

Phone: 1300 305 073

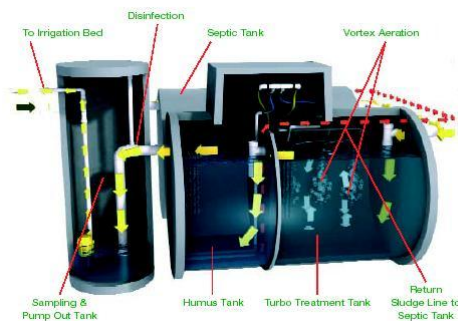
www.icon-septech.com.au



Owner's Manual for Turbojet 2000 Sewerage Treatment Plant

Thank you for purchasing our sewerage treatment plant. Please take a few minutes to read this leaflet so that together we can ensure you receive many years of trouble-free service.

ICON-SEPTTECH sewerage treatment plants are the latest technology and have been designed to give excellent effluent results with low running and maintenance costs.



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HOW YOUR ICON-SEPTECH TURBOJET SEWERAGE TREATMENT PLANT WORKS

Congratulations on your purchase of one of the most advanced aerated wastewater treatment systems available!

Wastewater from your household (bathroom, toilet, kitchen and laundry) is treated and, if required, lightly chlorinated. The clean, clear liquid is then automatically discharged by way of automatic electric pump to the designated area.

1. The wastewater passes into an anaerobic digestion tank. At this point the wastewater settles and anaerobic bacteria digest the solid particles. This is done in a low oxygen environment over a period of approximately 48 hours.
2. The primary treated water then passes into the second tank which is divided into two compartments. The first compartment is a submerged contact aeration tank, where treated wastewater is pumped with air into a spiraling patented vortex motion at regular time intervals. This generates a biomass of naturally occurring aerobic bacteria which further reduces wastewater impurities.
3. The effluent then passes into a humus chamber. At this stage all remaining particles of solid effluent are pumped back into the SCA chamber via a vortex lift. Sludge is also returned to the anaerobic chamber via a return line. Remaining wastewater passes through contact media on which biomass grows and further reduces the biological oxygen demand of the effluent. These processes have the following benefits:
 - Excess sludge is returned to the primary sewerage tank for storage and digestion.
 - Clean effluent is recycled through the plant which tends to suppress the activities of micro-organisms which emit odours.
 - By regularly recycling effluent, the circulating and fixed biomass in the SCA chamber is being fed with stored organics from the primary sewerage tank.
4. The wastewater then gravity feeds into the final tank where it may be chlorinated at controlled levels to ensure sterilization. This may vary from state to state or shire to shire but will be as directed by your local council environmental health officer.
5. Crystal clear and odorless water is pumped out into an irrigation system in your garden or lawn.

Icon-Septech's multi-tank system minimizes the risk of cross contamination which could lead to the failure of the wastewater system.

These features keep micro-organisms at maximum population levels and reduce the problems of treatment plants not used for extended periods such as during vacations. Consequently, untreated effluent is prevented from being discharged from the unit when persons return from vacation, or the treatment plant has been disabled from an extended power failure.

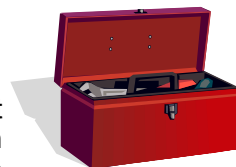
WARRANTY

Icon-Septech Pty Ltd warrants that the tanks supplied are manufactured to Australian Standard AS/NZS1546.1 and treatment systems to AS/NZS 1546.3.

Icon-Septech warrants to repair or replace such tanks requiring repair or replacement due to defective manufacture for a period of fifteen years from the date of purchase with the exception of fittings, pumps, control panel, irrigation lines and plumbing components for which period shall be 12 months from the date of purchase, it being understood that any failure of the system caused by the customer's noncompliance with the operating instructions or actual interference with the system or any of its parts will render such warranty null and void. The first twelve months servicing is incorporated into the purchase price. Please note that servicing does not include the replacement or repair of any mechanical, electrical or civil items outside the one year warranty period. However it is essential that the system is serviced in accordance with the manufacturer's specification at all times otherwise warranty will be null and void.

SERVICING REQUIREMENTS

At the time of commissioning, your sewerage treatment plant will be checked for correct operation. State Health Authorities have determined minimum effluent qualities that may be discharged and the treatment plant has been designed to exceed these standards. It must be understood that mandatory quarterly servicing is to be carried out by an authorised person, at which time any necessary adjustments to the plant and the topping up of chlorine tablets (if required) will be carried out. Annual service contracts are available from your **Icon-Septech** service technician at a moderate charge.



INSURANCE

We strongly recommend that you include the two electric pumps of the sewerage treatment plant in your household fusion policy, along with other electrical appliances (refrigerator, washing machine, etc).

ELECTRONIC CONTROL PANEL

The **Icon-Septech** system is fully automated by an intelligent microprocessor based controller, preprogrammed to optimize the performance and efficiency of the equipment.

Adjustable settings and historical data are stored in battery supported memory and are accessible via the user friendly Liquid Crystal Display and keypad. Once again putting **Icon-Septech** at the forefront of modern technology!



Advanced technology control panel will save you money

WARNING

Your treatment plant has been designed to treat all household waste water.

Do not place the following items or substances in toilets or plumbing that is connected to the Turbojet.

- x sanitary napkins
- x tampons and their wrappers
- x paper nappies and liners
- x condoms
- x cigarette packets
- x any foreign objects
- x paint
- x bleach (sodium hypochlorite)
- x nappy soaking products



These items should be placed in suitable wrapping and disposed of with the garbage collection. For the same reason we advise against toilet cleaners/ deodorants which are fitted to the toilet bowl.

