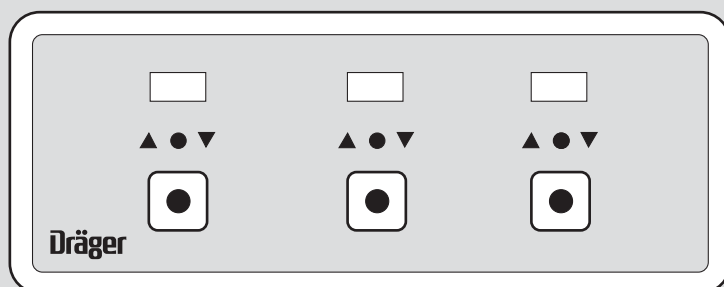
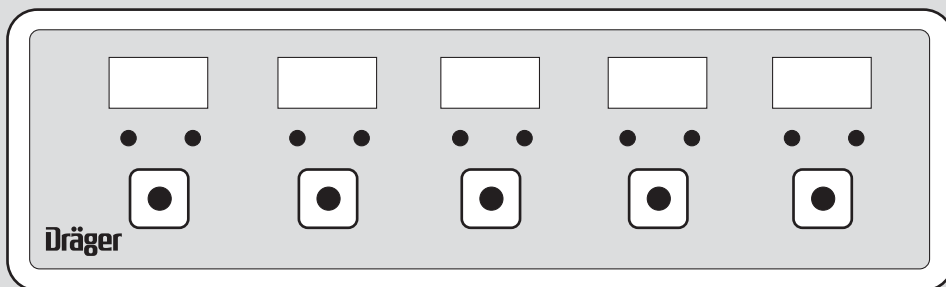


Operating and Emergency Alarm Panels

Paneli radnih alarma i paneli hitnih alarma



**For Medical Gas Pipeline Systems
Instructions for Use**

**Za cjevovodne sustave
medicinskog plina
Upute za rad**

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For Your Safety and that of Your Patients

Strictly follow the Instructions for Use

Any use of the apparatus requires full understanding and strict observation of these instructions. The apparatus is only to be used for purposes specified here.

Maintenance

The apparatus must be inspected and serviced regularly by trained service personnel at six monthly intervals (and a record kept). Repair and general overhaul of the apparatus may only be carried out by trained service personnel.

We recommend that a service contract be obtained with DrägerService and that all repairs also be carried out by them. Only authentic Dräger spare parts may be used for maintenance.

Observe chapter "Maintenance Intervals".



DANGER

Not for use in areas of explosion hazard. This apparatus is neither approved nor certified for use in areas where combustible or explosive gas mixtures are likely to occur.

Liability for proper function or damage

Liability for the proper function of the apparatus is irrevocably transferred to the owner or operator to the extent that the apparatus is serviced or repaired by personnel not employed or authorized by DrägerService or if the apparatus is used in a manner not conforming to its intended use.

Dräger cannot be held responsible for damage caused by non-compliance with the recommendations given above.

The warranty and liability provisions of the terms of sale and delivery of Dräger are likewise not modified by the recommendations given above.

Dräger Medical GmbH

Za Vašu sigurnost i sigurnost Vaših pacijenata

Strogo se pridržavajte ovih Uputa za rad

Svaka upotreba ovog aparata zahtijeva potpuno razumijevanje i strogo pridržavanje ovih uputa. Ovaj se aparat može koristiti jedino u ovdje specificirane svrhe.

Održavanje

Stručne osobe moraju izvršiti inspekciju i servisiranje ovog aparata u redovnim intervalima svakih šest mjeseci (i držati evidenciju o tome). Popravak i opći remont aparata smije izvršiti samo obučeno osoblje servisa.

Preporučujemo sklapanje ugovora o servisu s DrägerService-om i da oni izvrše sve popravke. Samo se izvorni Dräger-ovi zamjenski dijelovi smiju koristiti za održavanje.

Vidi poglavlje "Intervali održavanja".



OPASNOST

Nije namijenjeno upotrebi u eksplozijom ugroženim područjima.

Ovaj aparat nema odobrenje niti certifikat za rad u prostorima gdje je moguća pojava smjesa zapaljivih ili eksplozivnih plinova.

