Pendant systems EMALED with BS components

Pendant systems

Pendant systems are used to supply operating rooms with medical gases, electricity and data connections.

The supply comes from the ceiling, so that the floor remains free of cables and hoses. Pendant systems make it easier to clean the rooms, make the supply more flexible and prevent accidents.
At the mounting location of the pendant system, the supply lines are mounted on an interface plate and enable fast service.
The pendant system uses hoses and flexible cables to allow accurate positioning of the connectors.

Pendant systems finder mainly used in the following areas:

- In operating rooms with specific fittings for anesthesia or surgery
- Endoscopy
- Treatment rooms
- Intensive units

The EMA-LED GmbH offers 2 varieties of a selection of pendant systems

Standard variant

The standard versions are based on our many years of experience with pendant systems and the wishes of our customers.
Standard variants are based on a height of the raw ceiling of up to 4000mm and a false ceiling of approx. 3000mm.

The built-in components of the pendant are available in the 3 standards.

- BS
- DIN
- AFNOR

The standard configuration allows a shorter delivery time and an attractive price. Changes to the configuration are only possible in a limited range.

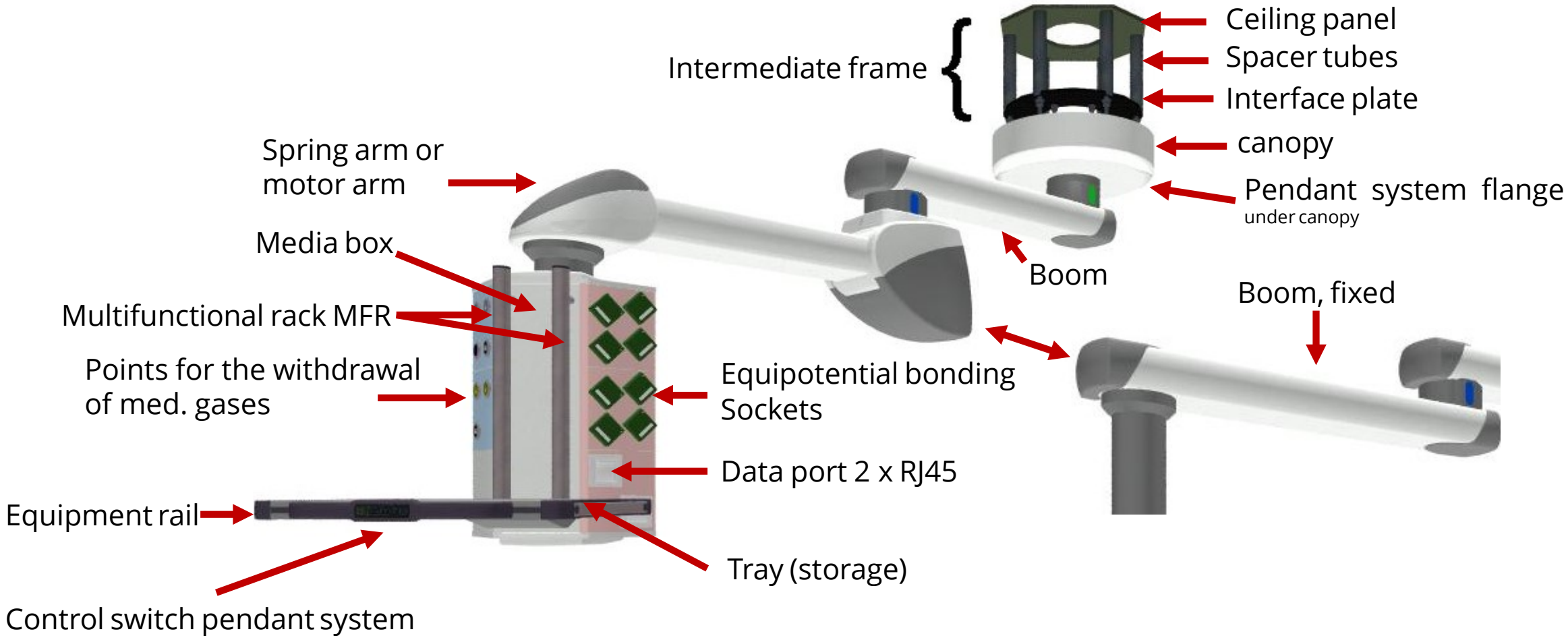
According to customer requirements

The customer-oriented planning of pendant systems enables the implementation of all customer requirements, provided they comply with national regulations.

It is possible to use payloads of up to 1000 kg and lift weights of up to 250 kg with a motor arm.
Gas outlets and sockets are available in all international standards.

It is possible to specify the manufacturers of the modules and also to provide material.
The delivery time for these products is about 12 weeks after clarification of all technical details.

Structure of a pendant system



Definition

Intermediate frame	Similar to the surgical lights.
Canopy	Similar to the surgical lights.
Boom	For expansion of the range as well as better positioning of the pendant systems. A boom is not strictly necessary.
Boom, fixed	Most simple boom type without elevation.
Spring arm	Most simple height-adjustable possibility for pendant systems. Also including cases when load is changed, spring arms must be set by a technician. The spring assemblies in the spring arm must thereby be set. A spring arm is not appropriate for alternating loads.
Motor arm	An electric motor is used for lifting and releasing, thus making a precise setting possible, regardless of the load, up to the max. weight (per pendant systems by EMALED, approx. 115 kg).

Definition

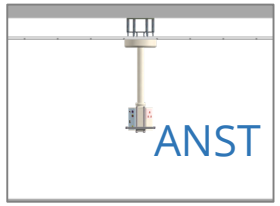
Friction brakes	A purely mechanical brake with brake screws, the same as on the surgical lights.
Air-brake	The brake runs on compressed air and thus requires a compressed air connector on the pendant systems.
E-brake	The e-brake is operated on electric power and is almost wear-free.
CGU	Central Gas Unit. The medical gases are fed into a pipe network system in the hospital and thus taken into all areas where they are needed.
Points for the withdrawal of med. gases	The points of withdrawal are standardised plug outlets which are coded differently and thus make the medical gases usable with appropriate plugs. The common medical gases are: Oxygen, compressed air, nitrous oxide, vacuum, CO2. Other gases are also partially present, and not all of the listed gases are always present.
Equipment rail	The standardised equipment rail is used for the fastening of accessories on the pendant systems.

Definition

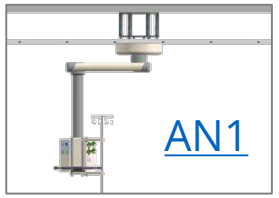
Multifunctional rack MFRA	Clamping system for accessories and trays on the pendant system.
Tray	Storage for mounting on the MFR - height-adjustable (with tools). Each tray is loadable with max. 50 kg, up to the permissible total load of the pendant system.
Data sockets	Connection sockets for networks
Equipotential bonding	Possibility to connect all electrical devices in the operation room with each other, in order to avoid any dangerous voltage between devices in case of error of a device.
Air motor	Connection for tools operated on compressed air in the operation room.
NGA or AGFS	Suction of anaesthetic gases in anaesthesia.

Operating Room

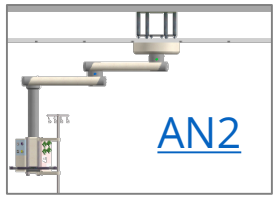
Anesthesia



Basic

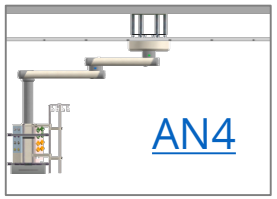


Basic

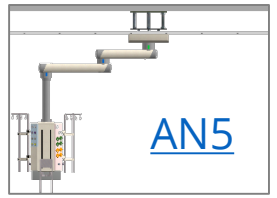


Basic

Performance

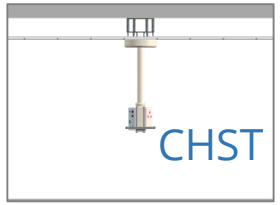


Performance



Premium

General Surgery



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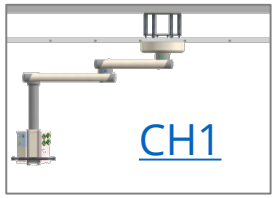
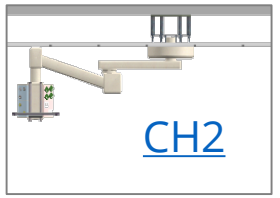
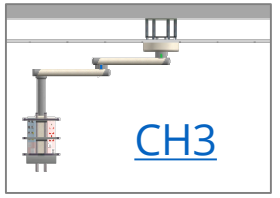


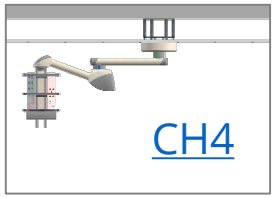
Basic



Performance



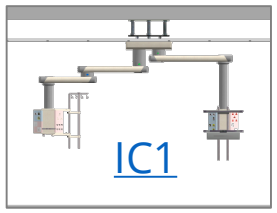
Performance



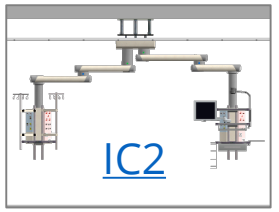
Premium

Intensive Care Unit

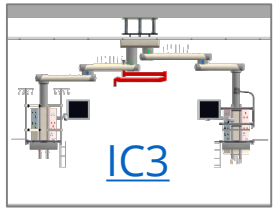
Intensive Care



Basic

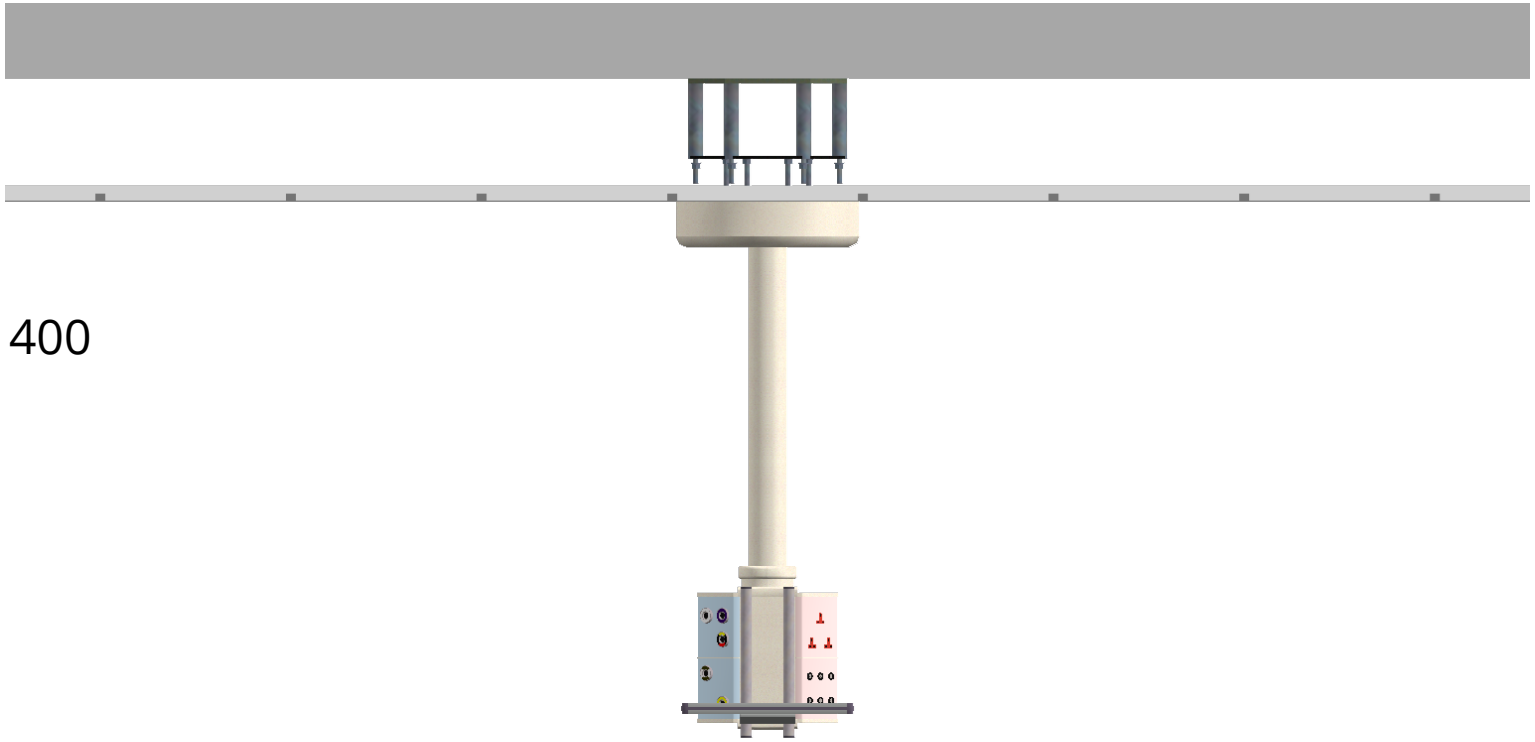


Performance



Premium

Configuration proposal Anesthesia Basic ANST



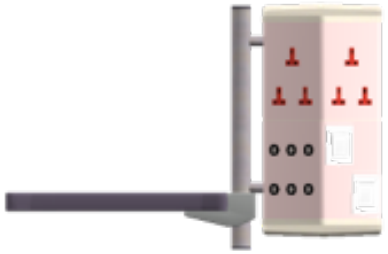
Configuration description:
OndaScope400 with Service Head 400
1 x shelf 520 mm