**FAILURE TO OBSERVE THESE BASIC REQUIREMENTS MAY
SUBSEQUENTLY CAUSE BLOCKAGE TO THE PUMPS OR JETS AND
NECESSITATE A SERVICE CHARGE!**

If chlorine tablets are required they should only be handled and administered by an authorized service technician. Please contact **Icon-Septech** on 1300 305 073.

Cleaning agents are amazing cocktails of chemicals. Many detergents are not readily biodegradable and may inhibit bacterial action in the treatment plant, as well as polluting the water cycle long after use. All nappy soaking products are anti-bacterial. If these products are to be used for soaking, ensure the wash water does not enter the system. Do not allow wash water to enter the system if using bleaches (sodium hypochlorite). Do not tip leftover paint, paint cleaners or other chemicals into the system. Do not discharge spa pools through the treatment plant.

Do not allow the treatment plant to become inaccessible by undergrowth, use as an incinerator or garbage storage pad, or allow excess dirt or debris around the treatment plant to fall into the various tank chambers. Do not exceed the design parameters of the treatment plant according to the original specification. Do not turn off the control panel. Any fault must be attended to immediately. Do not turn off the treatment plant to save power. Do not leave control panel and pump cover open to weather.

HINTS AND RECOMMENDATIONS

Look for gentle biodegradable products and follow the manufacturer's recommendations. Remember that pure soap flakes are 100% biodegradable. Excellent biodegradable products are also available from supermarkets, health food shops and specialty outlets. Do not use excess cleaners or detergents - give cleaning products more time to work - use better cleaning tools, e.g. long handled scrubbing brushes.



Machine Washing - use gentle biodegradable products. Pure soap flakes may also be used, firstly dissolved in very hot water before adding to the washing water. Soap residue or scum is a result of water hardness and is easily dealt with by adding a quarter-cup of washing soda to washing cycle (NOTE - WASHING SODA IS TOXIC IF SWALLOWED, SO KEEP OUT OF REACH OF CHILDREN OR PETS).

Toilets - Vinegar (purchased cheaply from the supermarket) is an excellent toilet bowl cleaner and will not affect the bacteria level essential for the operation of the treatment plant. Leave to soak for ten minutes, after which

time lime scale can be scrubbed off.

Baths - to clean the bath with a recommended biodegradable product, it is recommended the plug be inserted in the bath and most of the cleaning product used wiped out with a paper towel which should be disposed of in the garbage bin.

Desludging – All septic tanks require periodic cleanout to remove excess sludge. When required, desludging is to be arranged and paid for by the owner.

Please observe the advice contained in this manual in order to minimise the frequency of desludging of the primary treatment tank. Desludging will vary from one to 3 years (similar to a septic tank system) depending on use and maintenance treatment of the system. Poor quality effluent or odour problems may indicate this is necessary.

Irrigation Field - When an irrigation field is installed it is the owners responsibility to inspect and maintain the field by cleaning the filter and to flush the irrigation lines monthly.

Landscaping - When landscaping around your sewerage treatment plant be sure to plant only small shrubs and ground cover. The use of pinebark is not recommended.

Larger trees and shrubs with high moisture demands may cause damage to the treatment plant by intrusion of their root system. When planting out your irrigated area (if this method of disposal is directed by your local council or shire), high nutrient and high moisture tolerant plants should be chosen. It is suggested that advice be sought from your local nursery person regarding choice of suitable plants.

LIST OF PLANTS SUITABLE FOR WET SOILS

Please consult your local council authority before finalising the plant choices to suit your locality and site conditions.

Evergreen plants are suitable.

Attached is a list of plants that may be suitable for your information only:

Trees

Angophora costata
Banksia integrifolia
Callistemon salignus "White Bottlebrush"
Callistemon viminalis "Red Bottlebrush"
Casuarina glauca "Swamp Gum"
Casuarina strica "Drooping Gum"
Eucalyptus Robusta "Swamp Mahogany"
Eucalyptus botryoides
Hakea Saligna
Leptosperum Laevigatum "Coast Tea Tree"
Leptosperum Petersonii
Melaleuca Armillaris-Sandy Soil
"Bracelet HoneyMyrtle"
Melaleuca Quinquenervia- Sandy Soil
"Broad Paperbark"
Melaleuca styphelioides- Clay Soil
Melaleuca linariifolia- Clay Soil
Nyssa Sylvatica
Photinea x Fraseri "Robusta"
Hakea Salicifolia
Tristaniopsis Laurina "Kanuka"

Climbers

Bougainvillea
Hardenbergia "Purple Coral Sea"
Hibbertia Scandens "Snake Vine"
Kennedia "Dusky Coral Pea"
Lonicera Japonica "Japanese Honeysuckle"
Pandorea Jasminoides

Ground Cover

Acanthus Mollis
Coprosma x kirkii
Grevillea Poorinda "Royal Mantle"
Liriope Muscari
Ophiopogon

Shrubs

Abelia x Grandiflora
Acacia longifolia "Sallow Wattle"
Callistemon Citrinus
Cassia Bicapsularis
Ceratostigma
Chaenomeles Lagenaria
Cotoneaster lacteus
Cotoneaster pannosus
Correa alba
Ciphea Ignea
Euonymus Japonica
Euphorbia Millii
Euphorbia Pulcherrima
Hebe Speciosa "Veronica"
Jasminum Nesnyi
Jasminum Polyanthum
Jasminum Officinale "Grandiflorum"
Lantana Camara (Cultivars only)
Leptospermum Flavescens
Nerium Oleander
Plumbago Auriculata
Pyracantha Fortuneana
Thunbergia Alata
Westringia Fruiticosa

Perennials

Agapanthus Praecox
Aster novi-Belgii
Canna x Generalis
Chrysanthemum Maximum
Gazania x Hybrida
Salvia x Superba
Stokesia Laevis
Viola Hederacea

