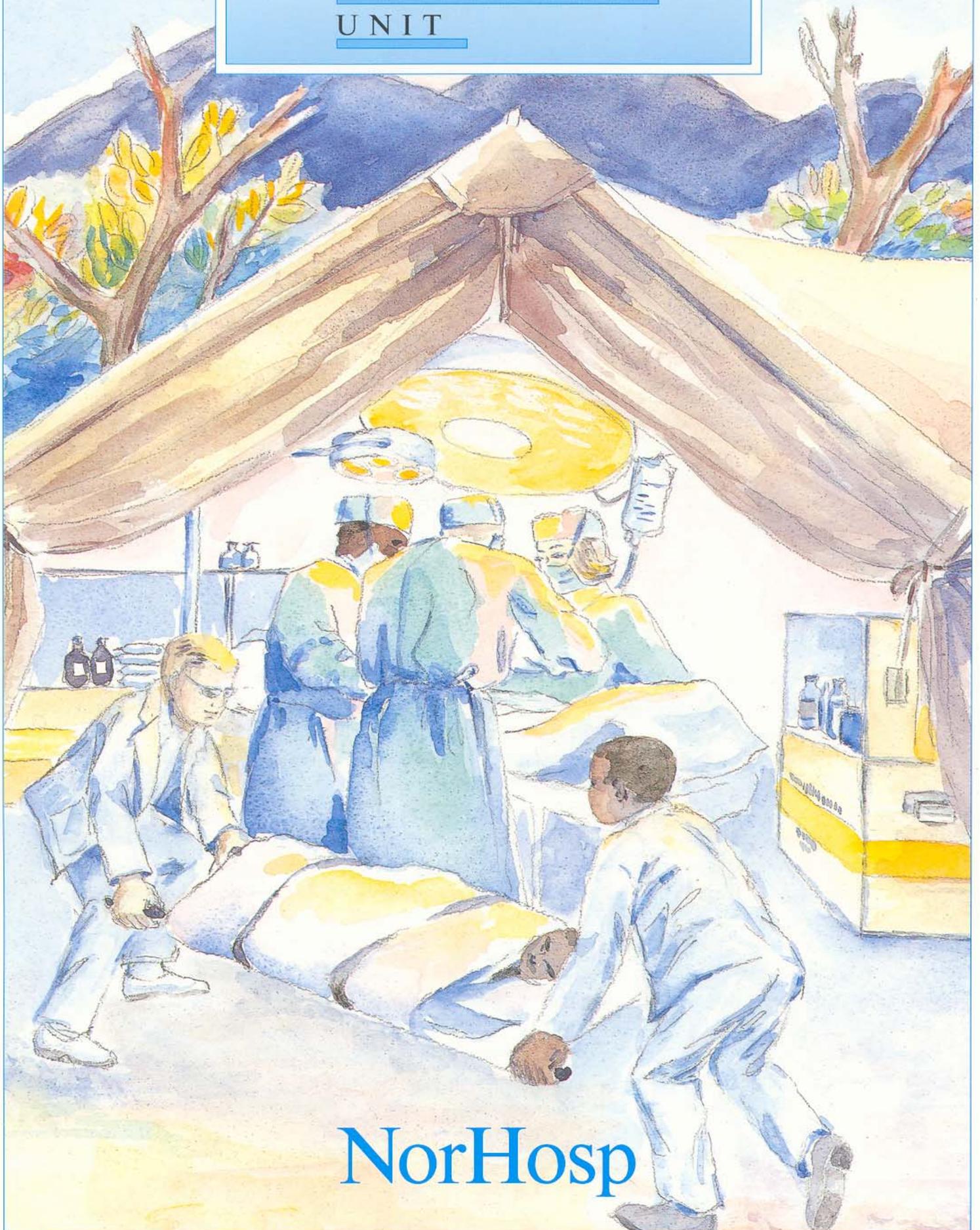
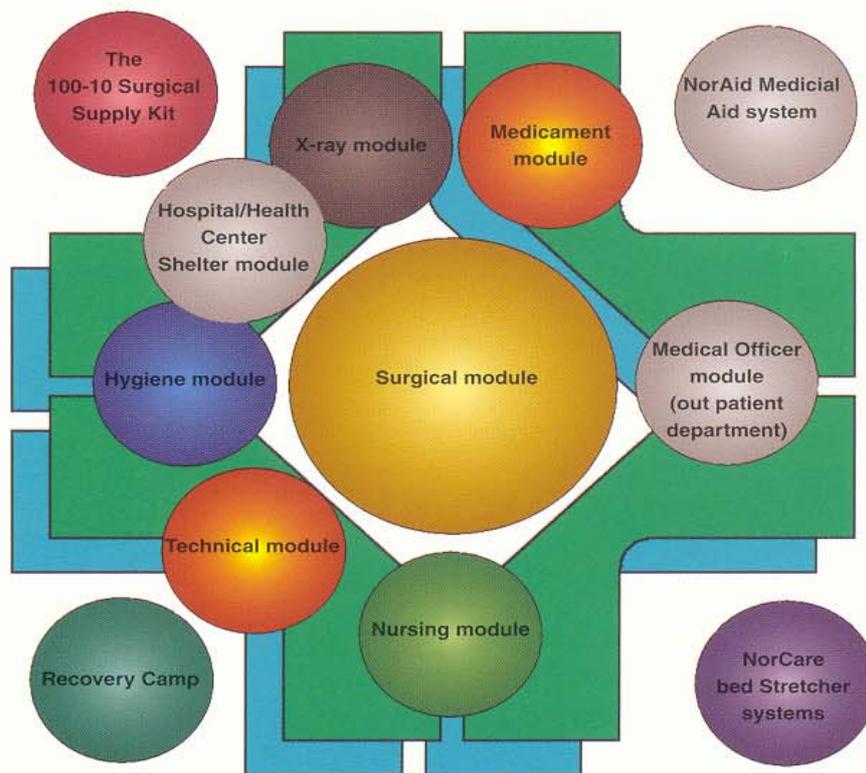