1. Brake system: friktion
2. Action space*: ---
3. Weights and pay loads
   remaining net pay load: 226 kg
   max. pendant pay load: 250 kg
   vertical force as configured: 3317 N
4. Remaining diameter: 66 %

* reference: centre of main bearing to centre of shelf

Configuration proposal Anesthesia Basic ANST

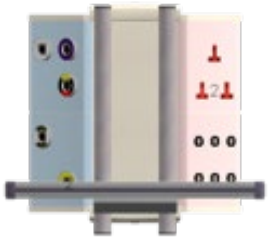
Side view right



Front view

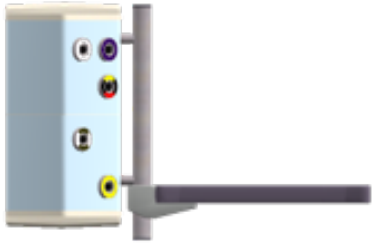
O2 1
N2O 1
AGFS.- 1

Air4 1
VAC 1



red 1
red 2

Side view left



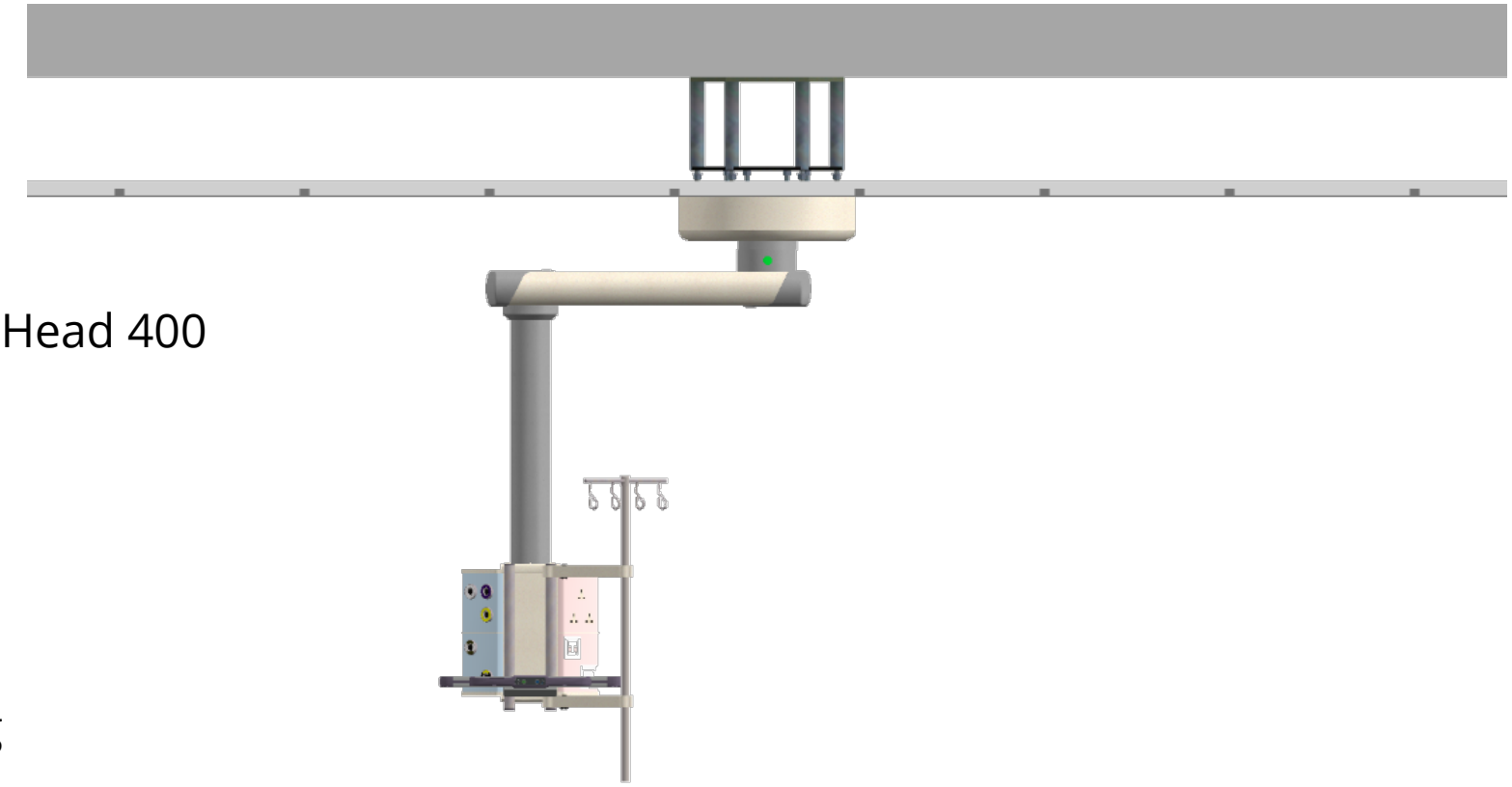
red 1
red 2

Bl.Cv 1
Bl. Cv. 2

Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1	1	1			1		6	6		
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal Anesthesia Basic AN1



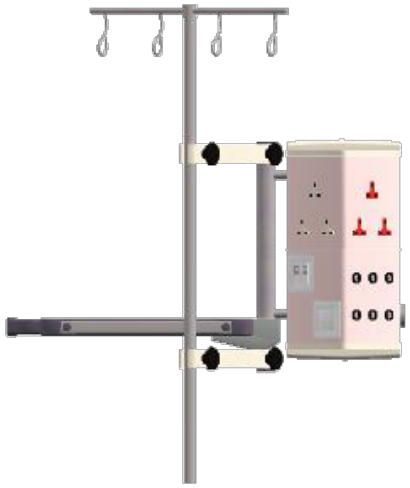
Configuration description:
MediBoom®Air 800 with Service Head 400
1 x shelf 520 mm, 1 x IV pole

1. Brake system: pneumatic
2. Action space*: 2,400 mm
1. Weights and pay loads
   remaining net pay load: 380 kg
   max. pendant pay load: 420 kg
   vertical force as configured: 5111 N
4. Remaining diameter: 61 %

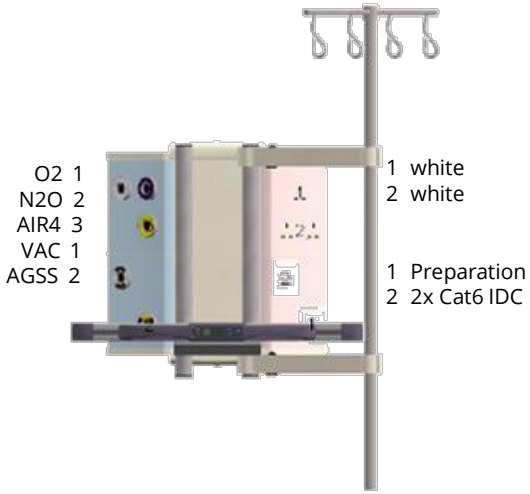
* reference: centre of main bearing to centre of shelf

Configuration proposal Anesthesia Basic AN1

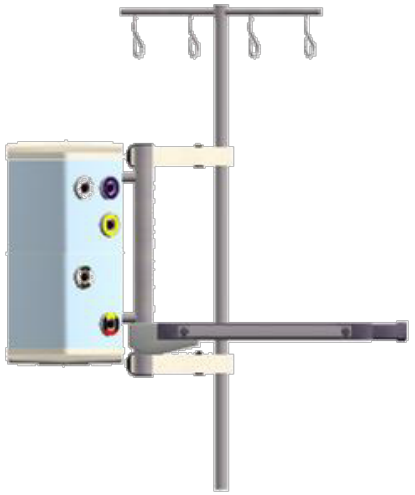
Side view right



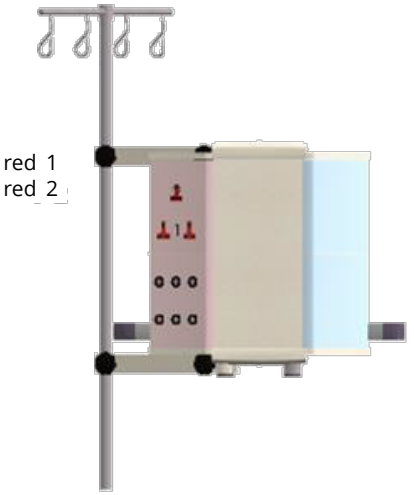
Front view



Side view left



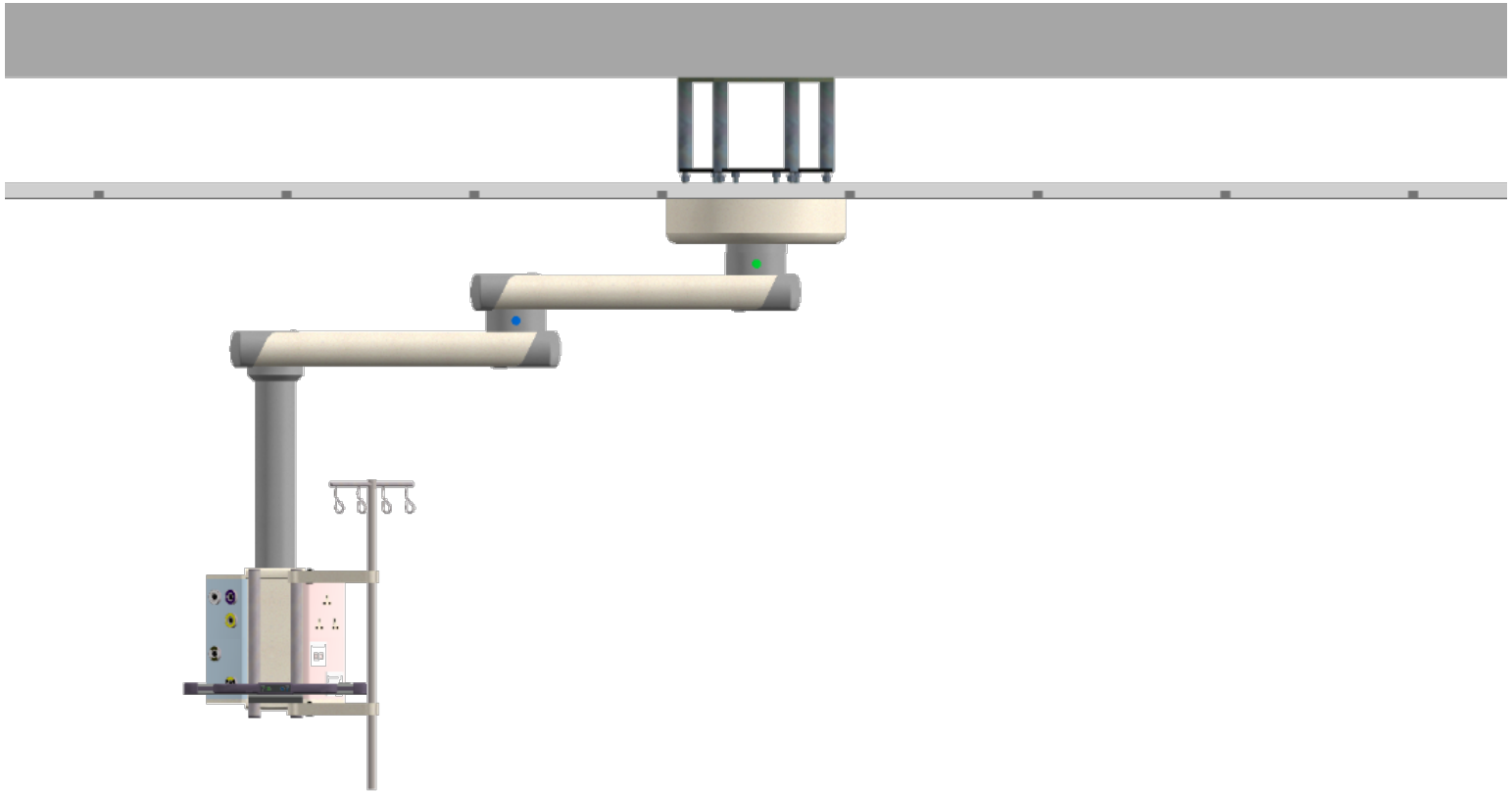
Back



Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1	1	1			1		6	6	1	2
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal Anesthesia Basic AN2



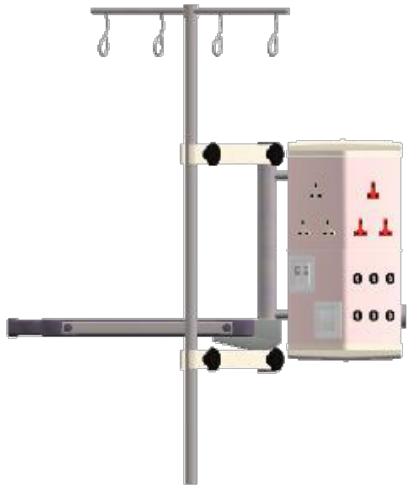
Configuration description:
MediBoom®Air 800/800 with
Service Head 400
1 x shelf 520 mm, 1 x IV pole

