

The Suspension Systems

With the exception of the Independant® 30 variant, the redesigned service head can be used in conjunction with the following suspension systems:

Independant® 30	Small monitor or surgical suspension system, either for wall mounting or ceiling mounting in combination with a marLux® operating light. Max. loading capacity (useful load): 25 kg (e.g. one CRT monitor or one HF unit). Alternatively, the pendant system can be fitted with a power supply box (electrobox).
Independant® 100	Swivel ceiling mount, either with height-adjustable spring arm or with motor arm offering a maximum load-carrying capacity of 120 kg. Safe positioning guaranteed by pneumatic brakes.
Independant® 200	Motorized swivel ceiling mount for a total load of up to 200 kg. Maximum useful load to be added: 90 kg. Large cable ducts for medical gases, electrical cables and data lines.
Independant® 300	Universal heavy-duty suspension system for surgery, endoscopy, anesthesia and intensive care. Optionally available with single or tandem extension arm offering a large swiveling range. Pneumatic brakes ensure high position fidelity.
Independant® 500	Heavy-duty suspension arm system for very high useful loads, with a total load-carrying capacity of nearly 1,000 kg.

Technical data related to the service head and suspension systems

Service head

Base (length)	min. 272 mm, max. 1,080 mm
Multifunction rack: lengths	475 / 975 / 1,475 mm, stainless steel
Multifunction rack: load capacity	max. 168 kg
Cable management	Storage space: 2 x 2,600 cm ³ per tray

Operation

Pneumatic brake buttons	min. 5 bar; max. 7 bar
Motor button	Up/Down for 230/120 V AC; 50/60 Hz; 1/3 HP / 10 A
Own weight	min. 7.3 kg; max. 70.3 kg
Hygiene report/certificate	SMP 8205021011
Usability certificate	USE-LAB 02/2006/01
Marks of conformity	CE; UL-recognized component
Medical device class	IIb

Independant® 30

Electrical data*

Nominal voltage	120/230 V
Nominal frequency	60/50 Hz
Rated current	max. 20/16 A per circuit
Maximum number of electric circuits	max. 4 circuits with four socket-outlets each

* depending on customer-specific configuration

Own weights

Intermediate ceiling set (ceiling anchor plate with 3 tubes and threaded bolts)	35 kg
Interface plate	30 kg
Flanged tube (weight of running meter)	10.0 kg per meter
Extension arm, 800 mm	10.1 kg
Spring arm, 988 mm	16.8 kg
Service head, 170 mm, with platform 410 x 400 mm	12.5 kg
Electrobox / Electrobox with 2 optional, single-part pump rods	7 kg / 17 kg
Monitor/equipment support (C-arm, M-arm)	7 kg / 17 kg
Vario View adapter element, single, dual, three-part	4 kg / 10 kg / 14 kg

Total load-carrying capacity of Independant® suspension arm (corresponds to own weight of service head plus added/useful load)

Extension arm, 800 mm	40 kg
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Gas data* (media connections acc. to DIN 13620, Part 2)

Compressed air	5 bar
Types of gas	oxygen, nitrous oxide

* only ceiling-mounting versions; depending on customer-specific configuration

Spring equipment

Spring versions	8–16 kg, 15–32 kg, 25–40 kg
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Maximum useful load capacity (with spring option and a spring load setting of 40 kg)

Spring arm, 988 mm	max. 40 kg
Electrobox / Electrobox with 2 optional, single-part pump rods	max. 33 kg / max. 23 kg
Monitor/equipment support for 17-inch monitors (C-arm)	max. 25 kg
Monitor/equipment support for 20-inch monitors (M-arm)	max. 33 kg
Vario View adapter element for 15-inch to 21-inch monitors, single, dual or three-part	max. 36 kg / 30 kg / 26 kg
Service head, 170 mm, with platform 410 x 400 mm	max. 20 kg

Noise level acc. to EN 793:1998

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

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

Equipment type: B

Type of protection: covered design	Ordinary appliance (closed unit without water ingress protection). The suspension arm system is not intended for use in hazardous atmospheres. The suspension arm system is designed for continuous operation.
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Applicable regulations / reference standards

EN 60601-1, UL 60601-1, EN 793:1998

Standard version certifications

The product has been tested and certified by the VDE-Prüf- und Zertifizierungsinstitut (EU ID no. 0366), Merianstr. 28, D-63069 Offenbach (Germany). Use of VDE symbol permitted under mark license.