**N**ORWEGIAN  
MOBILE HOSPITAL  
AND DISASTER  
UNIT



NorHosp

# I NTRODUCTION



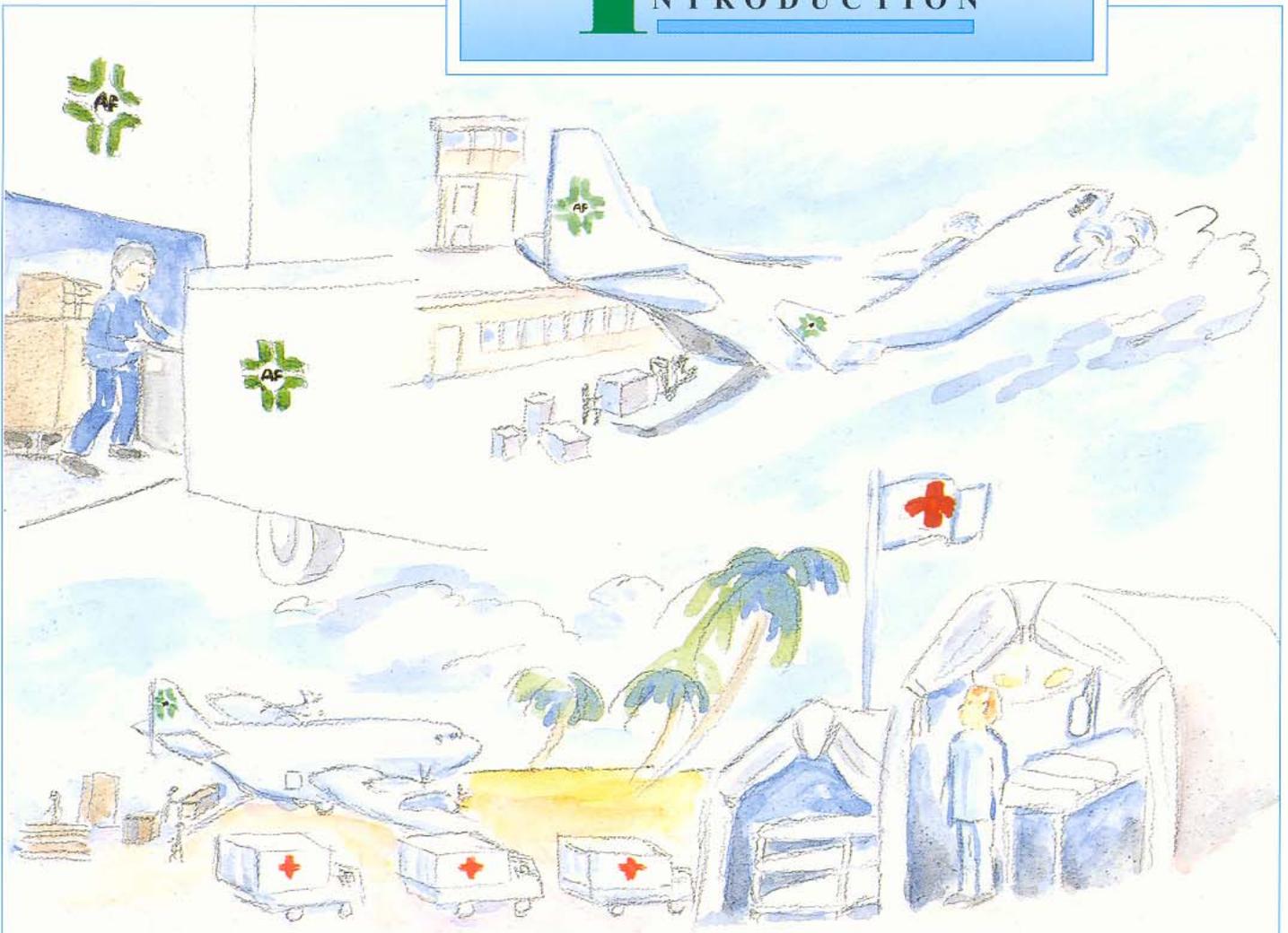
## NorHosp® Norwegian Mobile Hospital and Disaster Unit

**T**he Norwegian Mobile Hospital and Disaster Unit is a flexible medical emergency unit composed of different modules. The unit is specially designed to meet demands in connection with surgical injuries as a result of various disasters and armed conflicts. NorHosp can also be used for other purposes such as the introduction of health services in rural areas, or commercial health preparedness. Nor Hosp is a highly rated field hospital, built in close cooperation with the Norwegian health authorities and several aid organizations.