Odgovornost za ispravan rad ili štetu

Odgovornost za ispravan rad ovog aparata neopozivo se prenosi na vlasnika ili operatera u slučaju da aparat servisira ili popravlja osoblje koje nije zaposleno u ili ovlašteno od strane DrägerService-a ili ako se aparat upotrebljava na način koji ne odgovara njegovoj svrsi upotrebe.

Dräger ne može snositi odgovornost za štetu uzrokovanu nepoštivanjem gore navedenih preporuka.

Isto tako, klauzule jamstva i odgovornosti koje daje Dräger nisu modificirane gore navedenim preporukama.

Dräger Medical GmbH

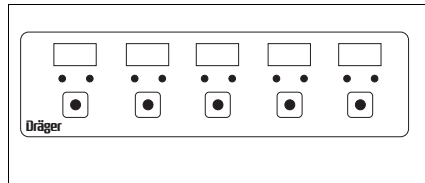
Intended Use

Operating- and emergency alarm panels

Display systems for operating conditions and activation of alarms, for use with medical gas pipeline systems.

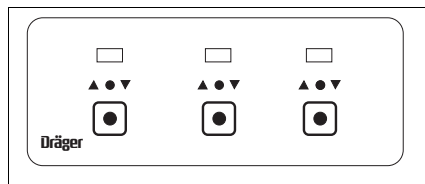
Operating alarm panels:

Visual and audible alarms for the technical staff of the hospital, signalling certain operating conditions: e. g. empty cylinder manifold.



Emergency alarm panels:

Visual and audible alarms of the medical staff in certain areas of the hospital e.g. surgical department or intensive-care ward, signalling failure of gas supply.



Svrha upotrebe

Paneli radnih alarma i paneli hitnih alarma

Sustav prikaza za radna stanja i aktiviranje alarma za upotrebu sa cjevovodnim sustavima za medicinski plin.

Paneli radnih alarma:

Vizualni i zvučni alarmi za tehničko osoblje bolnice koji signaliziraju određena radna stanja: na primjer, prazna baterija boca.

Paneli hitnih alarma:

Vizualni i zvučni alarmi za medicinsko osoblje u određenim prostorijama bolnice, npr., u kirurškom odjelu ili odjelu intenzivnog liječenja, koji signaliziraju kvar opskrbe plinom.

Testing and Commissioning

The operating- and emergency signal panels are components of the medical gas supply system.



NOTE

The unit may not be operated until it has been tested and commissioned by trained and qualified personnel.

National regulations must be observed.

In the European Economic Area, EN 737-3.

When installation or maintenance measures have been carried out, a testing and commissioning program must be undertaken by trained staff.

These tests determine:

- whether the safety requirements for the protection of patients and staff have been fulfilled

and

- whether the performance characteristics of the medical gas pipeline system are met.

Written records of the tests must be kept.

Following this testing procedure, the pipeline system which is ready for operation and the documentation, are handed over to the user, and users are then given instruction.

The handing-over procedure must be recorded formally.

Testiranje i puštanje u rad

Paneli radnih signala i paneli hitnih signala su komponente sustava opskrbe medicinskim plinom.



NAPOMENA

Ova se jedinica ne smije koristiti prije testiranja i puštanja u rad od strane obučenog i kvalificiranog osoblja.

Potrebno je pridržavati se nacionalnih propisa.

U Europskoj ekonomskoj zajednici, EN 737-3.

Nakon izvršene instalacije ili postupaka održavanja, mora se provesti program testiranja i puštanja u pogon od strane obučenog osoblja.

Tim se testovima utvrđuje:

- jesu li zadovoljeni sigurnosni zahtjevi potrebni za zaštitu pacijenata i osoblja

te

- jesu li zadovoljene značajke rada cjevovodnog sustava medicinskog plina.

O provedenim testovima treba voditi i pohraniti zapisnik.

Nakon ovog postupka testiranja, cjevovodni sustav spreman za rad i popratna dokumentacija predaju se korisniku a osoblje koje će rukovati sustavom upućuje se u način rukovanja.

O postupku primopredaje potrebno je voditi i pohraniti službeni zapisnik.

