Ceiling-mounting supply and suspension systems

Independant® for Intensive Care

COMPACT VERSATILITY AND OPTIMAL SPACE UTILIZATION IN INTENSIVE CARE
In intensive care, optimal workplace design ensuring smooth working processes is of eminent importance. As user requirements vary, customized solutions are indispensable. The challenge is to make all the information required – regarding supply, monitoring or documentation – available in an integrated way occupying as little space as possible. In other words, fast and unrestricted access to all devices and a good view of the monitoring screens are just as important as easy access to the patient.

All this is guaranteed with the KLS Martin Independant® system in an ideal way, irrespective of whether you opt for an arm or bridge-type system.

- Clear assignment of devices
- Flexible use of any respirators and infusion devices currently available on the market
- Safe patient monitoring thanks to flexible monitor positioning
- Numerous media outlets in compact arrangement, with cables routed in the shortest way possible
- Modular configuration of service-head media outlets allows for flexible workplace arrangement
- All systems can integrate all sorts of communication equipment
- Platforms, standard rails, infusion rails, monitoring arm systems, etc. can be installed on the front and/or rear of the service head
- Optimal space utilization due to height adjustability of all installation components
The Independant® service head brings structure and order to the site of application.

The KLS Martin product consists of five modular basic bodies and can be individually configured for specific applications. Whether you prefer gas outlets, power outlets or communication interfaces, we provide you with service heads tailored to your specific needs.
**Independant® ICU**

Besides, the service head can be optionally equipped with a whole range of additional components. As all of these attachments are adjustable in height, you can easily position them to suit your specific requirements.

KLS Martin arm systems can be individually designed to meet the customer’s needs, making the most of the space available. Depending on the field of use, you can combine arms of different lengths with each other to adapt the arm system to the spatial position of your choice. This gives your intensive care personnel unparalleled room for movement with lots of free space around the patient’s bed.
The Independant® Media Supply Unit is a ceiling-mounting service bridge with a supply system designed for use in intensive care and recovery rooms. Depending on available space, you can opt either for a one-side or double-side solution. In each case, the body of the supply bridge can be flexibly equipped, in modular fashion, with gas outlets, power sockets or communication/data connectors at your choice. But what's more, you are free to add additional features from a comprehensive range of options, such as different sorts of gliders allowing you to move the equipment out of the way if required, or special functions. This is rounded off by convenient operation of all system components. In short, the Independant® MSU is an ideal solution for ergonomic workplace design in intensive care units.
Glider systems
The Independant® MSU allows you to install various types of glider systems for flexible positioning of your equipment. These gliders can be moved across the entire length of the bridge and can be locked in place with an optional brake. Gliders are simply ideal for creating free space around the bed and ensuring easy access to the patient.

Easy and fast positioning
In intensive care environments, flexible positioning of the gliders for more working space is an indispensable requirement. No problem with the Independant® MSU! You simply push the gliders with their equipment aside and out of the way. Besides, the gliders can be rotated through 340° for increased convenience.

Mobile equipment glider
The mobile equipment glider is a platform that can be fitted with up to three integrated power sockets. This type of glider is specially useful for devices that need to be relocated frequently.

Standard glider
This glider is ideal for easy and convenient repositioning of devices needed around the patient’s bed. It can be equipped with up to three height-adjustable platforms and can be easily removed in case of need.
**Infusion glider**

The infusion side of the media supply unit allows you to mount infusion rails with bottle holders.

**Dimensions and carrying loads**

The MSU is available in four standard lengths ranging from 2,200 to 3,500 mm. In addition to the standard models equipped with an infusion glider and a standard glider, lots of special solutions can be implemented.

**Configuration and supply**

All installations are carried out according to customer requests and national standards. Gas outlets, power sockets, nurse call, PC connection options and other data interfaces can be flexibly integrated.

Standard rails can also be integrated in accordance with the customer’s preferences. They can be used for mounting monitor supports, examination lights or other accessories.