NorHosp was first designed in 1982 and was reorganized in 1989 and 1992 in order to improve its function in the field. This had led to alterations in the original module system. The various modules in NorHosp fit into most kinds of tents and buildings. However, a shelter module, as well as a technical module containing a generator, lighting equipment, etc., can be provided. NorHosp contains all the medical equipment necessary for the rapid establishing of a field hospital of considerable size. NorHosp can be used one place, packed up and used again in other places. Most of the equipment is smartly packed in lightweight, durable, splashpro-

of plywood cases. Maximum storage time is more or less unlimited. To facilitate classification and organization in the field, all the cases are clearly marked with different numbers and colors, identical to those in the NorHosp catalogue. The cases have measurements that allow them to fit onto euro pallets. They can therefore easily be transported on jeeps, trucks, boats and aircrafts in standard containers and holds.

# INTRODUCTION



The module system makes it possible to split up the complete unit and use the various modules in different combinations. In this way NorHosp can be tailored to meet particular needs.

NorHosp contains all the instruments and equipment necessary for the treatment of adults and children.

Our company can also assist with plans for manning the hospital and coordination of the startup.

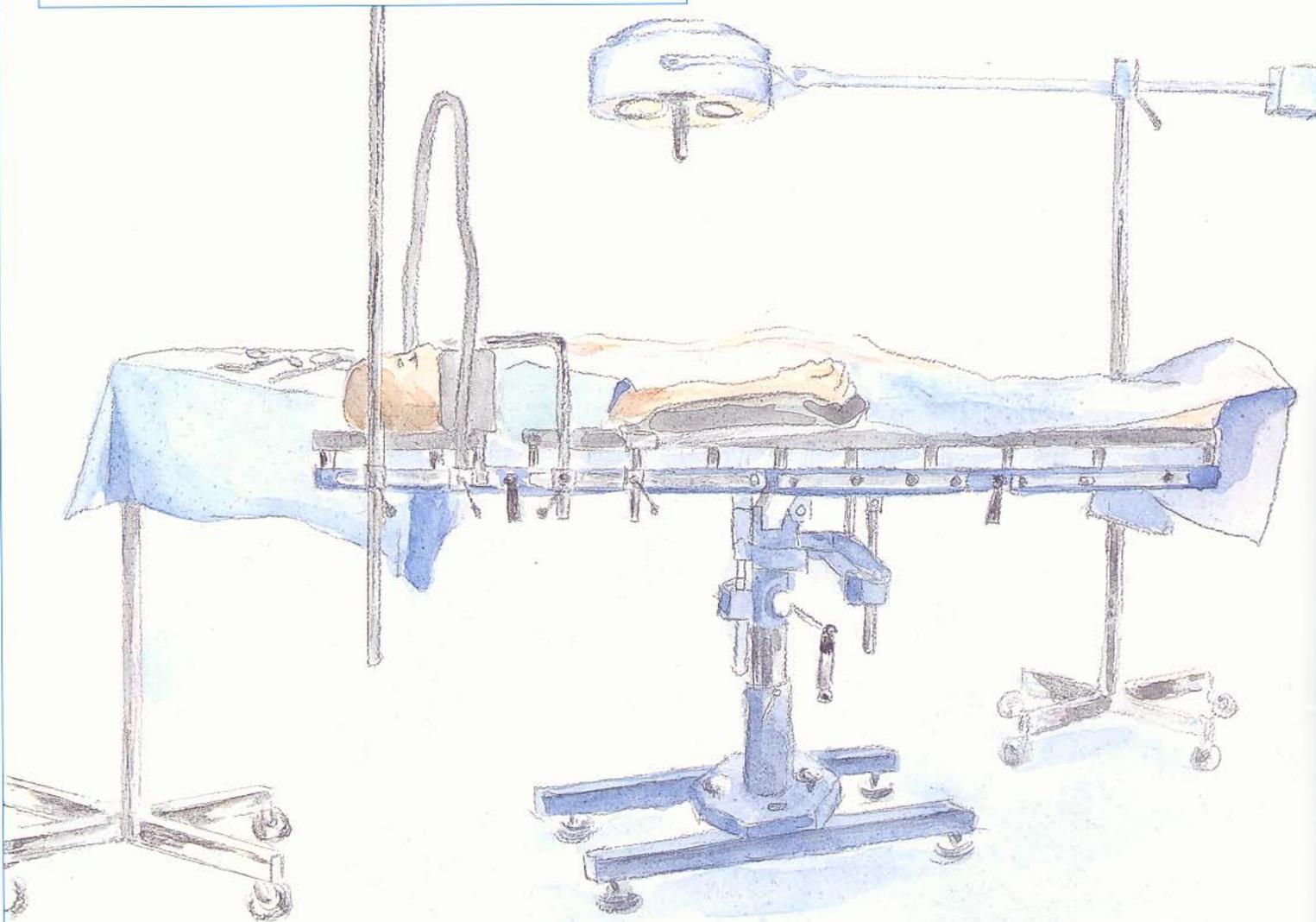
### **NorHosp storage**

A total of five complete NorHosps are stored in our warehouse in Oslo. Whenever a Norhosp is released, it will be replaced by a new hospital in the warehouse.

