

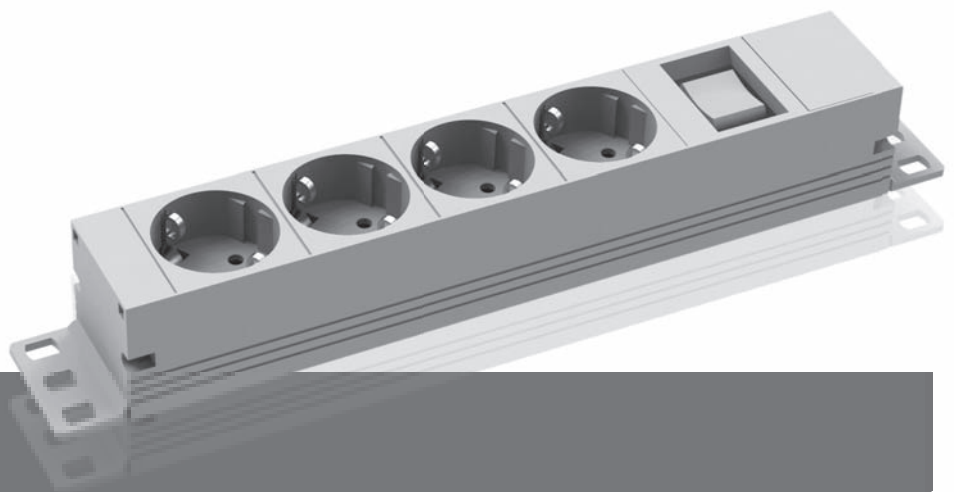
HAEBERLE

mobile workstations

Type list valid from 1 July 2019

practice-oriented and safe

electrical accessories



Notes

Electrical accessories

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Standard multiple socket outlets for all
HAEBERLE equipment cart systems

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Standard multiple socket outlets with 3 to 8 plug connectors in various country-specific versions



Technical data:

Voltage:	Depending on country version 220 to 240 V.
Output:	Total load maximum 3300 VA. IEC 320 multiple socket outlets are equipped with 10 A fuses to 2200 VA.
Protective conductor:	Bracket or plugs and aluminium housing.
Housing:	Anodised aluminium profile with plastic caps.
Fixation:	Plastic tabs with three holes.
Dimensions:	Differing lengths (see table) plus 44 mm anchoring tabs, height 44 mm, depth 44 mm.
Note:	Inspection in conformity with the medical standard VDE0750-1 is not possible.

Every multiple socket outlet is equipped with an approx. 3 m long power cable. A green power switch, which prevents inadvertent switching, disconnects all poles of all connected loads from the power supply.

Standard multiple socket outlets in various country-specific versions for HAEBERLE equipment cart series: **fuego**, **toro**, **swingo**, **keo**, **08/16**, **Variocar**, **Hospicar** und **bravo**.

Note: The reference numbers of the common multiple socket outlets are highlighted in the table in green and the different lengths of the multiple socket outlets are shown in mm.

fuego equipment cart system				
Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21506 220 mm	21696 264 mm	21686 353 mm	21556 440 mm
Type E (France)	21516 220 mm	21706 264 mm	21626 353 mm	21566 440 mm
Type K (Denmark)	21526 226 mm	21616 269 mm	21636 353 mm	21576 438 mm
Type G (British standard)	21426 253 mm	21716 308 mm	21646 418 mm	21586 528 mm
Type L (Italy)	21536 284 mm	21726 332 mm	21656 428 mm	21596 524 mm
Type J (Switzerland)	21546 220 mm	21736 264 mm	21666 353 mm	21606 440 mm
IEC320 (Type C14)	21476 264 mm	21676 303 mm	21486 396 mm	21496 484 mm

Note: fitting is only possible in the carrier profile.

toro equipment cart system				
Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21505 220 mm	21695 264 mm	21685 353 mm	21555 440 mm
Type E (France)	21515 220 mm	21705 264 mm	21625 353 mm	21565 440 mm
Type K (Denmark)	21525 226 mm	21615 269 mm	21635 353 mm	21575 438 mm
Type G (British standard)	21425 253 mm	21715 308 mm	21645 418 mm	21585 528 mm
Type L (Italy)	21535 284 mm	21725 332 mm	21655 428 mm	21595 524 mm
Type J (Switzerland)	21545 220 mm	21735 264 mm	21665 353 mm	21605 440 mm
IEC320 (Type C14)	21475 264 mm	21675 303 mm	21485 396 mm	21495 484 mm

Note: fitting is possible in the carrier profile, at a rear panel of the drawer, or at a horizontal arm.