1. Brake system: pneumatic
2. Action space*: >4,000 mm
3. Weights and pay loads
   remaining net pay load: 142 kg
   max. pendant pay load: 180 kg
   vertical force as configured: 3025 N
4. Remaining diameter: 61 %

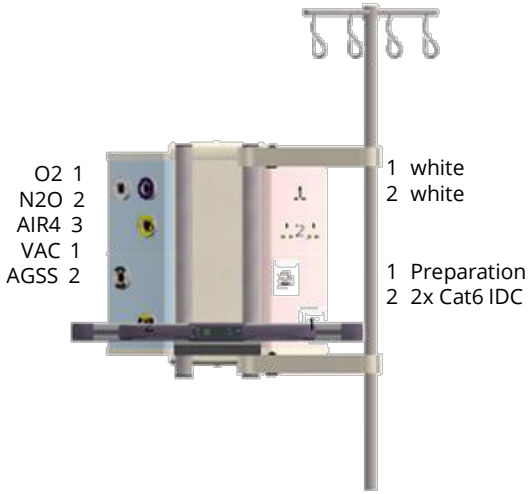
* reference: centre of main bearing to centre of shelf

Configuration proposal Anesthesia Basic AN2

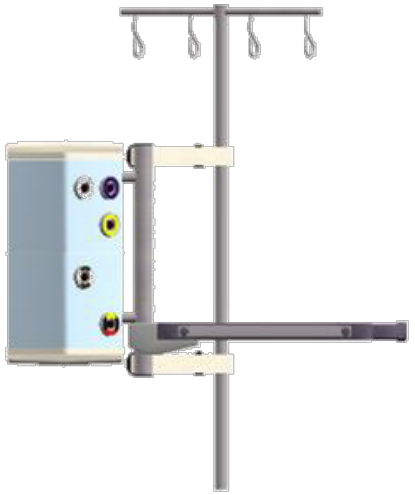
Side view right



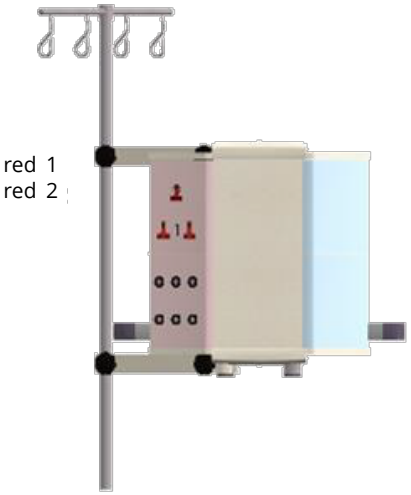
Front view



Side view left



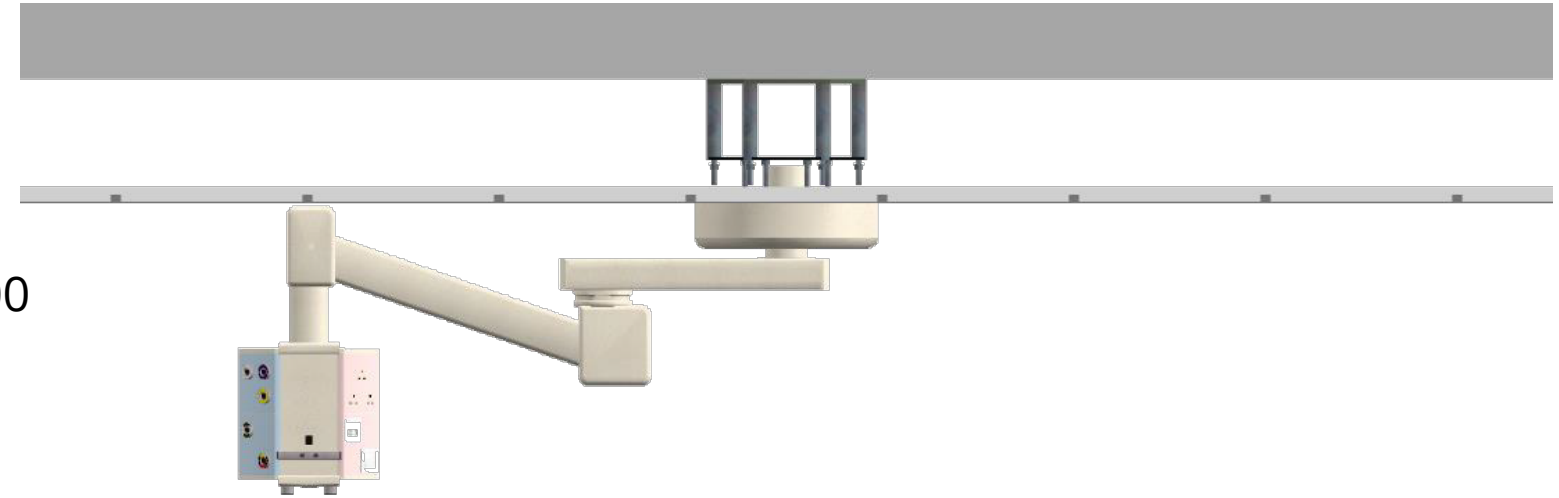
Back



Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1	1	1			1		6	6	1	2
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal Anesthesia Performance AN3



Configuration description:
Multimovement pendant 600/1000
with Service Head 400

1. Brake system: pneumatic
2. Action space*: >4,000 mm
3. Weights and pay loads
   remaining net pay load: 68 kg
   max. pendant pay load: 90 kg
   vertical force as configured: 2278 N
4. Remaining diameter: 20 %

* reference: centre of main bearing to centre of shelf

Configuration proposal Anesthesia Performance AN3

Side view right

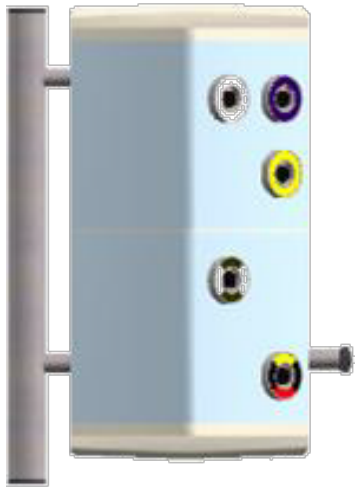
Front view

O2 1
N2O 2
AIR4 3
VAC 1
AGSS 2

1 white
2 white

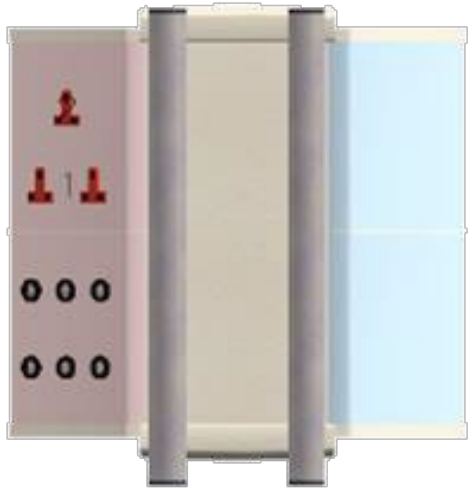
1 Preparation
2 2x Cat6 IDC

Side view left



Back

red 1
red 2

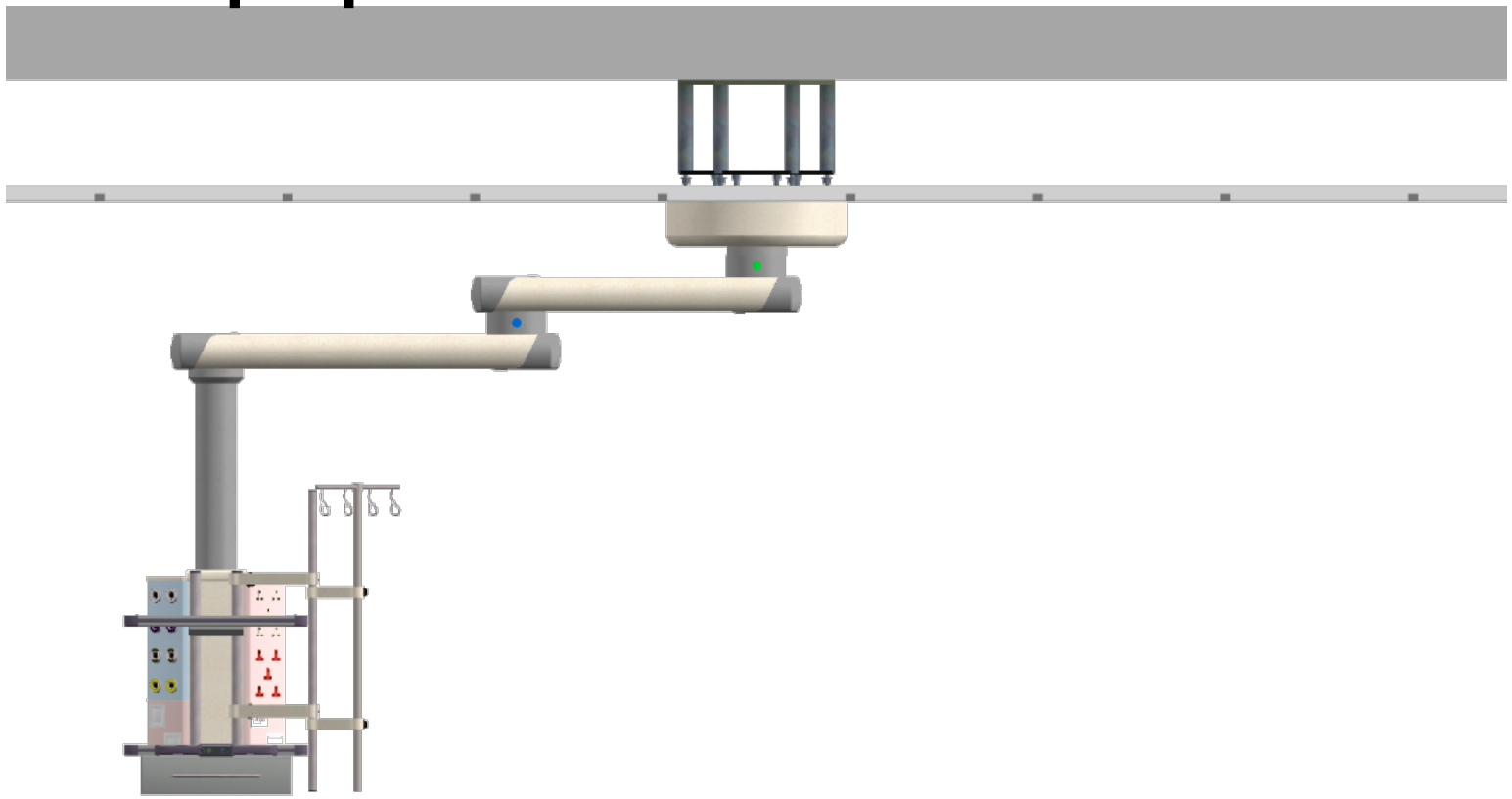


Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1	1	1			1		6	6	1	2
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal Anesthesia Performance AN4

Configuration description:
MediBoom®Air+ 800/1000
with Service Head 600
2 x shelf 520 mm
1 x drawer
1 x IV pole w. extension

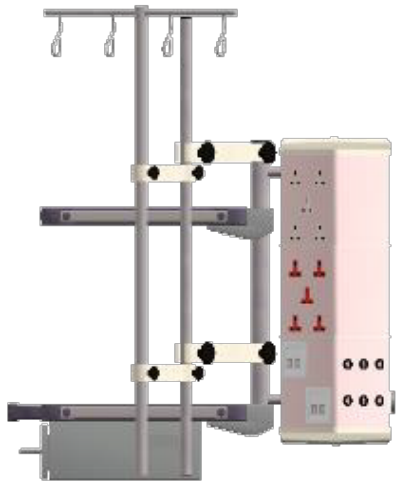


1. Brake system: electropneumatic
2. Action space*: >4,400 mm
3. Weights and pay loads
   remaining net pay load: 131 kg
   max. pendant pay load: 190 kg
   vertical force as configured: 3153 N
4. Remaining diameter: 41 %

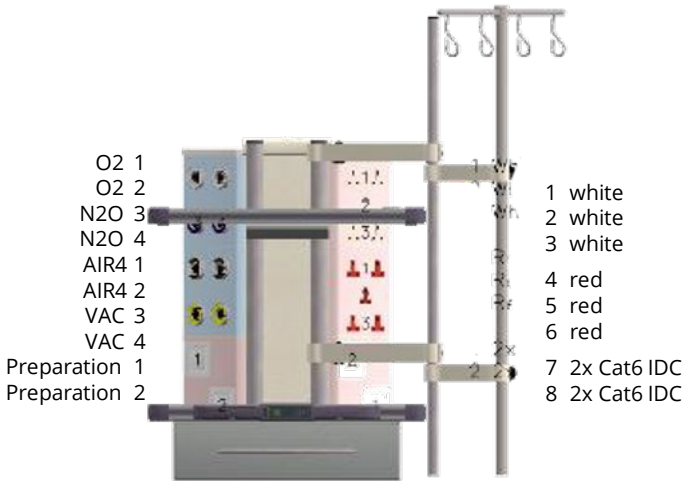
* reference: centre of main bearing to centre of shelf