Our logistical department makes it possible to ship a NorHosp to the nearest international airport within 6 hours. A complete NorHosp can be transported to any place in the world, and be fully operational within 72 hours if the flight connections are adequate.

### **How to obtain a NorHosp**

Nor Hosp is available for regular commercial sales purposes, and interested clients should contact as Apotekernes Fællesindkjøb. Our company is also a member of NOREPS (Norwegian Emergency Preparedness System). This makes it possible to apply for a NorHosp through the Norwegian Ministry of Foreign Affairs.



**E**ach surgical module contains sufficient medical equipment to establish an operating theatre with two operating tables. This is the only module containing lighting equipment. This consists of two operation and two examination lamps.

Two autoclaves allow for continuous sterilization of instruments and textiles. The autoclaves, can be heated either electrically, or with kerosene, gas, etc.

The module also contains electrical suction apparatus, microscope and centrifuge.

The multi-way equipment in the module has a durability of several years.

60–80 m<sup>2</sup> (700–900 square feet) of floor space is needed for efficient utilization of the module.

Table of contents for Surgical module

Case No	Contents
1–2	Autoclaves
3	Sterilizer drums
4–7	Operating tables
8	Boiling equipment
9	Boiling equipment, suction apparatus, tools
10	Instrument table, infusion stand, Thomas splint
11	Suction apparatus
12	Anaesthesia apparatus
13	Anaesthesia equipment
14	Operating lamps, examination lamps
15	Microscope, centrifuge

- 16–17 Surgical instruments
- 18–19 Equipment, external fixation
- 20 Splints
- 21 Laboratory equipment
- 22 Needles, scalpel blades, syringes, ligature
- 23 Ostomy bags, oxygen equipment, sterilization paper
- 24 Nursing equipment
- 25 Operating gowns
- 26 Operating gowns, disposable
- 27 Textiles
- 28 Textiles, disposable
- 29 Office equipment, patient cards



**T**he 100-10 Surgical Supply Kit is a backup system, that can be ordered in addition to NorHosp. The unit contains sufficient disposable medical equipment necessary for the treatment of 100 surgical patients for 10 days, particularly in the post-operative phase.

### Table of contents for 100-10 Surgical Supply Kit

Case No	Contents
1	Catheters / drains
2	Various needles / infusion, spinal puncture equipment
3	Infusion sets / pressure bags, infusion
4-5	Syringes, various sizes
6	Adhesive tape
7	Plastic bags, razors, bowls, plastic bags, spatulas, thermometers
8	Burn compresses, paraffin compresses, forceps, gauze swabs
9	Compresses, gauze
10	Sterilization paper

11-14	Compresses, absorbent
15-16	Cellulose, absorbent
17	Urine / colostomy bags / gloves
18	Various tubes and drains
19-20	Thorax drainage, double seal, disposable
21-22	Gloves, surgical
23-25	Gauze bandages
26	Scalpels, sutures, various sizes
27	Compresses, gauze / first aid dressings
28	Adhesive tape / surgical equipment / triangular and tubular bandages
29	Diapers / sanitary towels
30, 33	Plaster of Paris