swingo[®], swingo[®]-clinic or doppio equipment carts

Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21503 220 mm	21693 264 mm	21683 353 mm	21553 440 mm
Type E (France)	21513 220 mm	21703 264 mm	21623 353 mm	21563 440 mm
Type K (Denmark)	21523 226 mm	21613 269 mm	21633 353 mm	21573 438 mm
Type G (British standard)	21423 253 mm	21713 308 mm	21643 418 mm	21583 528 mm
Type L (Italy)	21533 284 mm	21723 332 mm	21653 428 mm	21593 524 mm
Type J (Switzerland)	21543 220 mm	21733 264 mm	21663 353 mm	21603 440 mm
IEC320 (Type C14)	21473 264 mm	21673 303 mm	21483 396 mm	21493 484 mm

Note: fitting is possible at a rear panel of the drawer or at a horizontal arm.

keo[®] functional trolley system

Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21504 220 mm	21694 264 mm	21684 353 mm	21554 440 mm
Type E (France)	21514 220 mm	21704 264 mm	21624 353 mm	21564 440 mm
Type K (Denmark)	21524 226 mm	21614 269 mm	21634 353 mm	21574 438 mm
Type G (British standard)	21424 253 mm	21714 308 mm	21644 418 mm	21584 528 mm
Type L (Italy)	21534 284 mm	21724 332 mm	21654 428 mm	21594 524 mm
Type J (Switzerland)	21544 220 mm	21734 264 mm	21664 353 mm	21604 440 mm
IEC320 (Type C14)	21474 264 mm	21674 303 mm	21484 396 mm	21494 484 mm

Note: fitting is possible on the left, right or at rear of the case.

08/16[®] multipurpose trolley 60

Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21501 220 mm	21691 264 mm	21681 353 mm	21551 440 mm
Type E (France)	21511 220 mm	21701 264 mm	21621 353 mm	21561 440 mm
Type K (Denmark)	21521 226 mm	21611 269 mm	21631 353 mm	21571 438 mm
Type G (British standard)	21421 253 mm	21711 308 mm	21641 418 mm	–
Type L (Italy)	21531 284 mm	21721 332 mm	21651 428 mm	–
Type J (Switzerland)	21541 220 mm	21731 264 mm	21661 353 mm	21601 440 mm
IEC320 (Type C14)	21471 264 mm	21671 303 mm	21481 396 mm	21491 484 mm

Note: fitting is only possible at a rear panel of a drawer. The reference numbers include the rear panel of the drawer.

08/16® multipurpose trolley 45

Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21507 220 mm	21697 264 mm	21687 353 mm	–
Type E (France)	21517 220 mm	21707 264 mm	21627 353 mm	–
Type K (Denmark)	21527 226 mm	21617 269 mm	21637 353 mm	–
Type G (British standard)	21427 253 mm	21717 308 mm	–	–
Type L (Italy)	21537 284 mm	21727 332 mm	–	–
Type J (Switzerland)	21547 220 mm	21737 264 mm	21667 353 mm	21607 440 mm
IEC320 (Type C14)	21477 264 mm	21677 303 mm	21487 396 mm	–

Note: fitting is only possible at a rear panel of a drawer.

Variocar® multipurpose trolley or Hospicar® functional trolley

Multiple socket outlet standard	3-fold	4-fold	6-fold	8-fold
Type F (Germany)	21502 220 mm	21692 264 mm	21682 353 mm	21552 440 mm
Type E (France)	21512 220 mm	21702 264 mm	21622 353 mm	21562 438 mm
Type K (Denmark)	21522 226 mm	21612 269 mm	21632 353 mm	21572 440 mm
Type G (British standard)	21422 253 mm	21712 308 mm	21642 418 mm	21582 ✘ 528 mm
Type L (Italy)	21532 284 mm	21722 332 mm	21652 428 mm	21592 ✘ 524 mm
Type J (Switzerland)	21542 220 mm	21732 264 mm	21662 353 mm	21602 440 mm
IEC320 (Type C14)	21472 264 mm	21672 303 mm	21482 396 mm	21492 484 mm

Attention: The multiple socket outlets marked with ✘ do not fit for Variocar®.

Note: In the **Variocar®** the multiple socket outlet is fixed to a shelf with a raised edge. For **Hospicar®**, the multiple socket outlet can be fixed on the left, right or at rear of the case. Ask us for the optimally suitable multiple socket outlet for your cart.

bravo® equipment cart

Multiple socket outlet standard	3-fold
Type F (Germany)	21508 220 mm
Type E (France)	21518 220 mm
Type K (Denmark)	21528 226 mm
Type G (British standard)	21428 253 mm
Type L (Italy)	21538 284 mm
Type J (Switzerland)	21548 220 mm
IEC320 (Type C14)	21478 264 mm

Note: Installation between the carrier profiles.