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 appliances: CE-marked KLS Martin service heads with a length of 413, 600 and 1025 mm.

The natural or legal person connecting the above devices to the KLS Martin suspension 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 appliances requires a separate conformity assessment, as specified in the MDD.

Mounting the above devices to a suspension arm system other than those specified above requires Gebrüder Martin's prior consent. 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 made by other manufacturers. To ensure proper handling, please refer to the appropriate user manual in each case.

CE 0297 – DQS – Deutsche Gesellschaft zur Zertifizierung von Managementsystemen mbH, EC ID number: 0297

Electrical data*

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

* depending on customer-specific configuration

Mechanical data* (load capacity)

Service head, 420 mm / 600 mm	max. 50 kg
Service head without drawers	max. 50 kg
Service head with one drawer	max. 40 kg
Service head with two drawers	max. 30 kg
Drawer	max. 15 kg
Pump rod, single-part	max. 30 kg
Pump rod set, two-part	max. 20 kg
Standard rail	max. 10 kg
Swivel/tilt part	max. 35 kg
C-arm / M-arm	max. 33 kg / max. 33 kg
Adapter for operating light	max. 35 kg
Keyboard drawer	for PC keyboard only

* depending on customer-specific configuration

Total load-carrying capacity of Independant® suspension arms (corresponds to own weight of service head plus added/useful load in each case) – extract

Motor arm, 700 mm	120 kg
Motor arm, 1,000 mm	90 kg
Spring arm, 1,000 mm	85 kg
Extension arm, 800 mm / motor arm, 1,000 mm	90 kg
600 / 700 mm	120 kg
800 / 700 mm	120 kg
1,000 / 700 mm	120 kg

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

Compressed air	5 bar
Compressed-air supply for air motor	10 bar
Types of gas	oxygen, nitrous oxide
Vacuum; anesthetic gas evacuation (with label)	

* depending on customer-specific configuration

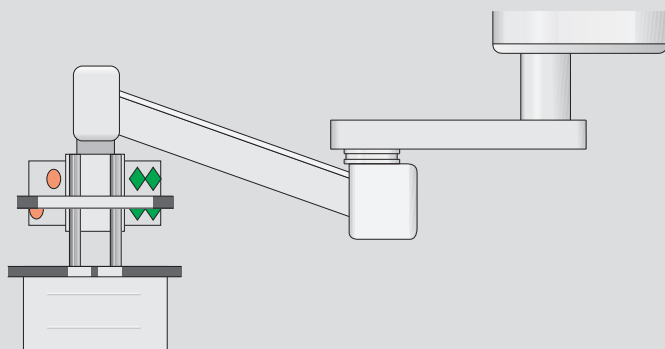
Noise level acc. to EN 793:1998

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

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	
Equipment type: B	
Type of protection: covered design	Ordinary appliance (closed unit without water ingress protection). The suspension arm system is not intended for use in hazardous atmospheres. The suspension arm system is designed for continuous operation.

For details concerning reference standards, certifications, EC Declarations of Conformity, CE-marking, etc., please refer to page 6.



Independant® 100

Independant® 200

Electrical data*

Nominal voltage	120/230 V
Nominal frequency	60/50 Hz
Rated current	max. 20/16 A per circuit
Maximum number of electric circuits	max. 4 circuits with four socket-outlets each

* depending on customer-specific configuration

Own weights

Intermediate ceiling set (ceiling anchor plate with 6 tubes and threaded bolts)	85 kg
Interface plate	55 kg
Extension arm (single-arm), with bearing, 600 mm	58 kg
Extension arm (single-arm), with bearing, 800 mm	64 kg
Extension arm (single-arm), with bearing, 1,000 mm	69 kg
Extension arm (single-arm), with bearing, 1,200 mm	74 kg
Motor arm (single-arm), with bearing, 750 mm	53 kg
Motor arm (single-arm), with bearing, 1,000 mm	55 kg
Spacer tube (bearing weight / weight of running meter)	15 kg / 7 kg per meter

Maximum loading capacity (useful load)

Platform (without "max. load" label)	max. 50 kg
Swivel/tilt part	max. 35 kg
Pump rod set, single-part	max. 30 kg
Pump rod set, two-part	max. 20 kg
Standard rail on pump rod set	max. 10 kg
Drawer	max. 10 kg
Keyboard drawer	for PC keyboard only