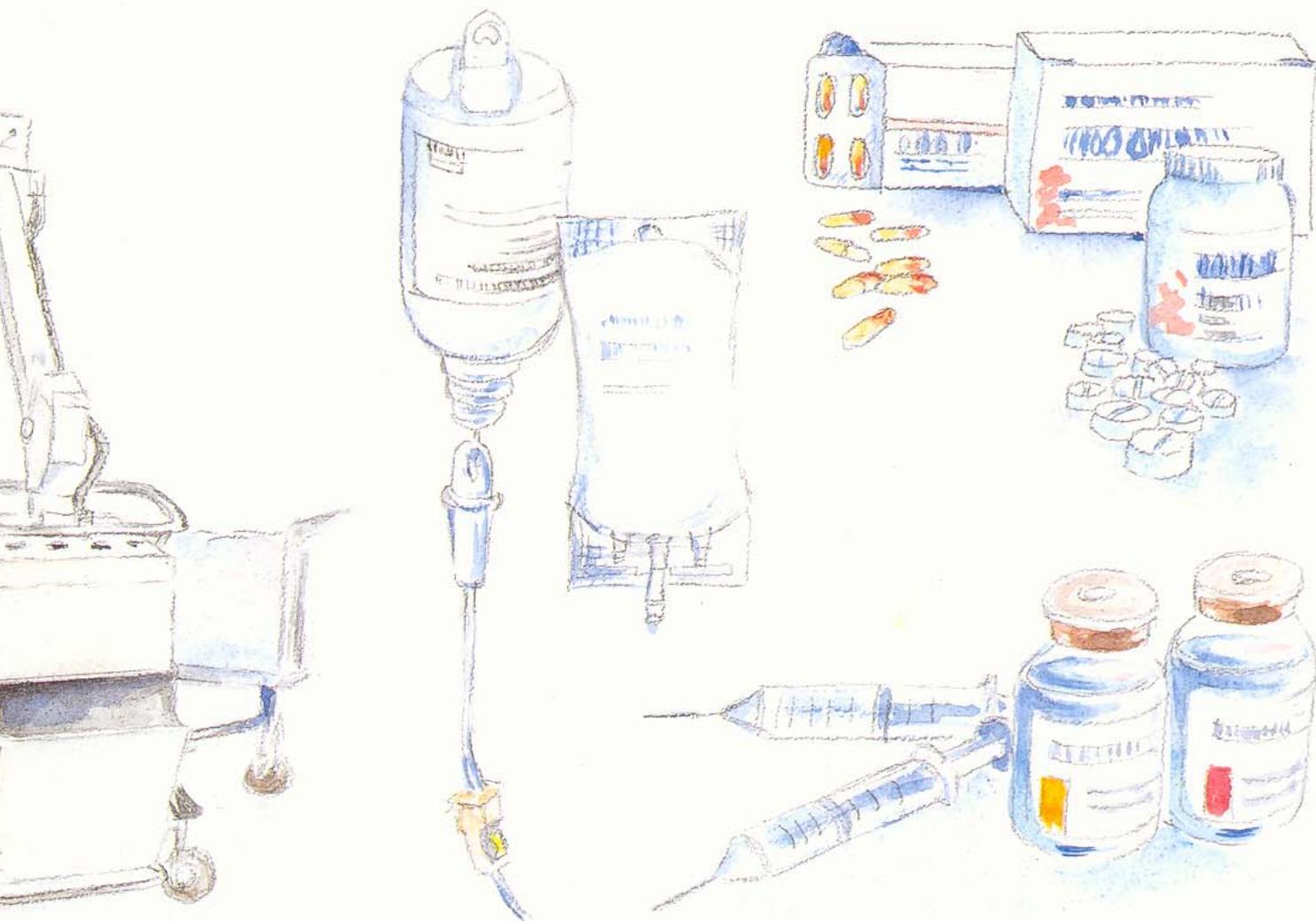


**E**ach nursing module contains all the necessary nursing equipment to establish and maintain a surgical ward with 50 inpatients, and has sufficient disposables for 14 days. The minimum floor space needed is 180 m<sup>2</sup> (2000 square feet). The number of staff will vary, depending on the condition of the patients and the level of nursing care.

Table of contents for Nursing module

Case No	Contents
1	Medical equipment
2	Catheters, rebreathing equipment etc.
3	Suction apparatus
4	Autoclave, stove, lamp etc.
5	Infusion stands, laundry stands etc.
6	Examination lamp, soaps, disinfectants, etc.
7	Nursing equipment
8	Bedpans
9	Waste bags, cellulose, toilet paper, etc.
10	Wash basins, pitchers
11	Wash tubs, buckets
12	Buckets, kettles, plates
13	Kitchen utensils
14	Towels, washcloths
15	Dressing gowns
16	Sweat suits
17	Gowns, sweat suits
18	Pyjamas
19	Clothing, briefs, socks, sweaters, T-shirts
20	Sweaters
21-25	Blankets, pillows, mattress covers

26-35	Blankets
36-38	Pillows
39-40	Cellulose
41	Chairs
42-43	Tables
44-45	Matresses
46-47	Stretchers
48-51	Stretcher legs
52	Stretcher legs w/wheel



**T**he X-ray module contains a complete X-ray department including X-ray machine, manual developing equipment, darkroom equipment, chemicals, films, light boxes and protection equipment. Minimum floorspace needed is 10 m<sup>2</sup> (110 square feet) plus 5 m<sup>2</sup> (55 square feet) for the darkroom.

Table of contents for X-ray module

Case No	Contents
1	X-ray machine
2	Light boxes
3	Processing/tank set, etc.
4	Chemicals, films, spare parts

**T**he medicament module contains medicaments and infusion fluids sufficient for treatment of 300 surgical patients (intravenously and orally), half of them with abdomen/ chest injuries. The module is designed to meet the standard WHO and ICRC drug lists. The module can be adjusted according to special needs and conditions.



