРОЙСТВО WASTE MANAGEMENT SYSTEM