**Direct and indirect illumination**

The supply unit features direct and indirect lighting. The upward-directed night light helps to create a pleasing atmosphere. Two halogen spotlights serve as reading lights.
### Load-carrying capacity of Independant® ceiling pendants
(corresponds to own weight of service head plus added/useful load)

<table>
<thead>
<tr>
<th>Model</th>
<th>Independant® 300</th>
<th>Independant® 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>800 mm</td>
<td>580 kg</td>
<td>1000 kg</td>
</tr>
<tr>
<td>1000 mm</td>
<td>320 kg</td>
<td>570 kg</td>
</tr>
<tr>
<td>1200 mm</td>
<td>260 kg</td>
<td>450 kg</td>
</tr>
<tr>
<td>Extension arm, 600 mm / 600 mm</td>
<td>260 kg</td>
<td>440 kg</td>
</tr>
<tr>
<td>600/800 mm</td>
<td>220 kg</td>
<td>360 kg</td>
</tr>
<tr>
<td>800/600 mm</td>
<td>220 kg</td>
<td>360 kg</td>
</tr>
<tr>
<td>800/800 mm</td>
<td>180 kg</td>
<td>300 kg</td>
</tr>
<tr>
<td>800/1000 mm</td>
<td>150 kg</td>
<td>250 kg</td>
</tr>
<tr>
<td>1000/600 mm</td>
<td>180 kg</td>
<td>270 kg</td>
</tr>
<tr>
<td>1000/800 mm</td>
<td>150 kg</td>
<td>250 kg</td>
</tr>
<tr>
<td>1000/1000 mm</td>
<td>130 kg</td>
<td>220 kg</td>
</tr>
<tr>
<td>1200/1000 mm</td>
<td>110 kg</td>
<td>170 kg</td>
</tr>
<tr>
<td>1200/1200 mm</td>
<td>90 kg</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Own weights

<table>
<thead>
<tr>
<th>Component</th>
<th>Independant® 300</th>
<th>Independant® 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intermediate ceiling set</td>
<td>58 kg</td>
<td>85 kg</td>
</tr>
<tr>
<td>Interface plate (Single / Duo)</td>
<td>15.5 kg / 38.2 kg</td>
<td>35.0 kg / 40.0 kg / 46.0 kg / 51.0 kg</td>
</tr>
<tr>
<td>Extension arms 600 / 800 / 1000 / 1200 mm</td>
<td>14.0 kg / 17.0 kg / 20.5 kg / 24.0 kg</td>
<td>21.0 kg / 23.0 kg / 21.0 kg / 23.0 kg</td>
</tr>
<tr>
<td>Flange (Single / Duo)</td>
<td>21.0 kg / 23.0 kg</td>
<td>21.0 kg / 23.0 kg</td>
</tr>
<tr>
<td>Spacer tube (weight of bearing / weight per running meter)</td>
<td>1 kg / 12 kg per meter</td>
<td>15 kg / 7 kg per meter</td>
</tr>
<tr>
<td>Swingo Clinic lift trolley, with adapter</td>
<td>112 kg</td>
<td>–</td>
</tr>
<tr>
<td>Service head</td>
<td>dep. on customized configuration</td>
<td>dep. on customized configuration</td>
</tr>
</tbody>
</table>

#### Maximum useful loads* (load-carrying capacity)

<table>
<thead>
<tr>
<th>Component</th>
<th>Independant® 300</th>
<th>Independant® 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tray (w/o max. load label)</td>
<td>max. 50 kg</td>
<td>max. 50 kg</td>
</tr>
<tr>
<td>Drawer</td>
<td>max. 15 kg</td>
<td>max. 15 kg</td>
</tr>
<tr>
<td>Pump rod, single-part</td>
<td>max. 30 kg</td>
<td>max. 30 kg</td>
</tr>
<tr>
<td>Pump rod set, two-part</td>
<td>max. 20 kg</td>
<td>max. 20 kg</td>
</tr>
<tr>
<td>Standard rail</td>
<td>max. 10 kg</td>
<td>max. 10 kg</td>
</tr>
<tr>
<td>Keyboard drawer</td>
<td>for PC keyboard only</td>
<td>for PC keyboard only</td>
</tr>
</tbody>
</table>

* depending on customer-specific configuration

#### Approved adapters* for HUBI 700 lifting device

- Swingo Clinic Adapter
- ADU
- Aliseo
- Kion
- Jolly Tronic 2
- AESTIVA
- CATO / CICERO / PRIMUS / JULIAN / FABIUS GS
- MODULUS
- EXCEL
- Swingo Clinic Adapter