* depending on customer-specific configuration

Total load-carrying capacity of Independant® suspension arms (corresponds to own weight of service head plus added/useful load in each case) – extract

Motor arm, 750 mm	200 kg
Motor arm, 1,000 mm	150 kg
Extension arm, 800 mm / motor arm, 750 mm	200 kg
1,000 / 1,000 mm	150 kg
1,200 / 1,000 mm	150 kg

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

Compressed air	5 bar
Compressed-air supply for air motor	10 bar
Types of gas	oxygen, nitrous oxide
Vacuum; anesthetic gas evacuation (with label)	

* depending on customer-specific configuration

Noise level acc. to EN 793:1998

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

Classification acc. to EC Directive concerning medical devices dated 14 June 1993: 93/42/EEC: (I = without gas supply; IIb = with gas supply)

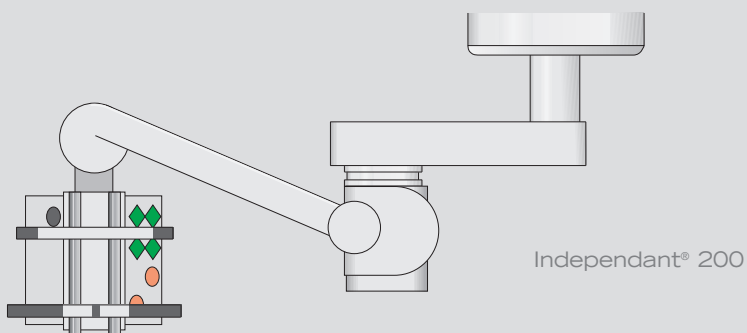
Protection class: I

Equipment type: B

Type of protection: covered design

Ordinary appliance (closed unit without water ingress protection). The suspension arm system is not intended for use in hazardous atmospheres. The suspension arm system is designed for continuous operation. The height adjustment function of the motor arm is not intended for continuous operation. Keep activation time limited to max. three minutes and maintain a cooling-down phase of 30 minutes afterwards.

For details concerning reference standards, certifications, EC Declarations of Conformity, CE-marking, etc., please refer to page 6.



Electrical data*

Nominal voltage	120/230 V
Nominal frequency	60/50 Hz
Rated current	max. 20/16 A per circuit
Maximum number of electric circuits	max. 4 circuits with four socket-outlets each

* depending on customer-specific configuration

Own weights

Intermediate ceiling set (ceiling anchor plate with 6 tubes and threaded bolts)	58 kg
Interface plate (Single / Duo)	15.5 / 38.2 kg
Flange	23.0 kg
Extension arm (single-arm), with bearing, 600 / 800 / 1,000 / 1,200 mm long	14.0 kg / 17.0 kg / 20.5 kg / 24.0 kg
Spacer tube (bearing weight / weight of running meter)	1 kg / 12 kg per meter

Maximum loading capacity (useful load)

Platform, 500 x 470 mm (without label)	max. 50 kg
Platform, 750 x 470 mm (without label)	max. 35 kg
Swivel/tilt part	max. 35 kg
Pump rod set, single-part / two-part	max. 30 kg / max. 20 kg
Standard rail on pump rod set	max. 10 kg
Drawer	max. 10 kg
Keyboard drawer	for PC keyboard only

* depending on customer-specific configuration

Total load-carrying capacity of Independant® suspension arms (corresponds to own weight of service head plus added/useful load in each case)

Extension arm, 600 mm	580 kg
Extension arm, 800 mm	420 kg
Extension arm, 1,000 mm	320 kg
Extension arm, 1,200 mm	260 kg
600 / 600 mm	260 kg
600 / 800 mm	220 kg
800 / 800 mm	180 kg
1,000 / 600 mm	180 kg
1,000 / 800 mm	150 kg
1,000 / 1,000 mm	130 kg

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

Compressed air	5 bar
Compressed-air supply for air motor	10 bar
Types of gas	oxygen, nitrous oxide

Vacuum; anesthetic gas evacuation (with label)

