

# Ceiling-mounting supply and suspension systems



## Independant® for Intensive Care

COMPACT VERSATILITY AND OPTIMAL  
SPACE UTILIZATION IN INTENSIVE CARE

**KLS martin**  
GROUP

## Independant® ICU

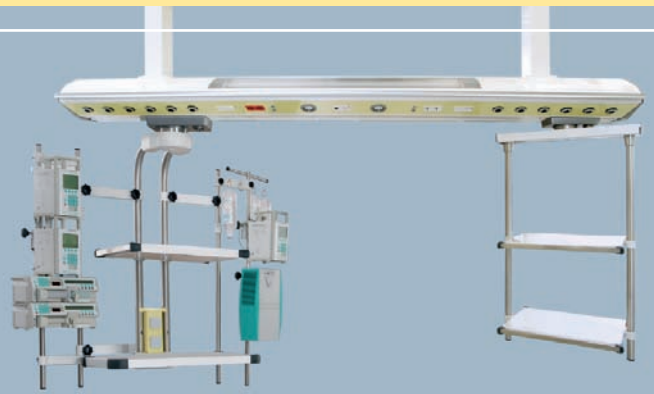
*In intensive care, optimal workplace design ensuring smooth working processes is of eminent importance.*

*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.*



ICU arm system



ICU bridge-type system

**Thanks to our profound experience acquired over many years, we can offer you a customized solution for any situation. This includes:**

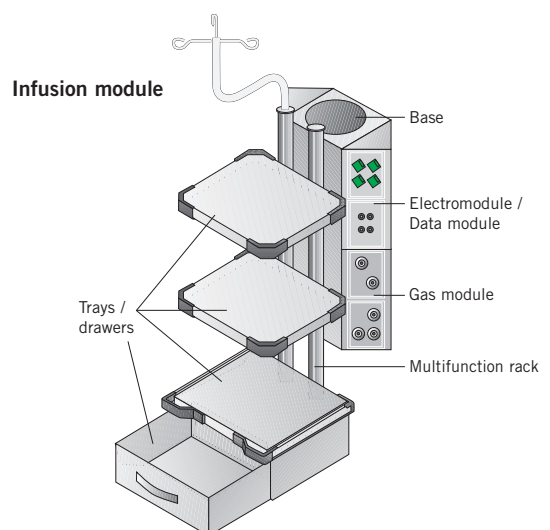
- Clear assignment of devices
- Flexible use of any respirators and infusion devices currently available on the market
- Safe patient monitoring thanks to flexible monitor positioning
- Numerous media outlets in compact arrangement, with cables routed in the shortest way possible
- Modular configuration 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



ICU arm system with bed

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.*

## Monitor versions on the respiration side



Optional monitor supports with VESA-100 adapter



Service head with respirator

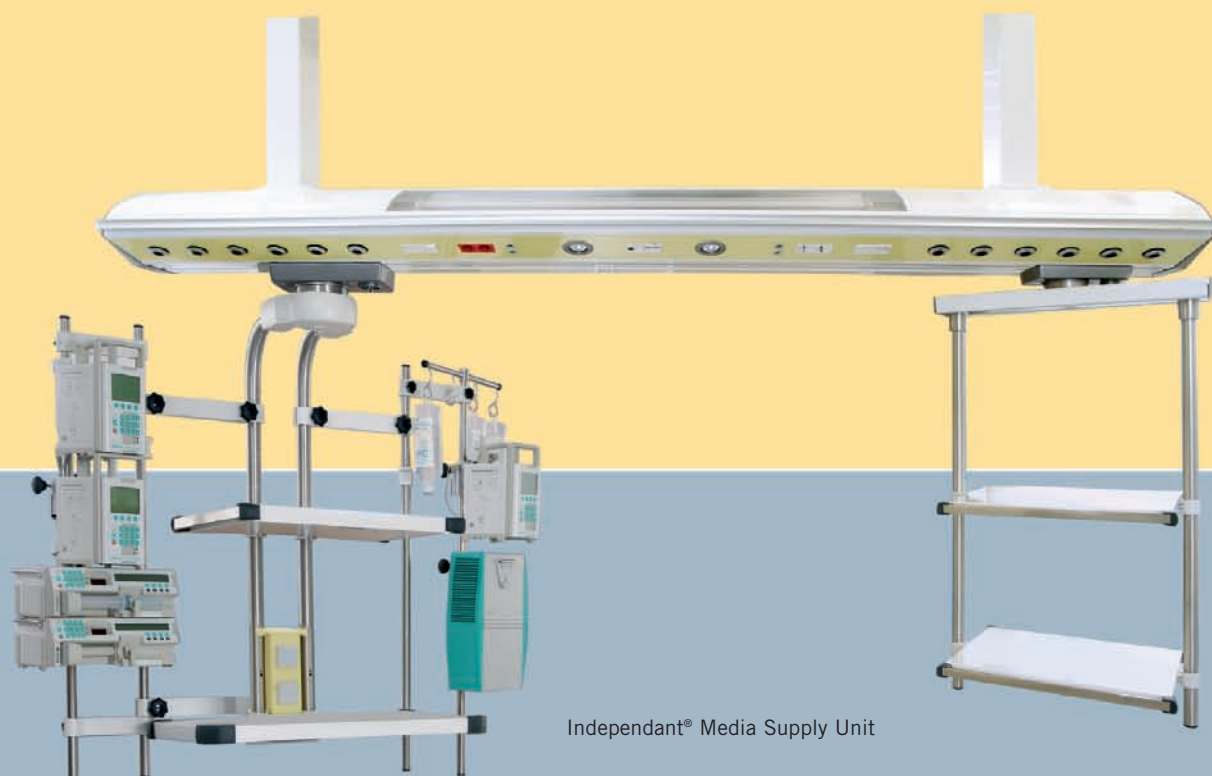


Infusion side with various attachments

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.