Operation

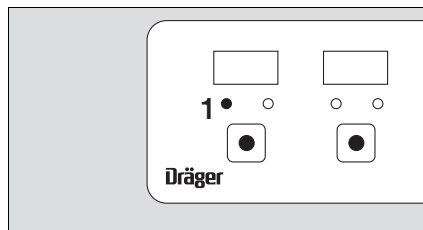
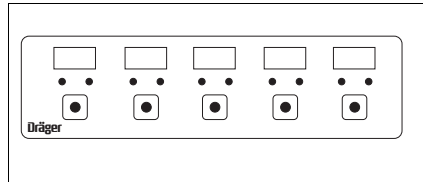
Operating alarm panels

These are controlled by contactors in the system to be monitored.

During operation,

when the system component monitored is ready for operation or in operation:

- 1 the green LED is lit continuously.



In the case of malfunction or failure of gas supply:

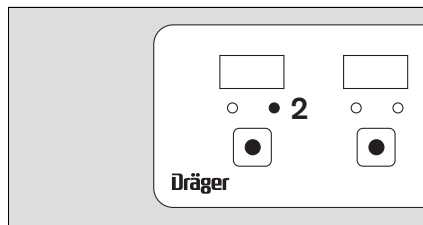
the audio alarm and LED colour indicate the type of fault. Depending on the system installed, a red LED flashes (alarm) or a yellow LED flashes (warning).

Alarm:

- 2 Red LED for the gas concerned flashes,
 - audio alarm sounds,
 - a potential-free relay is deactivated.
- Rectify cause of fault immediately.

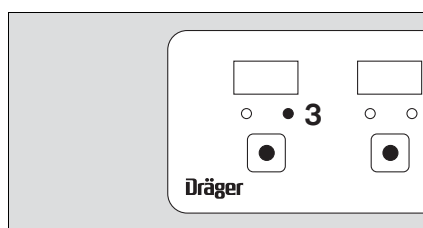
The cause of alarm may be e.g.:

- operating pressure of gas in question incorrect,
- failure of liquid oxygen tank, compressor, refrigeration type air drier or vacuum pump,
- disconnection between contactor and operating alarm panel.



Warning (level 1):

- 3 Yellow LED for the gas concerned flashes,
 - a potential-free relay is deactivated.



Upotreba

Paneli radnih alarma

Njima se upravlja putem kontaktora u sustavu koji se nadzire.

Tijekom upotrebe,

kad je nadzirana komponenta sustava spremna za rad ili u radu:

- 1 zeleni LED stalno svijetli.

U slučaju neispravnog rada ili kvara opskrbe plinom:

zvučni alarm i boja LED-a pokazuju vrstu kvara. Ovisno o instaliranom sustavu, treperi crveni LED (alarm) ili treperi žuti LED (upozorenje).

Alarm:

- 2 Treperi crveni LED za odgovarajući plin,
 - oglašava se zvučni alarm,
 - beznaponski relej se deaktivira.
- Odmah otklonite uzrok kvara.

Uzrok alarma može biti na primjer:

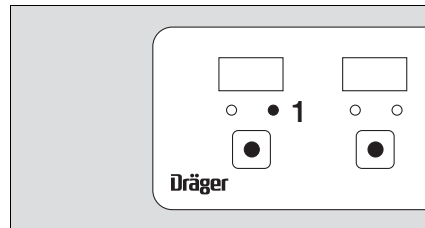
- pogrešan radni tlak dotičnog plina,
- kvar spremnika s tekućim kisikom, kompresora, sušila za zrak rashladnog tipa ili vakuumske pumpe,
- odspojenost kontaktora i panela radnih alarma.

Upozorenje (razina 1):

- 3 Treperi žuti LED za odgovarajući plin,
 - beznaponski relej se deaktivira.

Warning (level 2):


- 1** Yellow LED for the gas concerned flashes,
 - audio alarm sounds,
 - a potential-free relay is deactivated.
- Rectify cause of alarm. The cause of an alarm may be:
 - cylinder manifold on primary side of gas concerned is empty,
 - insufficient vessel pressure,
 - incorrect dew point – fault.

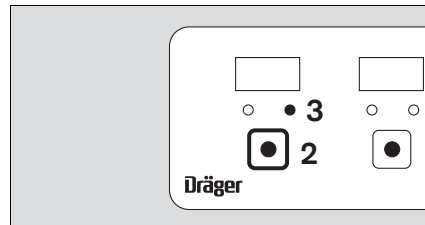


Upozorenje (razina 2):


- 1** Treperi žuti LED za odgovarajući plin,
 - oglašava se zvučni alarm,
 - beznaponski relej se deaktivira.
- Otklonite uzrok alarma. Uzrok alarma može biti:
 - prazna baterija boca na primarnoj strani dotičnog plina,
 - nedovoljan tlak u spremniku,
 - neispravno rosište – kvar.