Configuration proposal Anesthesia Performance AN4

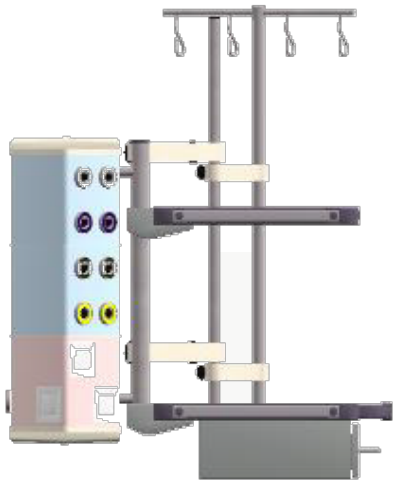
Side view right



Front view



Side view left



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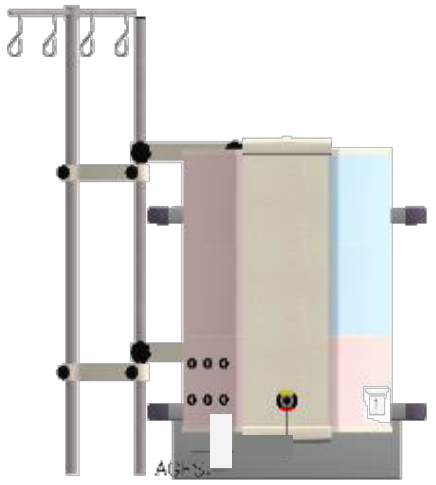


Number of service components

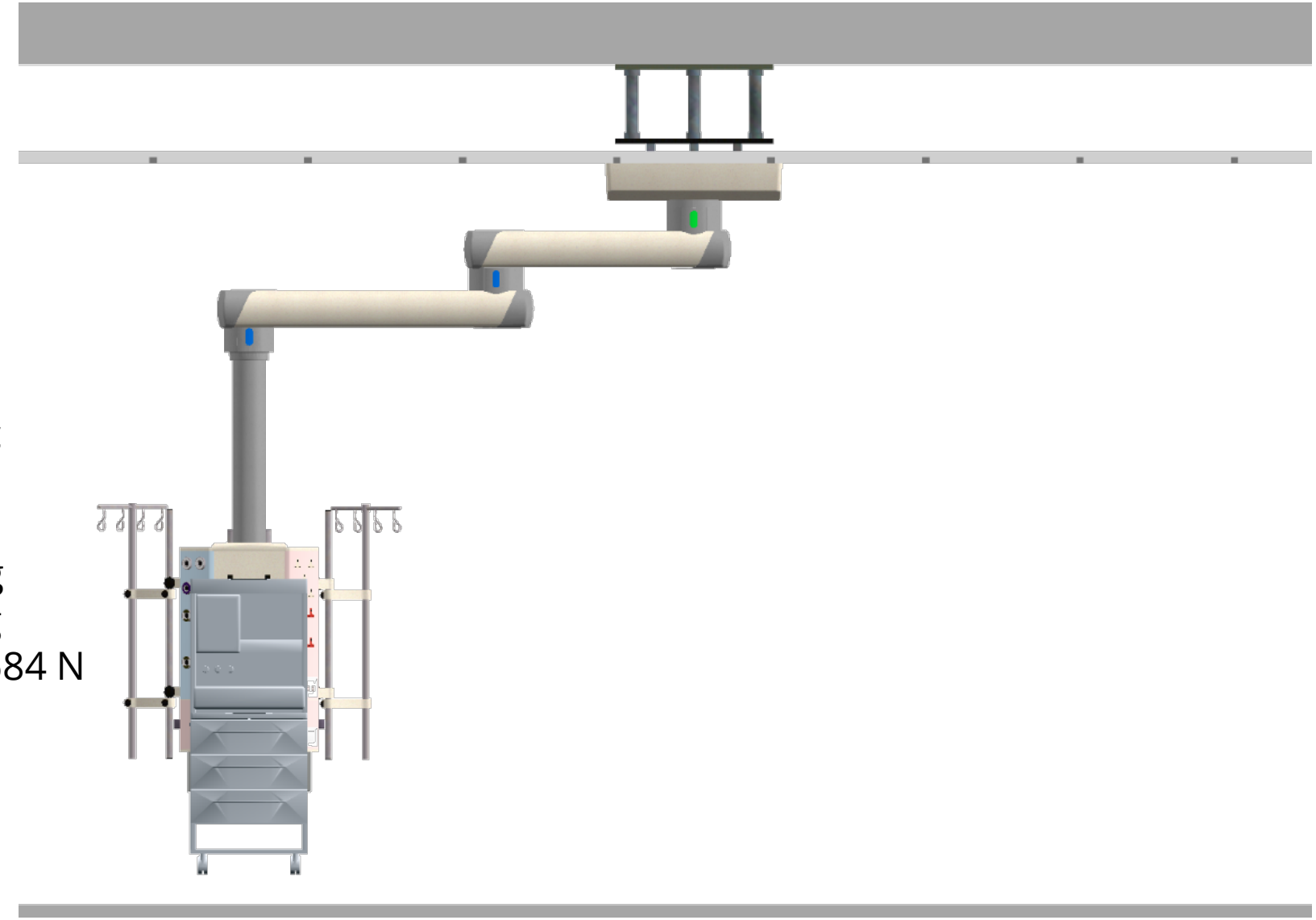
O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2	2	2			1		10	6	2	3
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal Anesthesia Prime AN5

<u>Configuration description:</u>
MediBoom®XXL 800/1000
with Anesthesia Machine Lifting
1 x shelf 520 mm,
2 x drawer,
2 x IV pole w. extension

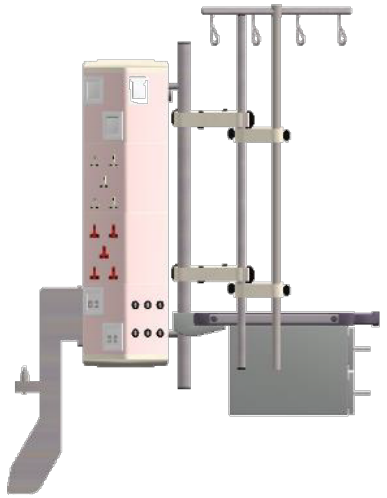
1. Brake system: electromagnetic
2. Action space*: >4,400 mm
3. Weights and pay loads
   remaining net pay load: 237 kg
   max. pendant pay load: 340 kg
   vertical force as configured: 5684 N
4. Remaining diameter: 41 %

* reference: centre of main bearing to centre of shelf



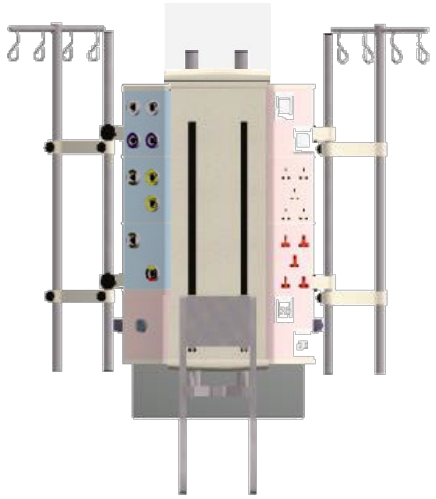
Configuration proposal Anesthesia Prime AN5

Side view right



Front view

O2 1
O2 2
N2O 3
N2O 4
AIR4 1
VAC 2
VAC 3
AIR4 1
AGSS 2



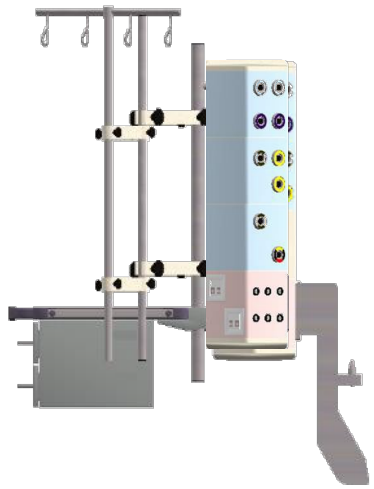
1 Preparation
2 Preparation

1 white
2 white
3 white

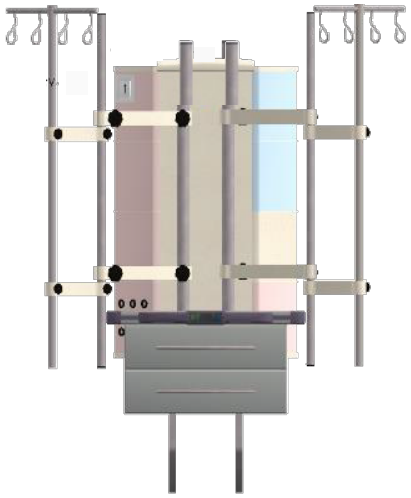
4 red
5 red
6 red

7 2x Cat6 IDC
8 2x Cat6 IDC

Side view left



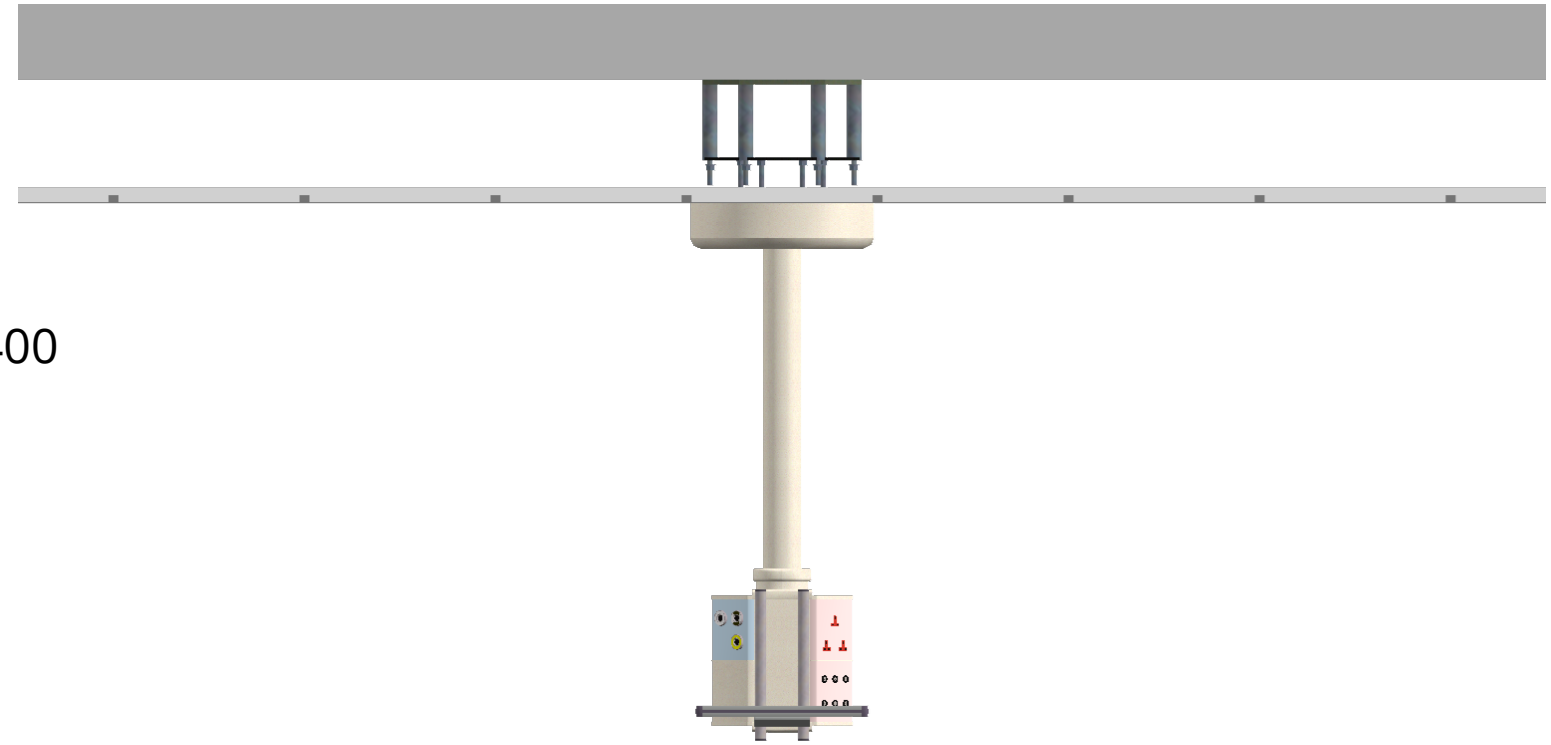
Back



Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2	2	2			1		10	6	2	3
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal General Surgery Basic CHST



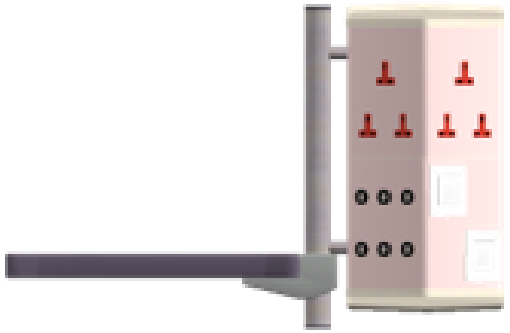
Configuration description:
OndaScope400 with Service Head 400
1 x shelf 520 mm