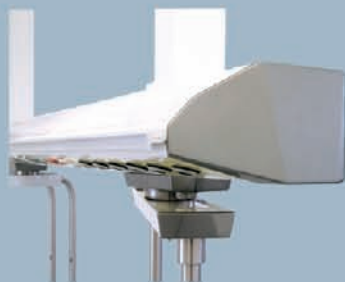
# Independant® MSU

*Flexible and optimal supply solutions for intensive care*

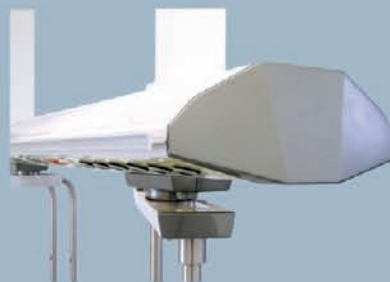


Independant® Media Supply Unit

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.



One-side supply body



Double-side supply body

## Modular and flexible

### 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 glider with power sockets installed in tray

### 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.



Infusion side with various infusion and syringe pumps

### 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.



Standard glider with two platforms



Standard glider with monitor support, platform and drawer

### Infusion glider

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



Infusion glider with infusion rail and bottle hooks

### 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.



Equipment installation options for Independent® MSU

### 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.



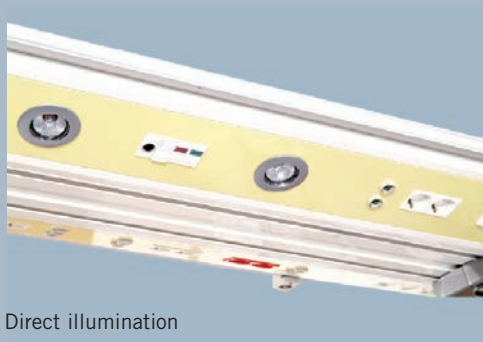
Standard rails can also be integrated in accordance with the customer's preferences. They can be used for mounting monitor supports, examination lights or other accessories.



Standard rail with mounting options

### 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.



Direct illumination via two halogen spotlights

## Independant® 300 and 500

### Load-carrying capacity of Independant® ceiling pendants

(corresponds to own weight of service head plus added/useful load)

	Independant® 300	Independant® 500
Extension arm, 600 mm	580 kg	1000 kg
800 mm	420 kg	730 kg
1000 mm	320 kg	570 kg
1200 mm	260 kg	450 kg
Extension arms 600 mm / 600 mm	260 kg	440 kg
600/800 mm	220 kg	360 kg
800/600 mm	220 kg	360 kg
800/800 mm	180 kg	300 kg
800/1000 mm	150 kg	250 kg
1000/600 mm	180 kg	270 kg
1000/800 mm	150 kg	250 kg
1000/1000 mm	130 kg	220 kg
1200/1000 mm	110 kg	170 kg
1200/1200 mm	90 kg	–

### Own weights

Intermediate ceiling set (ceiling anchor plate with 6 tubes and threaded bolts)	58 kg	85 kg
Interface plate (Single / Duo)	15.5 kg / 38.2 kg	55 kg
Extension arms 600 / 800 / 1000 / 1200 mm	14.0 / 17.0 / 20.5 / 24.0 kg	35.0 / 40.0 / 46.0 / 51.0 kg
Flange (Single / Duo)	21.0 / 23.0 kg	21.0 / 23.0 kg
Spacer tube (weight of bearing / weight per running meter)	1 kg / 12 kg per meter	15 kg / 7 kg per meter
Swingo Clinic lift trolley, with adapter	112 kg	–
Service head	dep. on customized configuration	dep. on customized configuration

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

Tray (w/o max. load label)	max. 50 kg	max. 50 kg
Drawer	max. 15 kg	max. 15 kg
Pump rod, single-part	max. 30 kg	max. 30 kg
Pump rod set, two-part	max. 20 kg	max. 20 kg
Standard rail	max. 10 kg	max. 10 kg
Keyboard drawer	for PC keyboard only	for PC keyboard only

\* 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\*

Nominal voltage	120 / 230 V	120 / 230 V
Nominal frequency	60 / 50 Hz	60 / 50 Hz
Rated current	max. 20/16 A per circuit	max. 20/16 A per circuit
Maximum number of electric circuits	max. 4 circuits with 6 socket-outlets each	max. 4 circuits with 6 socket-outlets each
Maximum number of socket-outlets acc. to 49440	24	24
Maximum number of equipotential bonding sockets acc. to 42801	24	24

\* 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, CO <sub>2</sub> , 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

IEC 60601-1:1988 + A2:1995

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

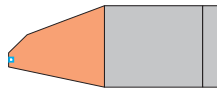
# Independant® MSU

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	

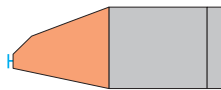


Independant® MSU length options:	2200 mm
	2800 mm
	3100 mm
	3500 mm

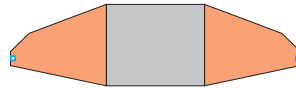
One-side supply bridge:



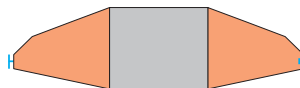
One-side supply bridge  
with standard rail:



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.



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