The audio alarm can be suppressed:

- 2** Press pushbutton »  « for the gas concerned. The audio alarm is muted,
- 3** Red/yellow LED changes from flashing to continuously lit.



Zvučni alarm se može utišati:


- 2** Pritisnite tipku »  « za dotični plin. Zvučni alarm je utišan,
- 3** Crveno/žuti LED prestaje treptati i stalno svijetli.


When the system has been appropriately installed, alarms are passed on as a malfunction message to a building management system (BMS).

Kada je sustav ispravno instaliran, alarmi se prenose kao poruke neispravnog rada do sustava upravljanja zgradom (BMS - Building Management System)..

Unheeded alarms of short duration are displayed and should be acknowledged:

Nezapaženi, kratkotrajni alarmi se prikazuju i mora ih se potvrditi:

- 2** Press pushbutton »  « for the gas concerned.

- 2** Pritisnite tipku »  « za dotični plin.

If repeated short-duration alarms occur:

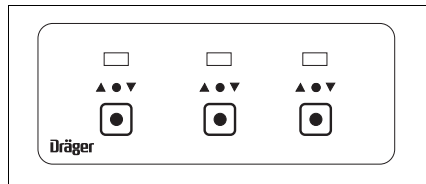
- inform technical staff.

Ukoliko se pojave ponavljani kratkotrajni alarmi:

- obavijestite tehničko osoblje.

Emergency alarm panels

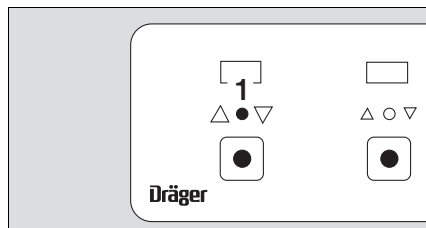
These are controlled by contactors installed downstream of the last shutoff valve in the valve boxes of individual areas.



During operation,

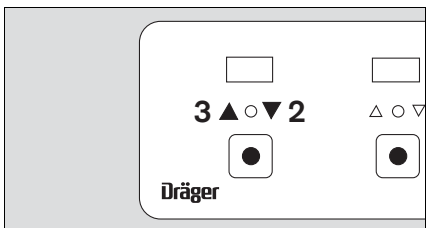
when the supply of individual gases is within prescribed values:

- 1 green LED of gas concerned is continuously lit.



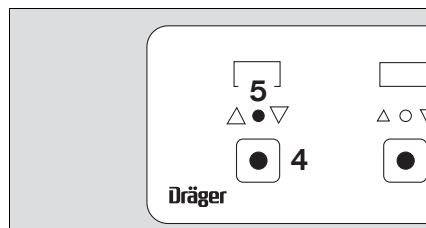
In the case of malfunction or failure of gas supply:

- Audio alarm sounds,
- 2 red LED » ▼ « flashes if the pressure drops 20 % below the prescribed value or
- 3 red LED » ▲ « if the pressure rises 20 % above the prescribed value,
- a potential-free relay is deactivated.



The audio alarm can be suppressed for about 15 minutes:

- 4 Press » ● « pushbutton for the gas concerned.
- Audio alarm off,
- 5 red LED changes from flashing to lit continuously. The LED remains lit until the fault is rectified.
- Connect up an alternative gas supply as an emergency supply.



The cause of an alarm may be e.g.:

- pressure of gas concerned is above or below alarm limits,
- disconnection between contactor and emergency alarm panel.

Paneli hitnih alarma

Njima se upravlja putem kontaktora instaliranih nizvodno od zadnjeg zapornog ventila u kutijama ventila pojedinačnih područja.

Tijekom upotrebe,

kad je opskrba pojedinih plinova unutar propisanih vrijednosti:

- 1 zeleni LED dotičnog plina stalno svijetli.

U slučaju neispravnog rada ili kvara opskrbe plinom:

- Oglašava se zvučni alarm,
- 2 crveni LED » ▼ « treperi ukoliko tlak padne 20 % ispod propisane vrijednosti ili
- 3 crveni LED » ▲ « treperi ukoliko se tlak povisi 20 % iznad propisane vrijednosti,
- beznaponski relej se deaktivira.