1. Brake system: friktion
2. Action space*: ---
3. Weights and pay loads
   remaining net pay load: 226 kg
   max. pendant pay load: 250 kg
   vertical force as configured: 3317 N
4. Remaining diameter: 75%

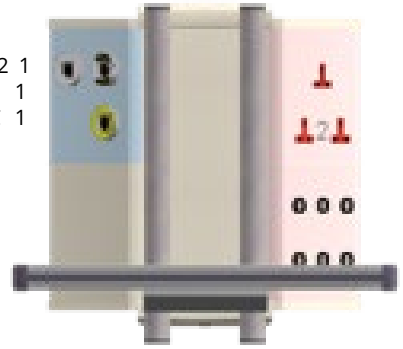
* reference: centre of main bearing to centre of shelf

Configuration proposal General Surgery Basic CHST

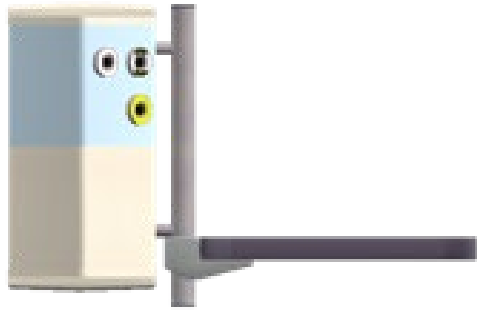
Side view right



Front view



Side view left



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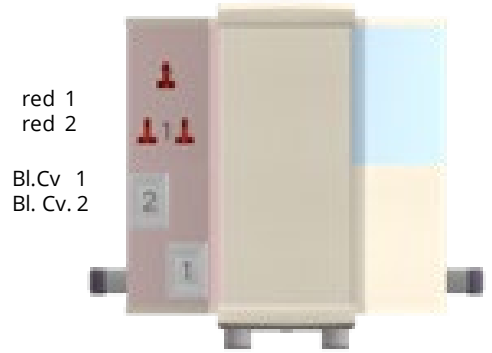
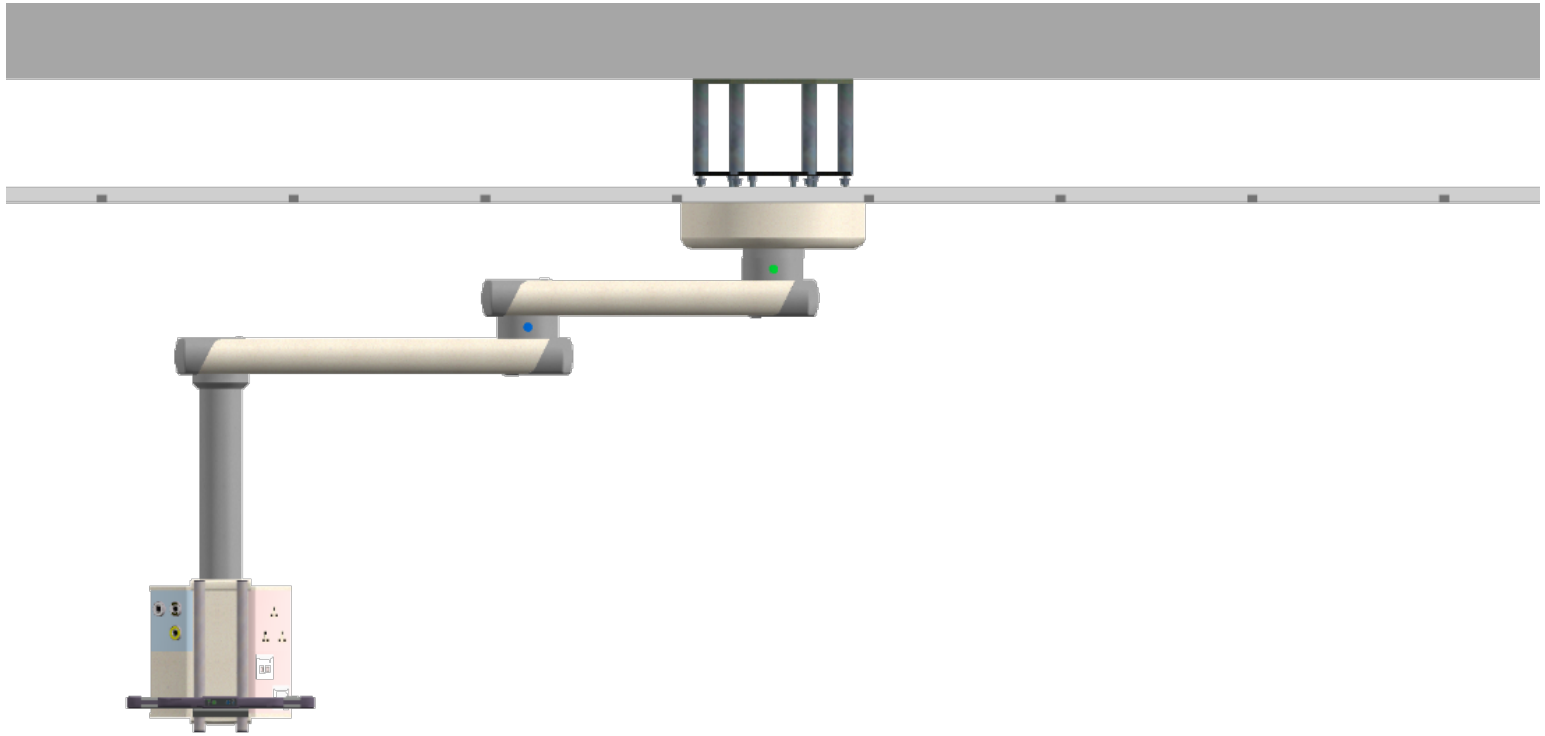


Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1		1					6	6		
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal General Surgery Basic CH1



Configuration description:
MediBoom®Air 800/1000
with Service Head 400
1 x shelf 520 mm

1. Brake system: pneumatic
2. Action space*: >4,400 mm
3. Weights and pay loads
   remaining net pay load: 114 kg
   max. pendant pay load: 150 kg
   vertical force as configured: 2761 N
4. Remaining diameter: 71 %

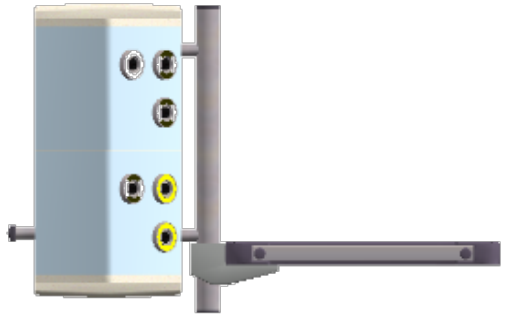
* reference: centre of main bearing to centre of shelf

Configuration proposal General Surgery Basic CH1

Side view right

Front view

Side view left



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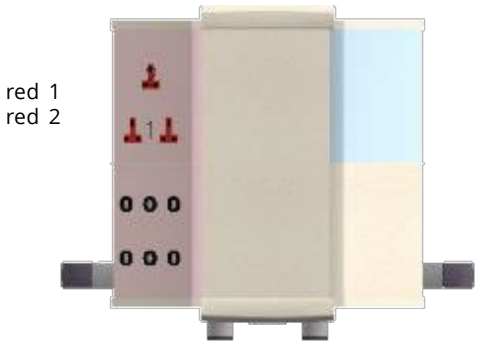
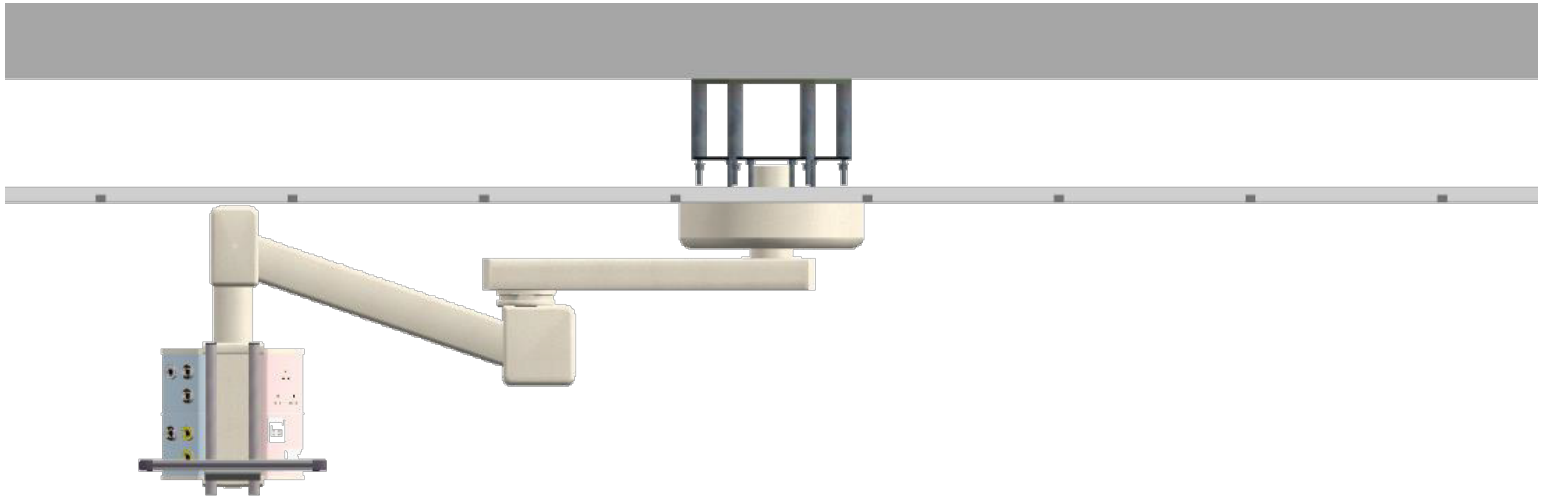


Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1		1					6	6	1	1
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal General Surgery Performance CH2



Configuration description:
Multimovement pendant
800/1000 with Service Head 400
1 x shelf 520 mm

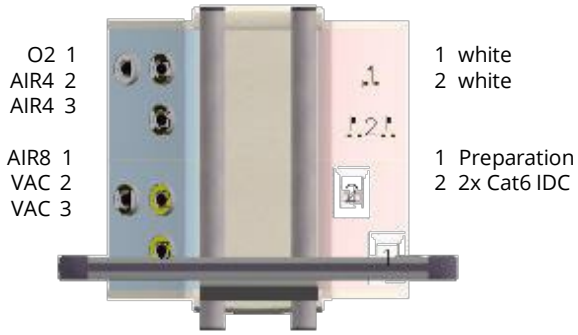
1. Brake system: pneumatic
2. Action space*: >4,400 mm
3. Weights and pay loads
   remaining net pay load: 59 kg
   max. pendant pay load: 90 kg
   vertical force as configured: 2322 N
4. Remaining diameter: 10 %

* reference: centre of main bearing to centre of shelf

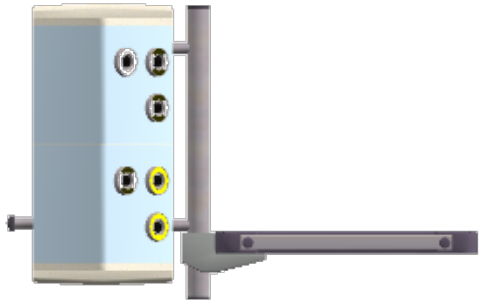
Configuration proposal General Surgery Performance CH2