Multiple socket outlet with plug-out protection

Height adjustable plug-out protection for connectors or power supplies in a multiple socket outlet. Integrated in the carrier profile of the equipment carts **fuego** and **toro** or mounted on the rear wall of the equipment carts **swingo** and **toro**. Other designs on request.

Integrated in the profile of **fuego** equipment cart



Multiple socket outlet 4-fold, standard (type F) with plug-out protection, in the carrier profile of **fuego** or **toro**.

Dim.:
334 x 106 x 37 to 86 mm
(w x d x h)

Ref. no.

12200

Mounted on the rear wall of **toro** equipment cart



Multiple socket outlet 4-fold, standard (type F) with plug-out protection, on the rear wall of **swingo** or **toro**.

Dim.:
308 x 60 x 81 to 130 mm
(w x d x h)

Ref. no.

12210

Medical multiple socket outlet with plug-out protection

For equipment cart series **toro** and **swingo**



Medical multiple socket outlet with 4 plugs This medical multiple socket outlet is automatically locking through the safe-guard and can only be opened with a tool. In accordance to DIN EN 60601-1-1. 2 pole secured. Casing aluminium anodised. Operating indicator green, cable length 3 m with medical plug (Type F). 4 plugs, 90° turned with enough space in between.

Dim.:
400 x 65 x 82 mm (w x d x h)

Ref. no.

05090



Medical multiple socket outlet with 6 plugs This medical multiple socket outlet is automatically locking through the safe-guard and can only be opened with a tool. In accordance to DIN EN 60601-1-1. 2 pole secured. Casing aluminium anodised. Operating indicator green, cable length 3 m with medical plug (Type F). 6 plugs, 90° turned with enough space in between.

Dim.:
528 x 65 x 82 mm (w x d x h)

Ref. no.

05085

Plug versions for different countries

Worldwide, there are currently 17 different standardised plug connections. We can offer the following versions common in Europe. Some countries have non-standardised or varying plugs and, as such, the specified countries are mentioned for information purposes only and without responsibility. Should your country version not be listed here, we recommend you purchase in the country of destination.

Type F (Germany)



also suitable for the countries:

Afghanistan, Albania, Algeria, Andorra, Armenia, Azerbaijan, Egypt, Ethiopia, Georgia, Indonesia, Iran, Kazakhstan, Lithuania, Macedonia, Madeira, Moldavia, Russia, Slovenia, Tajikistan, Ukraine, Uzbekistan, Turkmenistan, Austria, Balearics, Azores, Bosnia Herzegovina, Bulgaria, Croatia, Finland, Estonia, Greece, Hungary, Iceland, Luxemburg, Montenegro, Netherlands, Norway, Portugal, Romania, Serbia, Spain, Sweden, Turkey.

Type E (France)



also suitable for the countries/regions:

Belgium, Czech Republic, France, Réunion, Poland, Slovakia, Benin, Guadeloupe, Martinique, French Guyana, Monaco (predominantly), Burkina Faso, Burundi, Cameroon, Central African Republic, the Comoros, Congo, Ivory Coast, Djibouti, Guinea, Mali, Mongolia, Morocco, Tahiti, Tunisia.

Type K (Denmark)



also suitable for the countries:

Greenland, Faroe Islands.

Type G (United Kingdom) British Standard BS1363



also suitable for the countries/regions:

Bahrain, Cyprus (predominantly), Gibraltar, Ireland, Guernsey, Jersey, Isle of Man, Mauritius, Oman, Botswana, Dominica, Ghana, Macao, Nigeria, Qatar, Leeward Islands, Sierra Leone, Tanzania, Zimbabwe, Brunei, Gambia, Windward Islands, Hong Kong, Kenya, United Arab Emirates, United Kingdom, Malawi, Malaysia, Malta, Seychelles, Singapore, Uganda, Falkland Islands.

Type L (Italy)



also suitable for the countries:

Libya, San Marino, Chile, Eritrea, most of Syria.

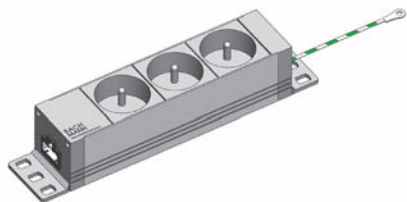
Type J (Switzerland)



also suitable for the country:

Liechtenstein.