Zvuk alarma se može utišati na otprilike 15 minuta:

- 4 Pritisnite » ● « tipku za dotični plin.
- Zvučni alarm je isključen,
- 5 crveni LED prestaje treperiti i stalno svijetli. LED ostaje svijetliti sve dok se kvar ne ukloni.
- Priključite alternativnu opskrbu plinom kao opskrbu u slučaju nužde.

Uzrok alarma može biti na primjer:

- tlak dotičnog plina koji je iznad ili ispod granica alarma,
- odspojenost kontaktora i panela hitnih alarma.

If fault is not rectified within about 15 minutes:

- audio alarm sounds again,
- red LED flashes again.

When the system has been appropriately installed, alarms are passed on as a malfunction message to a building management system (BMS).

Functional test

during operation

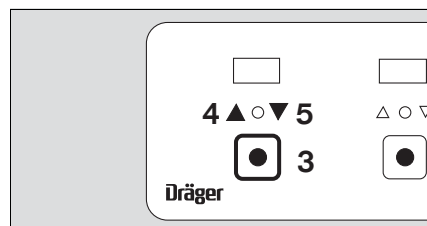
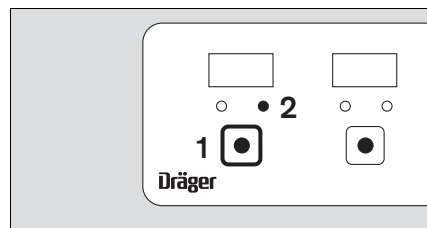
Operating alarm panel:

- 1 Hold down » ● « pushbutton,
- 2 LED remains lit as long as the pushbutton is held down.

Emergency alarm panel:

- 3 Hold down » ● « pushbutton,
- 4 » ▲ « LED and
- 5 » ▼ « LED remain lit as long as the pushbutton is held down.

If the operating or emergency alarm panel is connected with a building management system (BMS), the functional test is passed on like an alarm.



Ukoliko se greška ne ispravi unutar otprilike 15 minuta:

- ponovno se oglašava zvučni alarm,
- crveni LED ponovno treperi.

Kada je sustav ispravno instaliran, alarmi se prenose kao poruke neispravnog rada do sustava upravljanja zgradom (BMS).

Test ispravnosti rada

tijekom upotrebe

Panel radnog alarma:


- 1 Držite pritisnutom tipku » ● «,
- 2 LED ostaje svjetliti sve dok se tipka drži pritisnutom.

Panel hitnih alarma:


- 3 Držite pritisnutom tipku » ● «,
- 4 » ▲ « LED i
- 5 » ▼ « LED ostaju svjetliti sve dok se tipka drži pritisnutom.

Ukoliko je panel radnog alarma ili hitnih alarma spojen na sustav upravljanja zgradom (BMS), test ispravnosti rada se prenosi dalje kao alarm.

Cleaning and Disinfecting

 **DANGER**
Do not use cleaning agents which release chlorine or oxygen.
Do not use solvents such as benzene or ether.

- Wipe surface with a disposable cloth.

 **NOTE**
Wipe disinfection only.
Follow disinfectant manufacturer's instructions.

Use surface disinfectants. For material compatibility use disinfectants based on

- aldehydes,
- alcohols,
- quaternary ammonium compounds.

Damage to materials may occur if disinfectants are used which are based on

- phenols,
- halogen-releasing compounds,
- strong organic acids,
- oxygen-releasing compounds.

For users in Germany we recommend that only disinfectants on the current DGHM list are used (DGHM: Deutsche Gesellschaft für Hygiene und Mikrobiologie = German Society for Hygiene and Microbiology).


The DGHM list indicates the composition of each disinfectant.

For countries where the DGHM list is not available, we recommend the types of disinfectant given above.


The following surface disinfectants can be recommended due to surface compatibility:

Disinfectant	Manufacturer
Buraton 10 F	Schülke & Mayr, Norderstedt
Kohrsolin	Bode Chemie GmbH&Co., Hamburg

Čišćenje i dezinfekcija

 **OPASNOST**
Nemojte koristiti sredstva za čišćenje koja otpuštaju klor ili kisik.
Nemojte koristiti otapala kao što su benzin ili eter.