Side view right

Front view



Side view left



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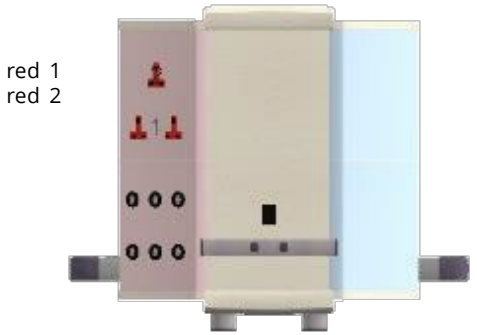
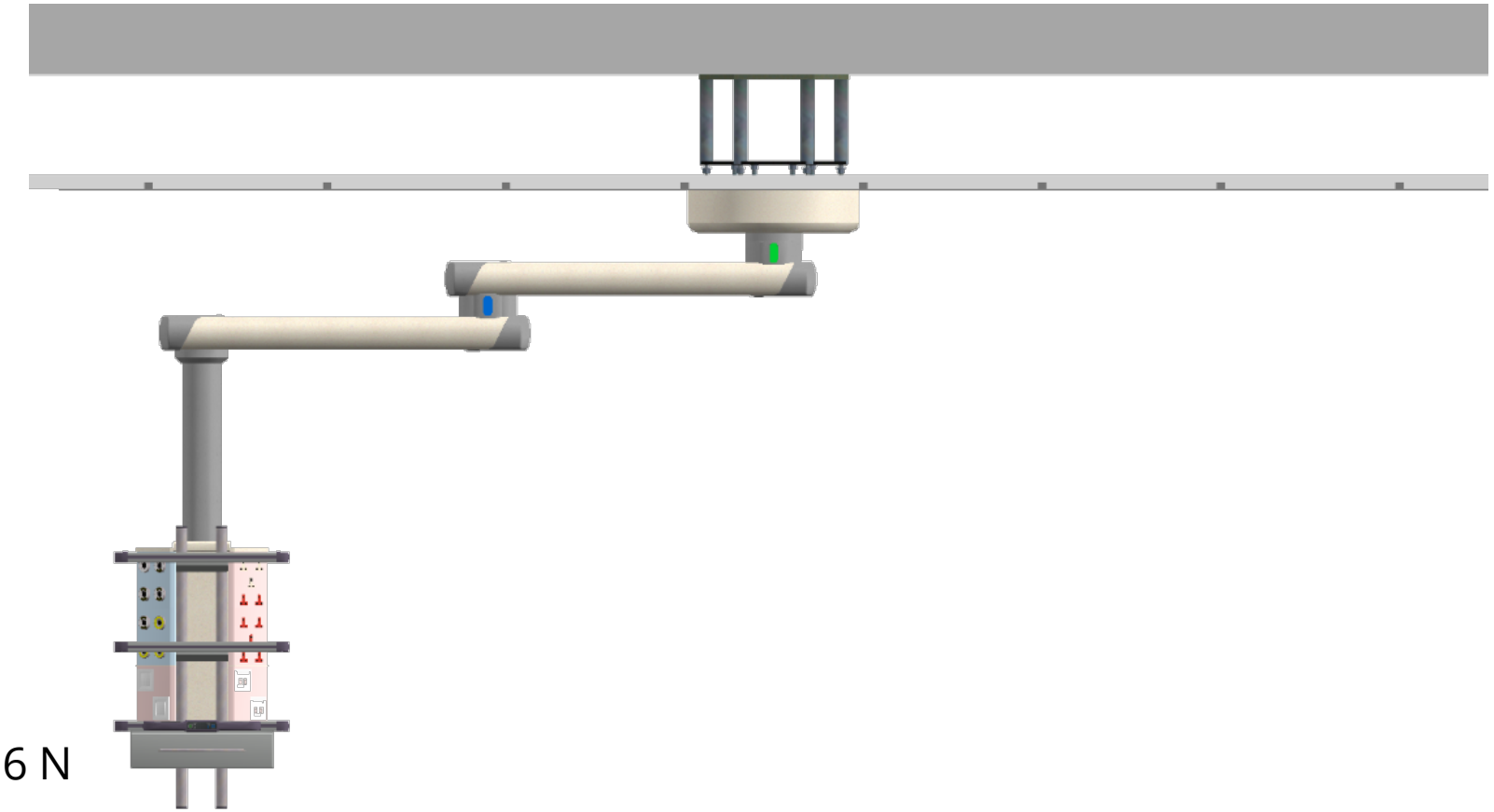


Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	2		2				1	6	6	1	1
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal General Surgery Performance CH3



Configuration description:
MediBoom® 1000/1000
with Service Head 600
3 x shelf 520 mm,
1 x drawer

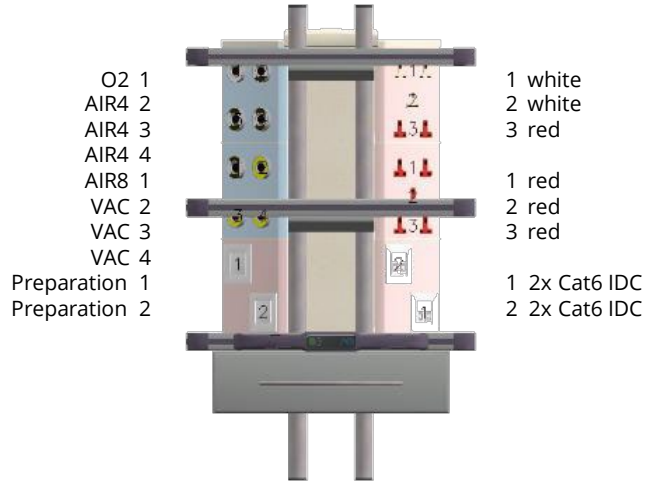
1. Brake system: electromagnetic
2. Action space*: >4,800 mm
3. Weights and pay loads
   remaining net pay load: 109 kg
   max. pendant pay load: 170 kg
   vertical force as configured: 2986 N
4. Remaining diameter: 41 %

* reference: centre of main bearing to centre of shelf

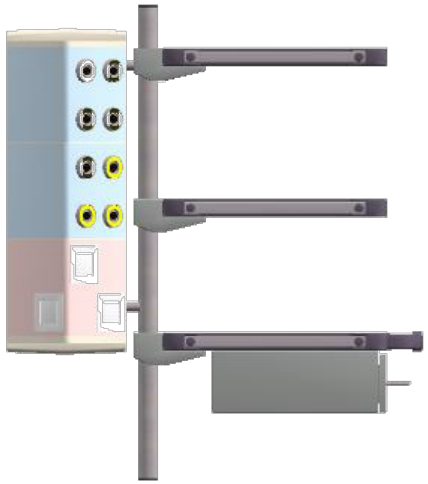
Configuration proposal General Surgery Performance CH3

Side view right

Front view



Side view left



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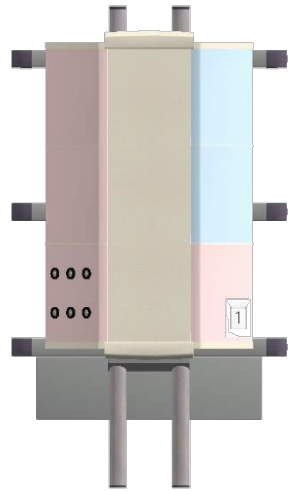
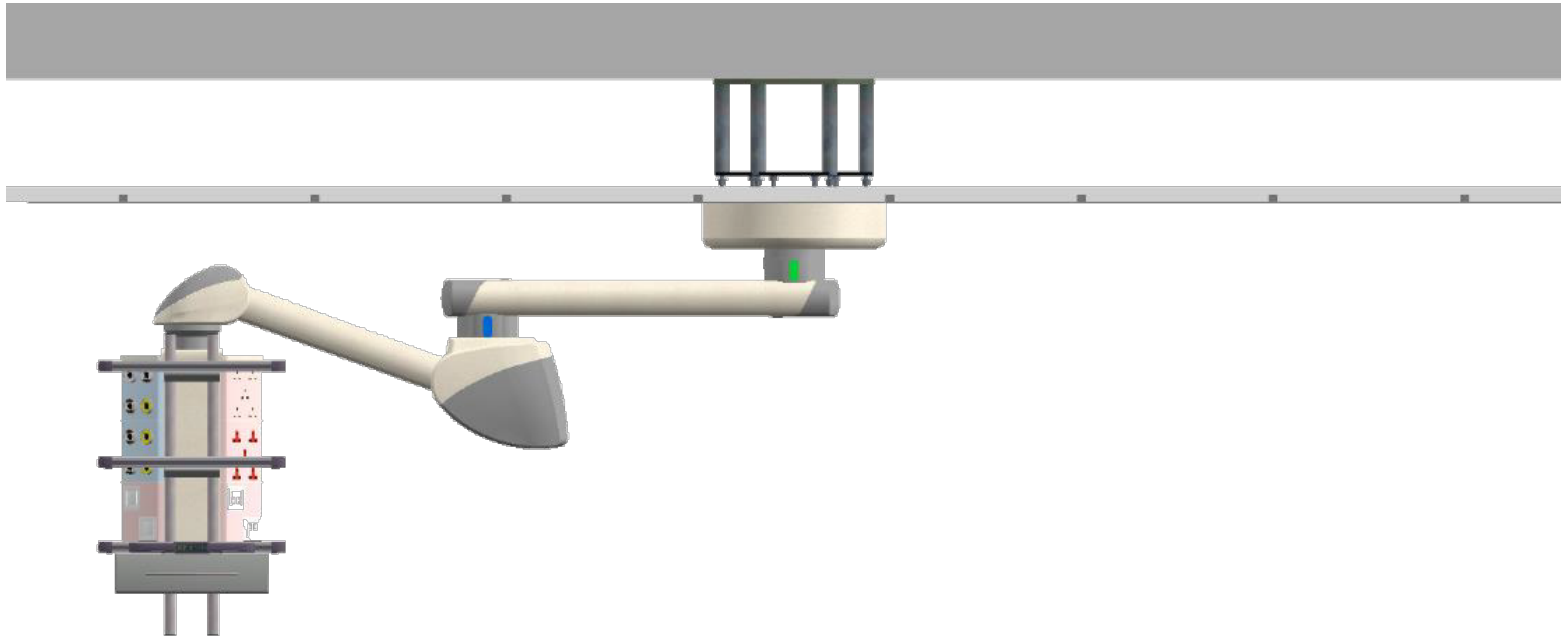


Number of service components

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	2		2				1	6	6	1	2
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal General Surgery Prime CH4



Configuration description:
MediLift 1000/1000
with Service Head 600
3 x shelf 520 mm
1 x drawer

1. Brake system: electromagnetic
2. Action space*: >4,800 mm
3. Weights and pay loads
   remaining net pay load: 94 kg
   max. pendant pay load: 150 kg
   vertical force as configured: 3166 N
4. Remaining diameter: 41 %

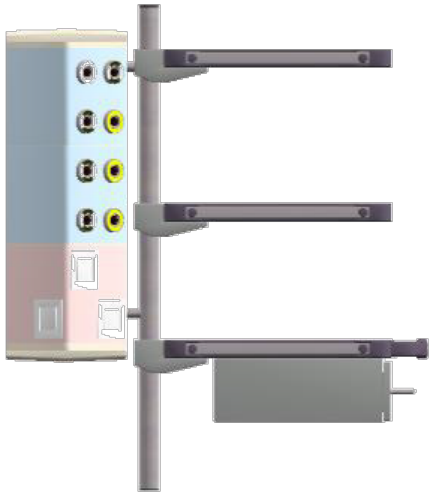
* reference: centre of main bearing to centre of shelf

Configuration proposal General Surgery Prime CH4

Side view right

Front view

Side view left



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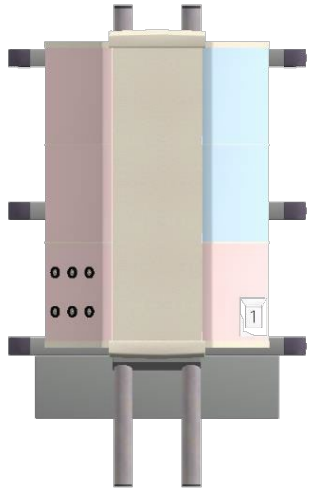


Number of service components

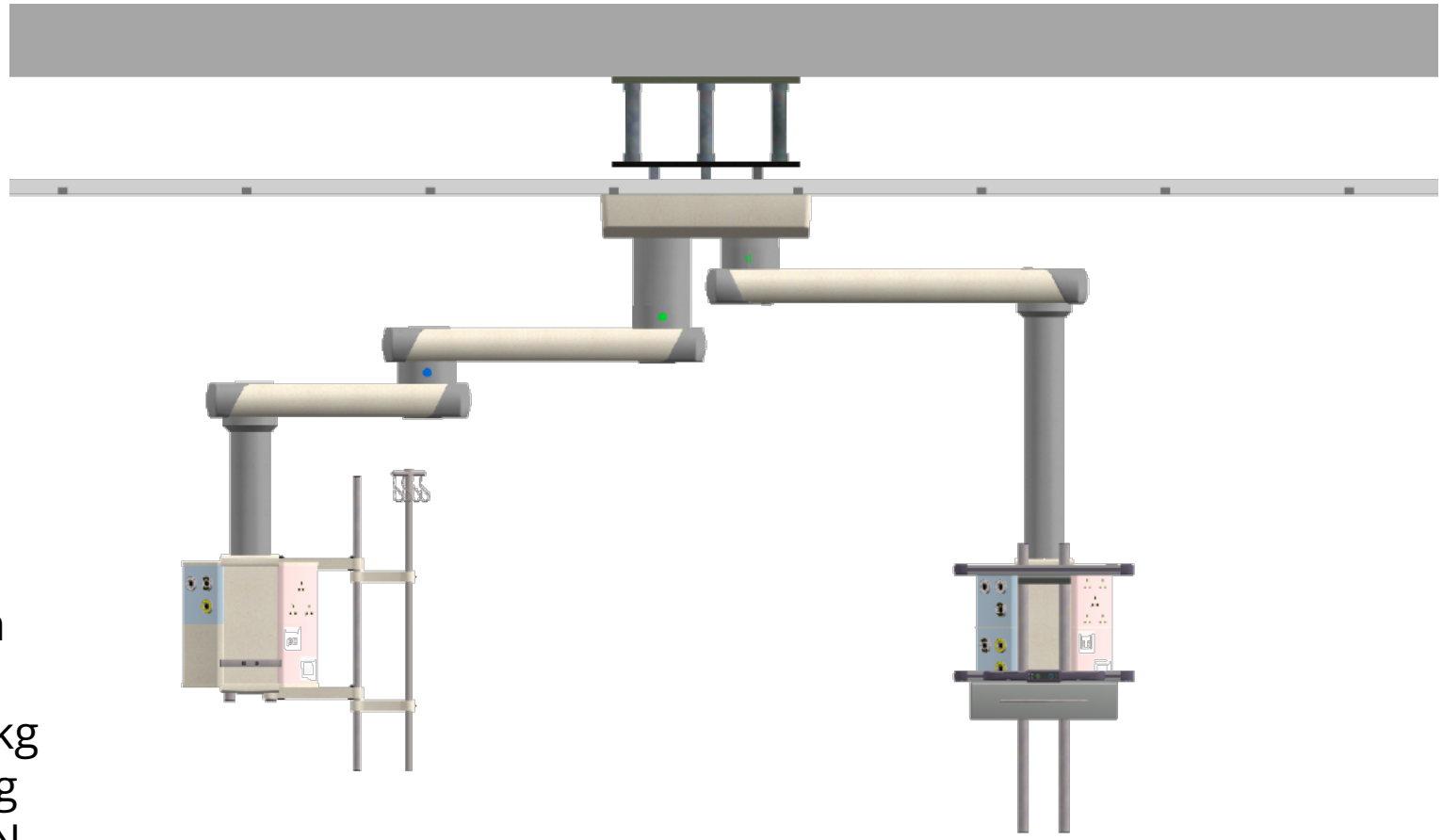
O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	3		3				1	10	6	2	3
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal ICU Basic IC1