Modular multiple socket outlets with 2 to 6 plug connectors in various country-specific versions and cable systems for individual solutions



Technical data:

Voltage:	Depending on country version 220 to 240 V.
Output:	Total load maximum 3300 VA. IEC 320 multiple socket outlets are equipped with 10 A fuses to 2200 VA.
Protective conductor:	Bracket or plugs and aluminium housing and free cable end with a 4 mm ring terminal.
Housing:	Anodised aluminium profile with plastic caps.
Fixation:	Plastic tabs with three holes.
Dimensions:	Differing lengths (see table) plus 44 mm anchoring tabs, height 44 mm, depth 44 mm.

A modern plug-in connection system is attached to the attachment side of the multiple socket outlets, where one side is equipped with an inlet and the other with an outlet. Accessories such as extensions, distributors and IEC 320 adapters are recommendable for this. Approx. 5 m long power cables in different country-specific versions are the minimally required addition. If an off switch is present, a central switch is additionally required.

In the **swingo** equipment cart, a central switch is positioned on the inside of the carrier profile. At the **toro** equipment cart, there are two positioning options, and at the **fuego** equipment cart, three positioning options.

If devices on an equipment cart are placed far away from one another, numerous multiple socket outlets can be connected by extensions. This system also enables IEC 320 outlets to be led out at specific positions. The multiple socket outlets IEC 320 and type G are equipped with 10 A fuses.

Various country-specific versions for equipment cart series: **fuego, toro, swingo**

Note: The various lengths of the multiple socket outlets are shown in the tables and may vary up to 10mm.

fuego equipment cart system				
Multiple socket outlet modular	2-fold	3-fold	4-fold	6-fold
Type F (Germany)	21743 200 mm	21748 244 mm	21753 287 mm	21758 372 mm
Type E (France)	21763 200 mm	21768 244 mm	21773 287 mm	21778 372 mm
Type K (Denmark)	21783 202 mm	21788 244 mm	21793 287 mm	21798 372 mm
Type G (British standard)	21803 264 mm	21808 319 mm	21813 374 mm	21818 484 mm
Type L (Italy)	21823 213 mm	21828 261 mm	21833 309 mm	21838 405 mm
Type J (Switzerland)	21843 200 mm	21848 244 mm	21853 288 mm	21858 376 mm
IEC320 (Type C14)	21443 242 mm	21448 286 mm	21438 330 mm	21433 418 mm

toro equipment cart system

Multiple socket outlet standard	2-fold	3-fold	4-fold	6-fold
Type F (Germany)	21742 200 mm	21747 244 mm	21752 287 mm	21757 372 mm
Type E (France)	21762 200 mm	21767 244 mm	21772 287 mm	21777 372 mm
Type K (Denmark)	21782 202 mm	21787 244 mm	21792 287 mm	21797 372 mm
Type G (British standard)	21802 264 mm	21807 319 mm	21812 374 mm	21817 484 mm
Type L (Italy)	21822 213 mm	21827 261 mm	21832 309 mm	21837 405 mm
Type J (Switzerland)	21842 200 mm	21847 244 mm	21852 288 mm	21857 376 mm
IEC320 (Type C14)	21442 242 mm	21447 286 mm	21437 330 mm	21432 418 mm

swingo® or swingo®-clinic equipment cart system

Multiple socket outlet standard	2-fold	3-fold	4-fold	6-fold
Type F (Germany)	21741 200 mm	21746 244 mm	21751 287 mm	21756 372 mm
Type E (France)	21761 200 mm	21766 244 mm	21771 287 mm	21776 372 mm
Type K (Denmark)	21781 202 mm	21786 244 mm	21791 287 mm	21796 372 mm
Type G (British standard)	21801 264 mm	21806 319 mm	21811 374 mm	21816 484 mm
Type L (Italy)	21821 213 mm	21826 261 mm	21831 309 mm	21836 405 mm
Type J (Switzerland)	21841 200 mm	21846 244 mm	21851 288 mm	21856 376 mm
IEC320 (Type C14)	21441 242 mm	21446 286 mm	21436 330 mm	21431 418 mm

Power cable for different countries

The required power cable H05 VV-F 3G1.5 (approx. 5 m long) is relieved of tension on the cart.

Country variation on input plug	Ref. no.
Type F (Germany) / Type E (France)	21400
Type K (Denmark)	21402
Type G (United Kingdom)	21403
Type L (Italy)	21404
Type J (Switzerland)	21405
IEC320 Type C14 plug-in coupling	21406
IEC320 Type C14 1 m (adapter)	21414

Extensions



to connect individual multiple socket outlets or distributors, as well as for extending cables within the **fuego**, **toro** and **swingo** equipment cart systems.