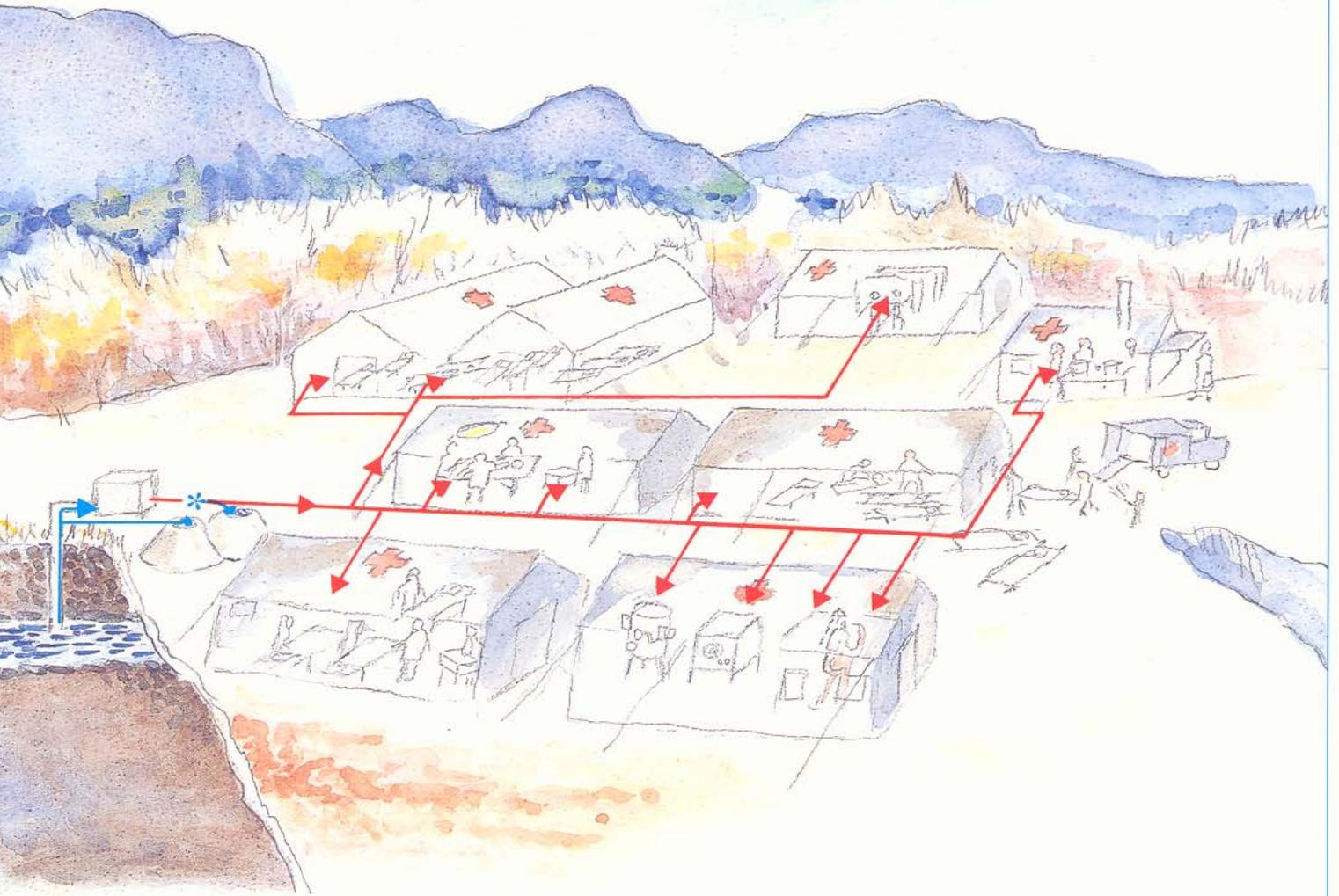
**E**ach Medical Officer module contains equipment for establishing a simple outpatient department for diagnosing, and where triage and emergency treatment can be provided.

Table of contents for Medical Officer module

Case No	Contents
1	Medical treatment, surgical instruments
2	Bandages, infusion, injection equipment
3	Boiling equipment, splintys, scales

Table of content for Hospital/Health Center Shelter module

Case No	Contents
8	Complete hospital tents 90m' with inner skin in stock
	Flat-packs, prefab houses and container systems can be ordered upon request



**T**he hygiene module contains equipment for gathering, heating, storing, testing and distributing water.

The basic tool in this module is the sanator which pumps, heats and distributes water. It can deliver 80 liters of water per minute at a temperature of 45°C. When steam is required, the sanator provides steam at a temperature of 150 °C from 30 liters of water per minute.

The module will also include equipment for showers and high pressure steaming. In addition, there is a backpack disinfecting sprayer for insect extermination, fumigation and

individual delousing purposes. The module does not contain any disinfectants or insecticides, but this can be ordered in addition. There are also 6 collapsable water tanks, capacity 36 m<sup>3</sup>, with water distribution pipe systems.

**Table of contents for Hygiene module**

Case No	Contents
1	Generator, hot water, Sanator
2-7	Water tank
8	Shower, water purifying equipment
9-10	Water hoses
11	Manifold, stop cocks
12	Water pump, jerry cans
13	Water testing equipment
14	Tools
15	Insecticide sprayer, jerry cans
16	Suction houses for water pump
	Optional: Shower room
	Toilet room