* depending on customer-specific configuration

Noise level acc. to EN 793:1998

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

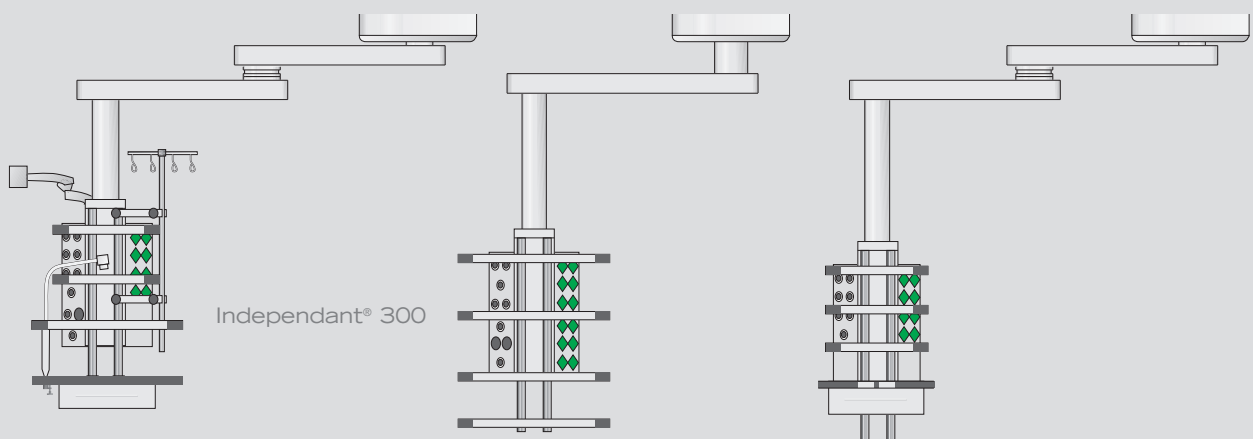
Classification acc. to EC Directive concerning medical devices dated 14 June 1993: 93/42/EEC: (I = without gas supply; IIb = with gas supply)

Protection class: I

Equipment type: B

Type of protection: covered design
 Ordinary appliance (closed unit without water ingress protection). The suspension arm system is not intended for use in hazardous atmospheres. The suspension arm system is designed for continuous operation.

For details concerning reference standards, certifications, EC Declarations of Conformity, CE-marking, etc., please refer to page 6.



Independant® 500

Electrical data*

Nominal voltage	120/230 V
Nominal frequency	60/50 Hz
Rated current	max. 20/16 A per circuit
Maximum number of electric circuits	max. 4 circuits with four socket-outlets each

* depending on customer-specific configuration

Own weights

Intermediate ceiling set (ceiling anchor plate with 6 tubes and threaded bolts)	85 kg
Interface plate	55 kg
Extension arm (single-arm), with bearing, 600 / 800 / 1,000 / 1,200 mm long	35 kg / 40 kg / 46 kg / 51 kg
Spacer tube (bearing weight / weight of running meter)	15 kg / 7 kg per meter
Lifting device (depending on configuration)	max. 80 kg

Maximum loading capacity (useful load)

Platform, 500 x 470 mm (without label)	max. 50 kg
Platform, 750 x 470 mm (without label)	max. 35 kg
Swivel/tilt part	max. 35 kg
Pump rod set, single-part / two-part	max. 30 kg / max. 20 kg
Standard rail on pump rod set	max. 10 kg
Drawer	max. 10 kg
Keyboard drawer	for PC keyboard only

* depending on customer-specific configuration

Total load-carrying capacity of Independant® suspension arms (corresponds to own weight of service head plus added/useful load in each case)

Extension arm, 600 mm	980 kg
Extension arm, 800 mm	730 kg
Extension arm, 1,000 mm	570 kg
Extension arm, 1,200 mm	430 kg
600 / 600 mm	450 kg
600 / 800 mm	360 kg
800 / 800 mm	300 kg
800 / 1,000 mm	250 kg
1,000 / 600 mm	300 kg
1,000 / 1,000 mm	220 kg
1,000 / 1,200 mm	170 kg

Approved adapters* for HUBI 700 lifting device

ADU, ALISEO, KION, JOLLY TRONIC 2, AESTIVA, CATO / CICERO / PRIMUS, MODULUS, EXCEL, KLS Martin equipment trolley

* Non-listed adapters require Gebrüder Martin's approval

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

Compressed air	5 bar
Compressed-air supply for air motor	10 bar
Types of gas	oxygen, nitrous oxide
Vacuum; anesthetic gas evacuation (with label)	

* depending on customer-specific configuration

Noise level acc. to EN 793:1998

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	The suspension arm system is designed for continuous operation.

For details concerning reference standards, certifications, EC Declarations of Conformity, CE-marking, etc., please refer to page 6.