* Non-listed adapters must be approved by ONDAL Industrietechnik

#### Electrical data*

<table>
<thead>
<tr>
<th>Component</th>
<th>Independant® 300</th>
<th>Independant® 500</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nominal voltage</td>
<td>120 / 230 V</td>
<td>120 / 230 V</td>
</tr>
<tr>
<td>Nominal frequency</td>
<td>60 / 50 Hz</td>
<td>60 / 50 Hz</td>
</tr>
<tr>
<td>Rated current</td>
<td>max. 20/16 A per circuit</td>
<td>max. 20/16 A per circuit</td>
</tr>
<tr>
<td>Maximum number of electric circuits</td>
<td>max. 4 circuits with 6 socket-outlets each</td>
<td>max. 4 circuits with 6 socket-outlets each</td>
</tr>
<tr>
<td>Maximum number of socket-outlets acc. to 49440</td>
<td>24</td>
<td>24</td>
</tr>
<tr>
<td>Maximum number of equipotential bonding sockets acc. to 42801</td>
<td>24</td>
<td>24</td>
</tr>
</tbody>
</table>

* depending on customer-specific configuration
Independant® 300 and Independant® 500

Gas data* (media connections acc. to DIN 13620, Part 2)

- Compressed air: 5 bar
- Compressed air supply to air motor: 8 bar
- Types of gas: oxygen, nitrous oxide, CO2, vacuum
- Anesthetic gas evacuation: with visual indicator

* depending on customer-specific configuration

Brakes

- Extension arms: Pneumatic and friction brakes
- M6 service head: Pneumatic and friction brakes

Stop adjustment

No arm dismantling required; stops infinitely adjustable through 330° (with damped stops)

Noise level acc. to EN 793:1998

Sound energy limit of 30 dB(A) (EN ISO 3744) is not exceeded.

Operation

- Manual forces < 100 N

Classification acc. to EC Directive concerning medical devices dated 14 June 1993: 93/42/EEC:

(I = without gas supply; IIb = with gas supply)
- Protection class: I
- Degree of protection: type B
- Type of protection: covered design
- Ordinary appliance (closed unit without water ingress protection)

The Independant® 300/500 suspension arm system is not intended for use in hazardous atmospheres.

The Independant® 300/500 suspension arm system is designed for continuous operation.

Applicable regulations / reference standards

- DIN EN 60601-1
- DIN VDE 0750, Part 1 / 05.02
- DIN VDE 0750, Part 211
- ISO 11197
- UL 60601-1 1st

Standard version certifications

UL Recognized Component

EC conformity

Both the suspension arm system and the service heads comply with the provisions stipulated in the EU Directives 93/42/EEC (MDD) and 89/336/EEC (EMC Directive).

The suspension arm system is certified only for connection of the following devices:

CE-marked M6 service head for Independant® 300/500 suspension arm system.

The natural or legal person connecting the above device(s) to the Independant® 300/500 arm system in order to place them on the market as a (total) system is required to draw up a declaration as specified in Article 12 of the EU Directive 93/42/EEC (MDD).

The connection of other devices requires a separate conformity assessment, as specified in Article 11 of the MDD.

Mounting the above device(s) to a suspension arm system other than those specified above requires the prior consent of Gebrüder Martin GmbH & Co. KG.

A separate conformity assessment is required in any such case.

Combination with other medical devices

The suspension arm system is intended for supporting terminal equipment (such as monitors) made by other manufacturers.

To ensure proper handling, please refer to the appropriate user manual in each case.

CE marking

DQS – Deutsche Gesellschaft zur Zertifizierung von Managementsystemen mbH, EC ID number: 0297
Independant® MSU

Profile dimensions:
- Width: 260 mm
- Height: 220 mm

Glider rotatability, horizontal: 340°

Weights:
- Ceiling mounting assembly, complete: 60 kg
- Media supply unit: 10 kg per meter

Independant® MSU length options:
- 2200 mm
- 2800 mm
- 3100 mm
- 3500 mm

One-side supply bridge:

One-side supply bridge with standard rail:

Double-side supply bridge:

Double-side supply bridge with front-side standard rail:

Double-side supply bridge with standard rail on both sides:

The Independant® MSU can be configured to any national standard.