**S**pecially designed mobile hospital generators, electrical distributions system, cable and lighting equipment.

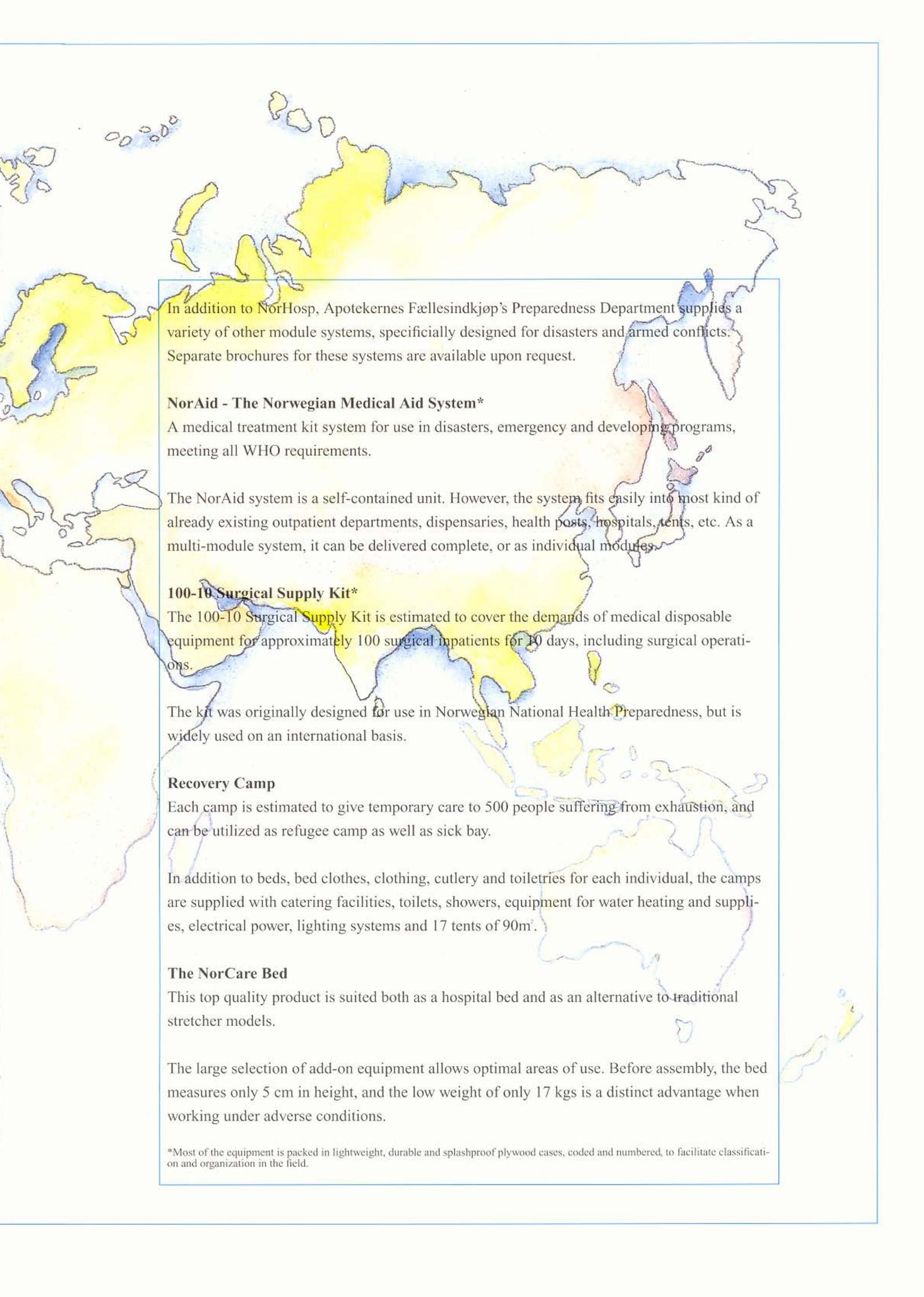
**Table of contents for Technical module**

Case No	Contents
	Generator 28 KW 230 Volts, with installed distribution central
	Trailer chassis
1-4	Lights and cables

## as Apotekernes Fællesindkjøb

Apotekernes Fællesindkjøb is the largest wholesaler of medical disposables and medical equipment in Norway. As such, they are a major supplier to Norwegian hospitals and large industries. They also supply the UN system, national and international NGOs, as well as the Norwegian army. The company is 100% controlled by the Norwegian government through its parent company, Norsk Medisinaldepot AS.

	Number of packages	Weight kgs	Volume cbm	load volume cbm
Surgical module	29	1650	8.50	10.00
Surgical Supply Kit	33	435	3.40	4.00
Nursing module	100	2700	14.00	16.00
Medical Officer module	3	137	0.75	16.00
Medicament module	Varies depending on special needs			
X-ray module	4	387	2.40	3.20
Hygiene module	16	858	6.13	6.63
Technical module	5	1898	6.26	6.90
Lighting equipment for hospital tent	1	68	0.30	0.30
Hospital tent 90m <sup>2</sup>	4(Pallets)	951	5.1	6.00



In addition to NorHosp, Apotekernes Fællesindkjøb's Preparedness Department supplies a variety of other module systems, specifically designed for disasters and armed conflicts. Separate brochures for these systems are available upon request.

#### **NorAid - The Norwegian Medical Aid System\***

A medical treatment kit system for use in disasters, emergency and developing programs, meeting all WHO requirements.

The NorAid system is a self-contained unit. However, the system fits easily into most kind of already existing outpatient departments, dispensaries, health posts, hospitals, tents, etc. As a multi-module system, it can be delivered complete, or as individual modules.

#### **100-10 Surgical Supply Kit\***

The 100-10 Surgical Supply Kit is estimated to cover the demands of medical disposable equipment for approximately 100 surgical inpatients for 10 days, including surgical operations.

The kit was originally designed for use in Norwegian National Health Preparedness, but is widely used on an international basis.

#### **Recovery Camp**

Each camp is estimated to give temporary care to 500 people suffering from exhaustion, and can be utilized as refugee camp as well as sick bay.