<u>Configuration infusion side:</u>
MediBoom® Air 800/600
with Service Head 400
1 x infusion pole with extension

<u>Configuration ventilation side</u>
MediBoom® Air 1000
with Service Head 400
2 x shelf 520 mm, 1 x drawer

1. Brake systems: pneumatic
2. Action spaces*: >3,600/>2,800 mm
3. Weights and pay loads
   remaining Net Pay Load: 188/269 kg
   max. pendant pay load: 220/320 kg
   vertical force as configured: 7535 N
4. Remaining diameter: 71/56 %



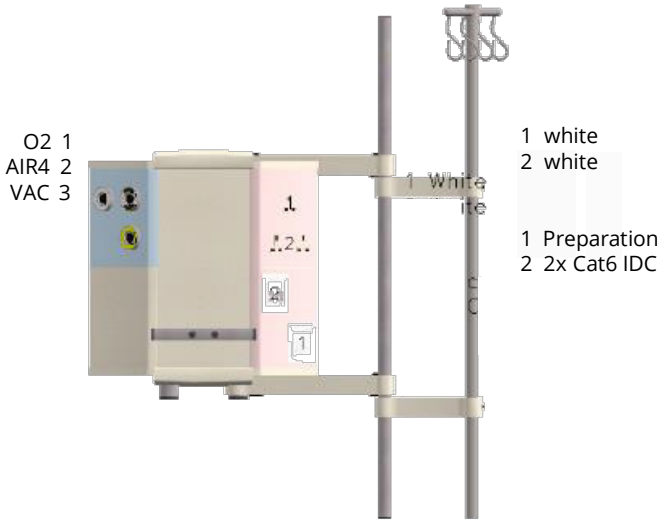
* reference: centre of main bearing to centre of shelf

Configuration proposal ICU Basic IC1

Infusion side

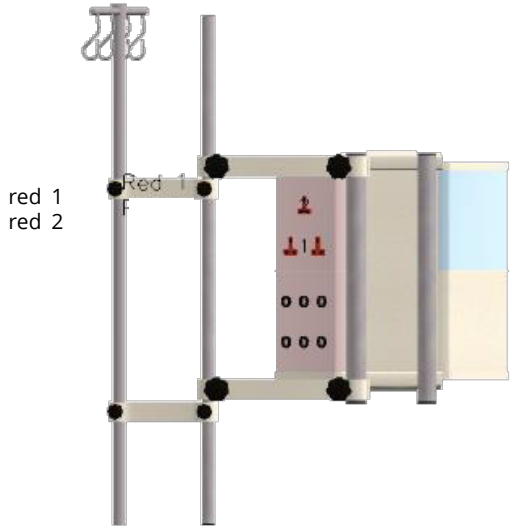
Side view right

Front view



Side view left

Back



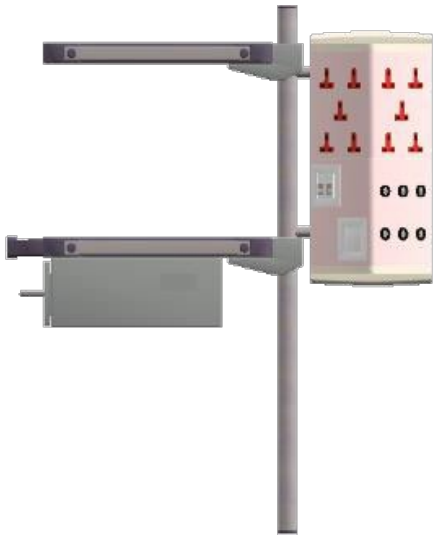
Number of service components - Infusion side

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1		1					6	6	1	1
Phoenix P3 British Standard (ISO)								Wands-worth			

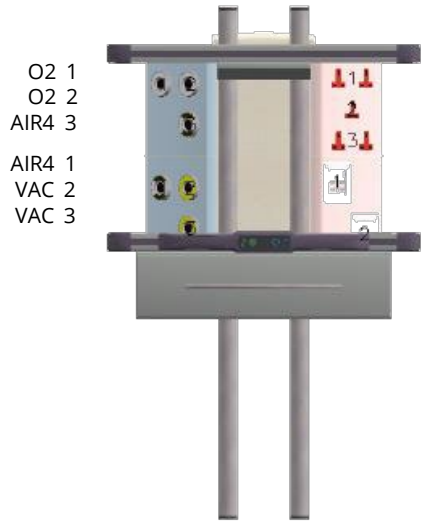
Configuration proposal ICU Basic IC1

Ventilation side

Side view right

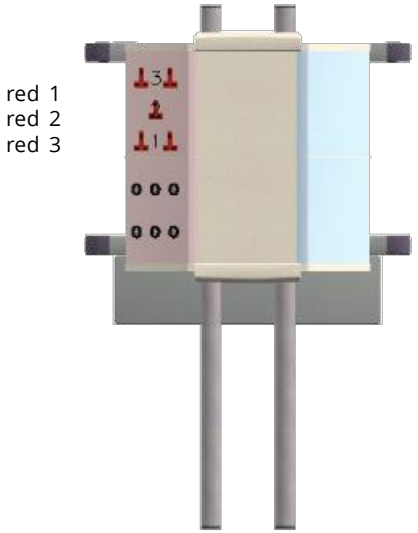


Front view



Side view left

Back



Number of service components - Ventilation side

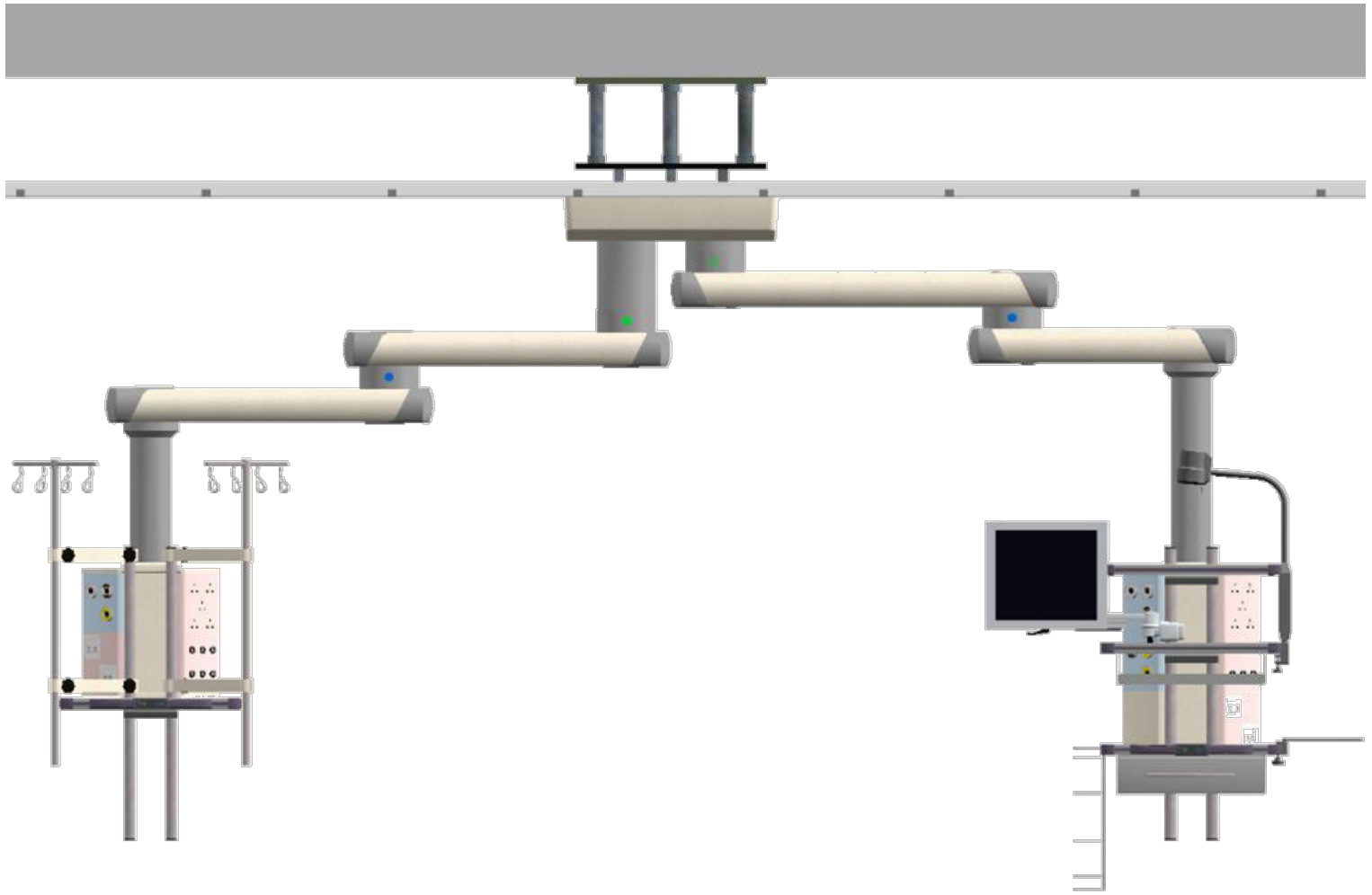
O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2		2					10	6	1	1
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal ICU Performance IC2

<u>Configuration infusion side:</u>
MediBoom® Air+ 800/800
with Service Head 400
1 x shelf 520 mm
1 x infusion pole with extension

<u>Configuration ventilation side:</u>
MediBoom® Air+ 1000/600 with
Service Head 600
3 x shelf 520 mm,
1 x drawer
1 x keyboard/writing tray

1. Brake systems: pneumatic
2. Action spaces*: >4,000/>4,000 mm
3. Weights and pay loads
   remaining net pay load: 171/148 kg
   max. pendant pay load: 220/220 kg
   vertical force as configured: 6822 N
4. Remaining diameter: 56/56 %



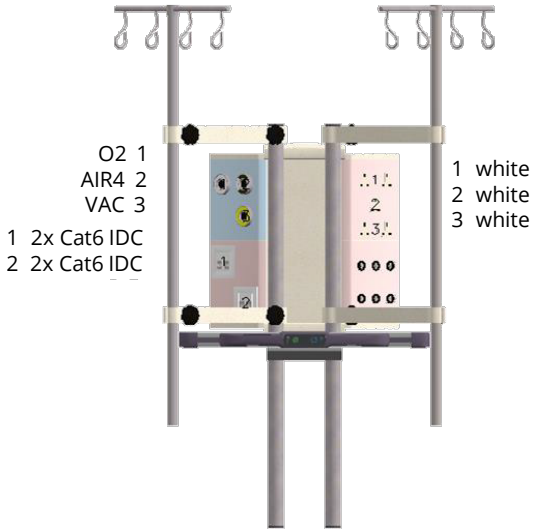
* reference: centre of main bearing to centre of shelf

Configuration proposal ICU Performance IC2

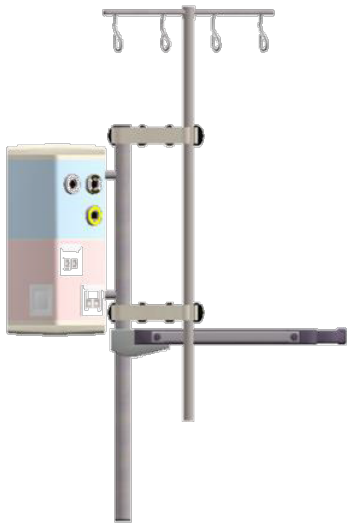
Infusion side

Side view right

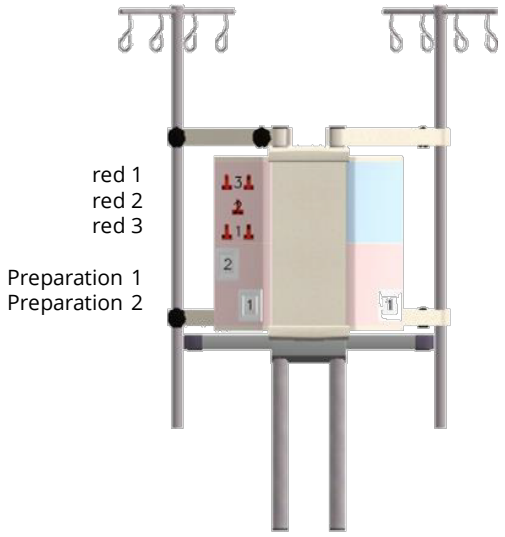
Front view



Side view left



Back



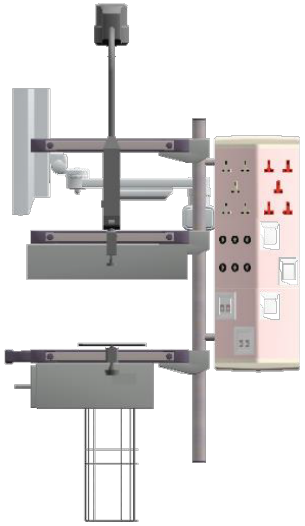
Number of service components - Infusion side