- Površine obrišite krpom za jednokratnu upotrebu.

 **NAPOMENA**
Dezinficirajte samo brisanjem.
Pridržavajte se uputa proizvođača dezinficijensa.

Koristite površinske dezinficijense. Zbog kompatibilnosti materijala koristite dezinficijense temeljene na

- aldehydima,
- alkoholima,
- kvaternarnim spojevima amonijaka.

Može doći do oštećenja materijala ukoliko su korišteni dezinficijensi koji su temeljeni na

- fenolima,
- spojevima koji otpuštaju halogene,
- jakim organskim kiselinama,
- spojevima koji otpuštaju kisik.

Za korisnike u Federalnoj Republici Njemačkoj, preporučujemo koristiti dezinficijense s trenutnog DGHM popisa (DGHM: Deutsche Gesellschaft für Hygiene und Mikrobiologie = Njemačka udruga za higijenu i mikrobiologiju).

DGHM popis navodi sastav svakog dezinficijensa.

Za države u kojima DGHM popis nije dostupan, preporučujemo gore navedene vrste dezinficijenasa.

Sljedeći se površinski dezinficijensi mogu preporučiti zbog površinske kompatibilnosti:

Dezinficijens	Proizvođač
Buraton 10 F	Schülke & Mayr, Norderstedt
Kohrsolin	Bode Chemie GmbH&Co., Hamburg

Maintenance Intervals

– every six months by experts.

Technical Data

Ambient conditions

Temperature	0 to 40 °C
Relative humidity	20 to 95 %
Atmospheric pressure	800 to 1300 hPa

Operating voltage

alternative :
24 V DC +25 %; –20 %
24 V AC +15 %; –20 %

Output

maximum 5 W per
device

Relay contacts

Contact load

potential-free two-way
contact
48 V AC / DC
1.0 A / 30 W / 60 VA

Electromagnetic Compatibility EMC

accordingly to
EN 60601-1-2

UMDNS-Code

Universal Medical Device
Nomenclature System

18-046

Classification

according to EC Directive
93/42/EC Appendix IX

Class I

Sound level

Audio alarm

60 dB (A)
by the 1 metre

Order List

Designation/description	Order no.
Operating alarm panel 5 EN	G 50 765
Emergency alarm panel 1 EN	G 50 761
Emergency alarm panel 2 EN	G 50 762
Emergency alarm panel 3 EN	G 50 763

Intervali održavanja

– svakih šest mjeseci od strane stručnjaka.

Tehnički podaci

Uvjeti okoline

Temperatura	0 do 40 °C
Relativna vlažnost	20 do 95 %
Atmosferski tlak	800 do 1300 hPa

Radni napon

alternativa:
24 V DC +25 %; –20 %
24 V AC +15 %; –20 %

Izlaz

maksimalno 5 W po
uređaju

Kontakti releja

Opterećenje kontakta

beznaponski dvosmjerni
kontakt
48 V AC / DC
1,0 A / 30 W / 60 VA

Elektromagnetska kompatibilnost EMC

prema
EN 60601-1-2

UMDNS kod

Universal Medical Device
Nomenclature System –
Nomenklatura za medicinske
uređaje

18-046

Klasifikacija

prema EC Direktivi 93/42/EC
Dodatak IX

Klasa I

Razina zvuka

Zvučni alarm


60 dB (A)
na 1 metar

Popis za naručivanje

Oznaka/opis	Broj za naruđbu
Panel radnog alarma 5 EN	G 50 765
Panel radnog alarma 1 EN	G 50 761
Panel hitnih alarma 2 EN	G 50 762
Panel hitnih alarma 3 EN	G 50 763



Directive 93/42/EEC
concerning Medical Devices


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FAX +49 451 8 82- 20 80

 <http://www.draeger.com>



Direktiva 93/42/EEC
za medicinske uređaje


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FAKS +49 451 8 82- 20 80

 <http://www.draeger.com>

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(Edition: 1 – 2011-12)

Subject to alteration



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(Izdanje: 1 – 2011-12)

Podložno promjeni

As of 2015-08:
Dräger Medical GmbH
changes to
Drägerwerk AG & Co. KGaA

Od 08/2015.:
Dräger Medical GmbH
mijenja se u
Drägerwerk AG & Co. KGaA