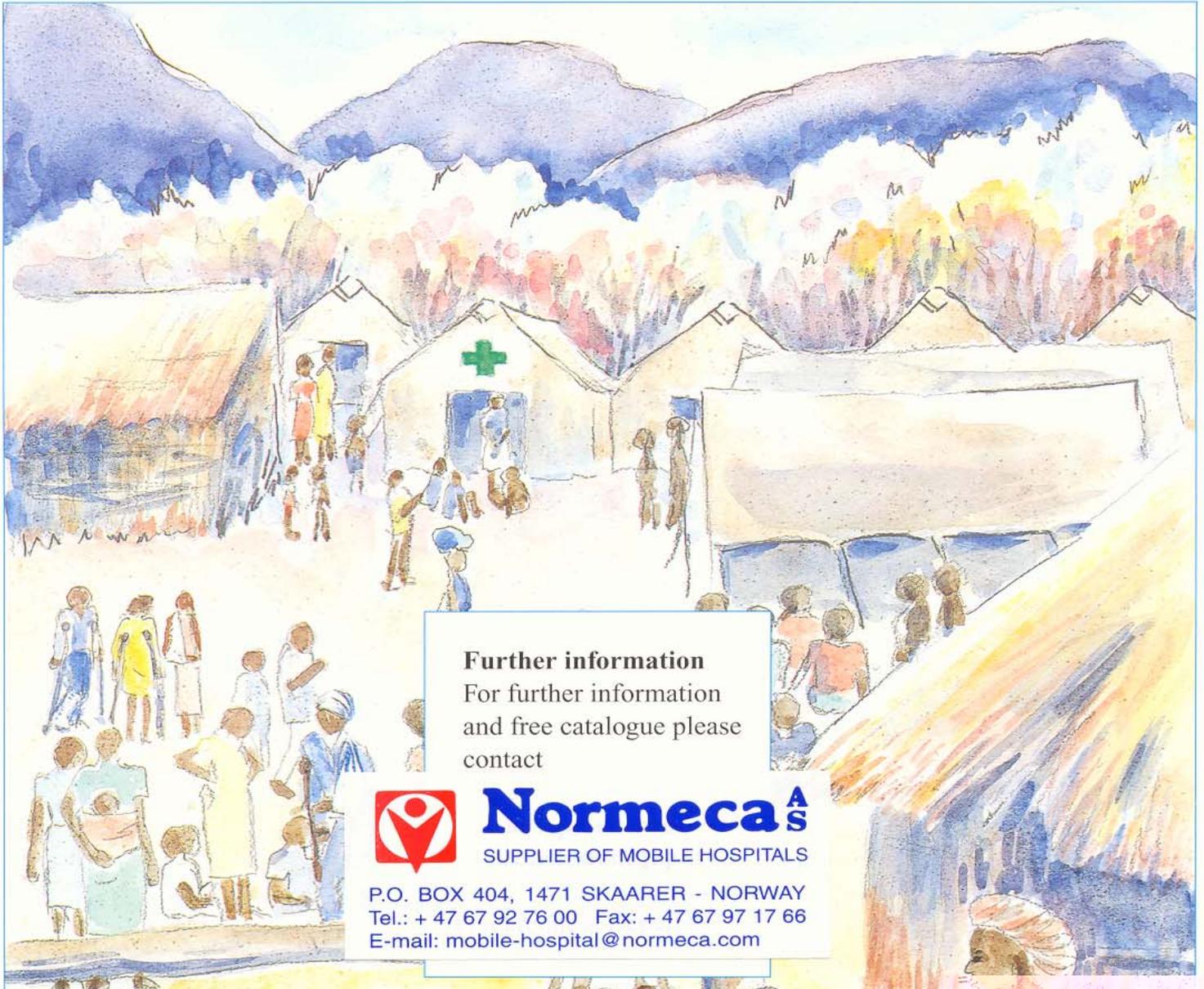
In addition to beds, bed clothes, clothing, cutlery and toiletries for each individual, the camps are supplied with catering facilities, toilets, showers, equipment for water heating and supplies, electrical power, lighting systems and 17 tents of 90m<sup>2</sup>.

#### **The NorCare Bed**

This top quality product is suited both as a hospital bed and as an alternative to traditional stretcher models.

The large selection of add-on equipment allows optimal areas of use. Before assembly, the bed measures only 5 cm in height, and the low weight of only 17 kgs is a distinct advantage when working under adverse conditions.

\*Most of the equipment is packed in lightweight, durable and splashproof plywood cases, coded and numbered, to facilitate classification and organization in the field.



**Further information**  
For further information  
and free catalogue please  
contact



**Normeca**<sup>A</sup>

SUPPLIER OF MOBILE HOSPITALS

P.O. BOX 404, 1471 SKAARER - NORWAY  
Tel.: + 47 67 92 76 00 Fax: + 47 67 97 17 66  
E-mail: mobile-hospital@normeca.com



a!



**Normeca**<sup>A</sup>

SUPPLIER OF MOBILE HOSPITALS

P.O. BOX 404, 1471 SKAARER - NORWAY  
Tel.: + 47 67 92 76 00 Fax: + 47 67 97 17 66  
E-mail: mobile-hospital@normeca.com

hjøp

ray  
16 81 69