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
1	1		1					10	6	2	2
Phoenix P3 British Standard (ISO)								Wands-worth			

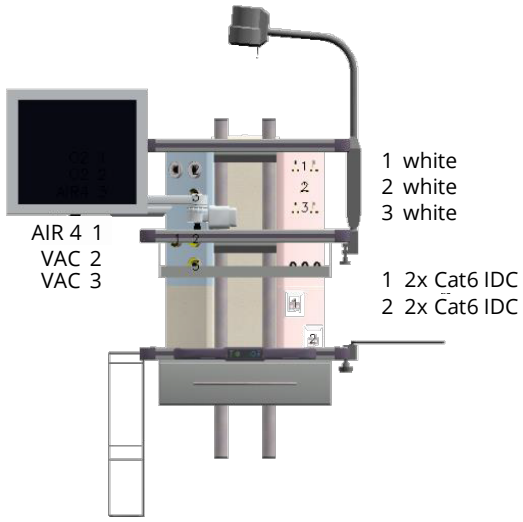
Configuration proposal ICU Performance IC2

Ventilation side

Side view right

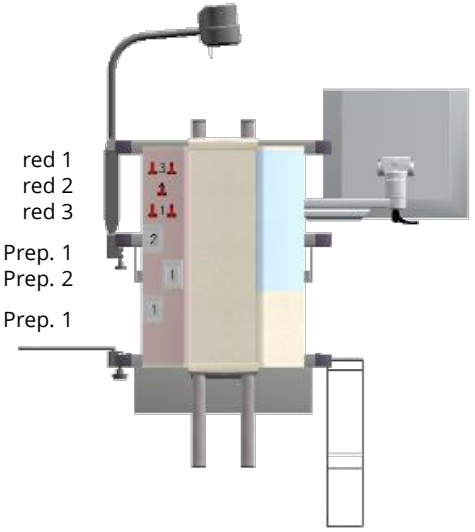


Front view



Side view left

Back



Number of service components - Ventilation side

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2		2					10	6	2	2
Phoenix P3 British Standard (ISO)								Wands-worth			

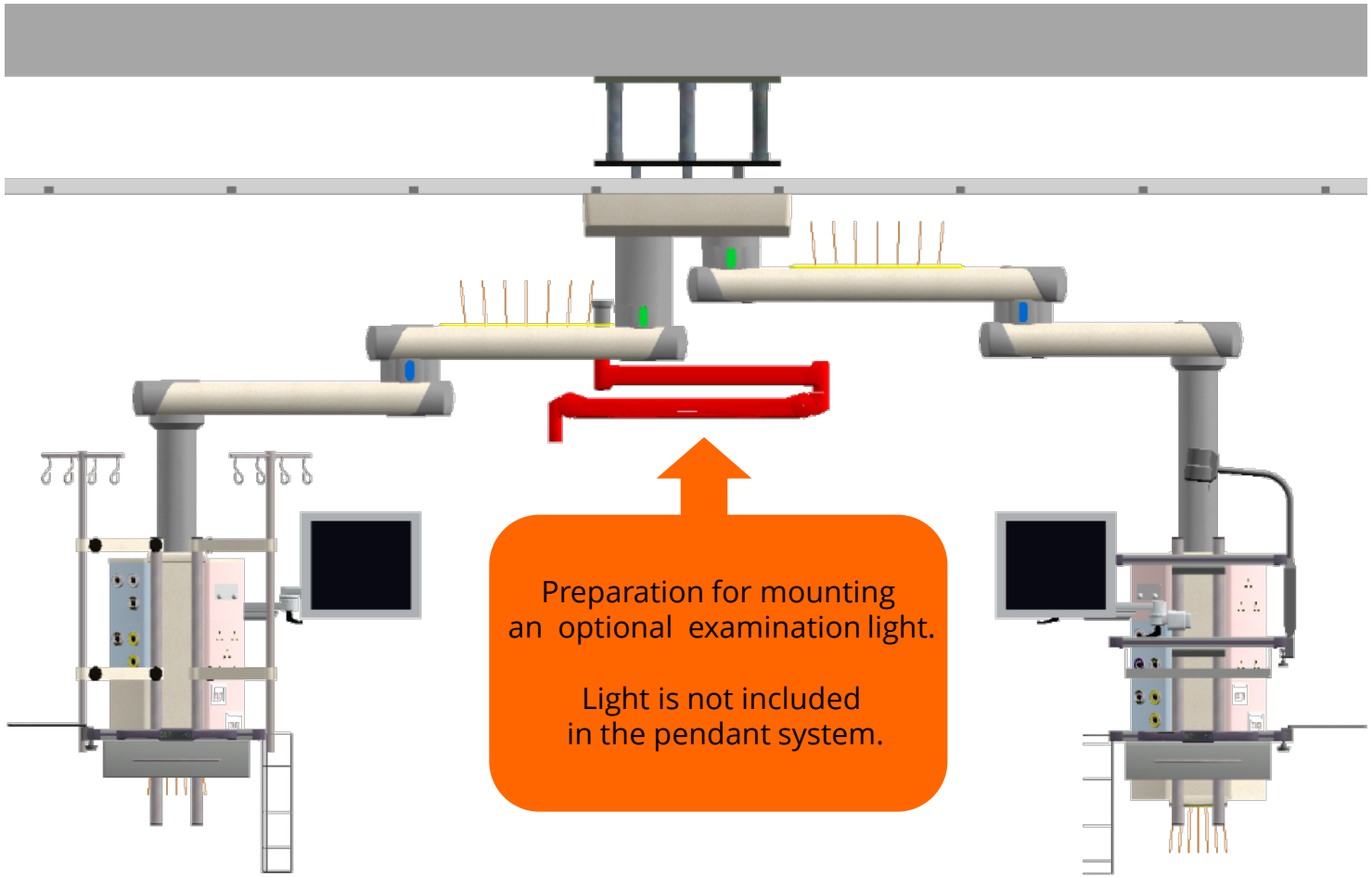
Configuration proposal ICU Prime IC3

<u>Configuration infusion side:</u>
MediBoom® 800/800
with Service Head 600
1 x shelf 520 mm
1 x drawer
2 x infusion pole with extension

<u>Configuration ventilation side:</u>
MediBoom® 1000/600
with Service Head 800
3 x shelf 520 mm,
1 x drawer
1 x keyboard/writing tray

1. Brake systems: electromagnetic
2. Action spaces*: >4,000/>4,000 mm
3. Weights and pay loads
   remaining net pay load: 161/141 kg
   max. pendant pay load: 220/220 kg
   vertical force as configured: 6822 N
4. Remaining diameter: 56/46 %

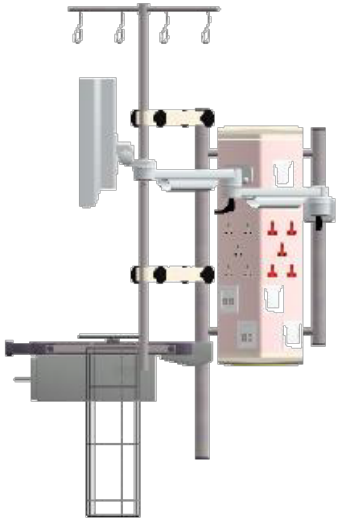
* reference: centre of main bearing to centre of shelf



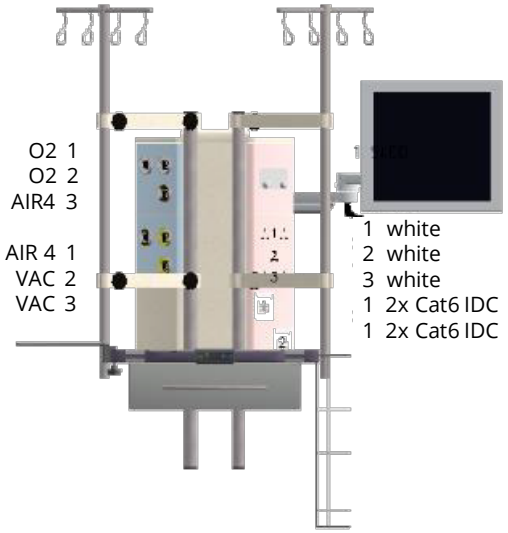
Configuration proposal ICU Prime IC3

Infusion side

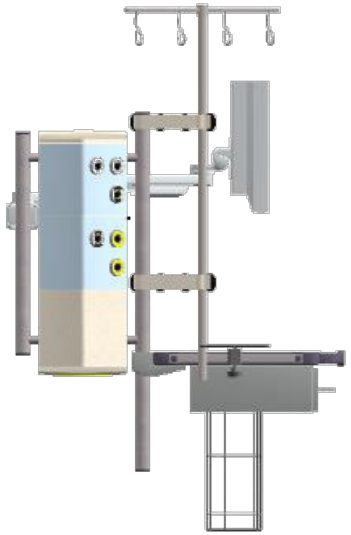
Side view right



Front view



Side view left



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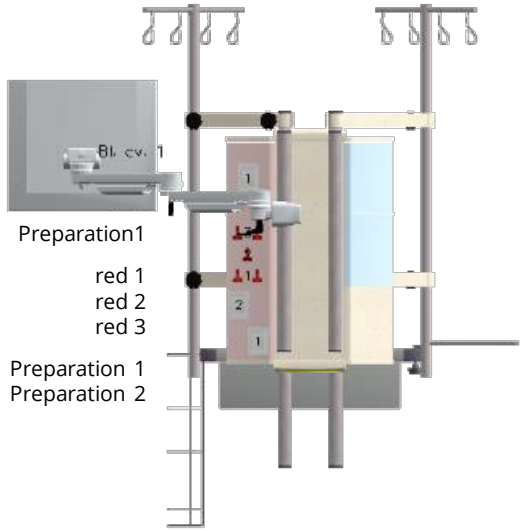


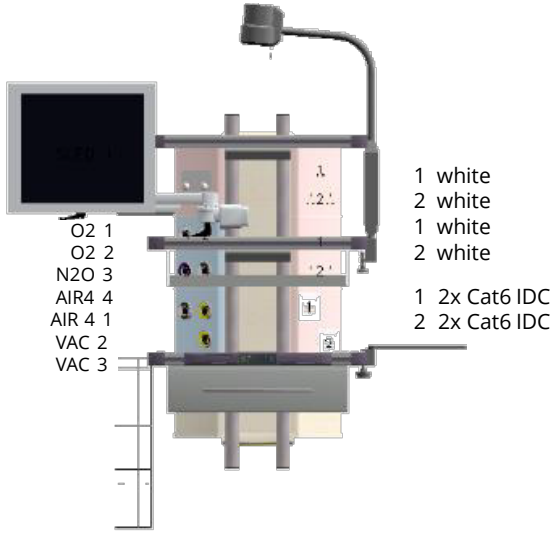
Number of service components - Infusion side

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2		2			0		10	6	2	2
Phoenix P3 British Standard (ISO)								Wands-worth			

Configuration proposal ICU Prime IC3
Ventilation side

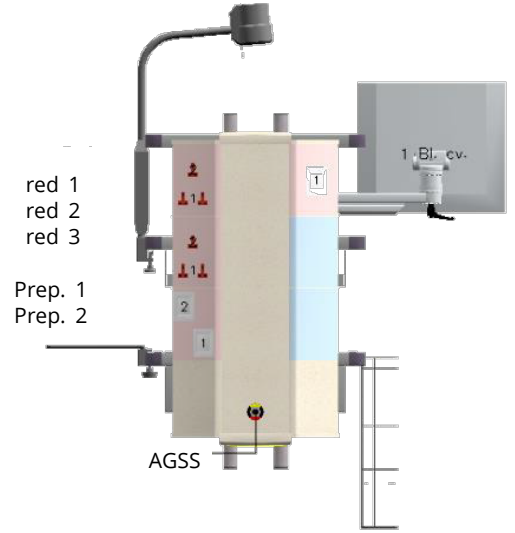
Side view right

Front view



Side view left

Back



Number of service components - Ventilation side

O_2	Air 4/5	N_2O	Vac	CO_2	N2	AGSS	Air 8/ Air-motor	Electrical sockets	Earth bonding sockets	Double RJ45	Data prep.
2	2	1	2			1		10	6	2	2
Phoenix P3 British Standard (ISO)								Wands-worth			

EMA-LED GmbH

Ottostraße 3
63785 Obernburg
Telefon: 06022 206 811
Fax: +49 6022 208 754
E-Mail: info@emaled.de
Internet: www.emaled.de