Extensions	Ref. no.
1 m long	21450
2 m long	21451
3 m long	21452

IEC cable for horizontal wiring



within the **fuego**, **toro** and **swingo** equipment carts. System available in three standard cable lengths, which provides free cable ends with IEC 320 plug-in couplings.

IEC cable	Ref. no.
0.5 m long	21410
1.0 m long	21411
2.0 m long	21412

Central on/off switch for **fuego**, **toro**, **swingo** equipment carts

A specified system, in which the power switch can be ergonomically positioned on the respective equipment cart.

On/off switch on **toro** equipment cart



Ref. no.
21865
Placement on top of the profile cover up to carrier profile height 1052 mm



Ref. no.
21864
Placement at side of the carrier profile installation height support profile 950 mm

On/off switch on **fuego** equipment cart



Ref. no.
21861
Placement on top of the profile cover up to carrier profile height 950 mm



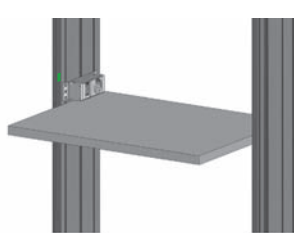
Ref. no.
21862
Placement on front of the carrier profile

Central switch for IEC system on **fuego** equipment cart



Ref. no.
19559
Placement on top of the profile cover up to carrier profile height 950 mm

On/off switch on **swingo** equipment cart



Ref. no.
21860
Placement on the inner side of the carrier profile

This central switch is suitable for the substructure transformer model U 600, ref. no. 19549 and for IEC 320 multiple socket outlet 6-fold, ref. no. 21893.

Isolating transformers

1. Isolating transformers – standing devices
2. Undermounted isolating transformers for fuego equipment cart series
3. Undermounted isolating transformers for equipment cart series swingo 60 and toro 63 / toro 45
4. LAN isolator
5. Retrofittable insulation monitor

1. Isolating transformers – standing devices

In medical operating or examining rooms, a combination of several devices, such as a cold light source, video processor, video monitor, high-frequency surgical devices, etc., are in most cases assembled on one equipment cart. The power supply then comes from multiple socket outlets, as mains sockets are often not present in sufficient numbers. Even if the individual devices do not exceed the permissible earth leakage current of max. 0.5 mA, this combination with a multiple socket outlet can result in the total earth leakage current being considerably over this limit. In the event of an interruption of the protective conductor in the supply to the multiple socket outlet, patients would be endangered by a dangerously high earth leakage current.

The use of safety isolating transformers provides the connected devices with an unearthed power supply. Thereby, even a simple error, such as an interruption of the protective conductor, does not lead to risk to the patient. Isolating transformers should also be used in rooms which have their own protective earthing system (e.g., operating rooms).

Standing devices with and without plug-out protection



Robust unit made of aluminium with POAG connection. The green-lit off switch is located on the rear of the unit.

Delivery includes a power cable (type E/F), min. 3 m long.

Isolating transformer standing device	Ref. no.	Euro	Ref. no.	Euro	Ref. no.	Euro
Model		1300		1600		2200
		16552		16545		16510

Technical data:

Nominal power	1300 VA	1600 VA	2200 VA
Input voltage	230 VAC		
Output voltage	230 VAC		
Maximum output current	5,5 A	6,8 A	9,37 A
Typical leakage current for Unom +10 %	< 300/500 µA		
Test voltage	Primary-sec.: 4 kV AC; primary-casing / sec.-casing 1,5 kV AC		
Switch-on current limiter	Yes		
Equipotential bonding (DIN42801)	POAG – S6/15		
Outlet	9 piece IEC/EN60320-2-2 (C13) UL 498 CSA C22.2 no.42		
Max. operating temperature	120 °C		
Max. altitude	3000 meters		
Protection class	I/I	I/I	I/I
Isolating transformer casing / dim.	metal, powder-coated (RAL 7035) / 235 x 325 x 125 mm (w x d x h)		
Isolating transformer – weight without power cable and packaging	13,5 kg	15,0 kg	19,0 kg
Tested by TÜV, according to the following standards	EN60601-1/:2006-ed 3.1; EN60601-1-2:2007; IEC 60601-1:1.2005 IEC 60601-1-2:2007; TÜV-SÜD - NRTL C + US		

Due to the electrical isolation by the isolating transformer, the monitoring of the secondary circuit, which is protectively separated according to EN 60601-1, for insulation faults by the FI safety switch integrated in the power supply, can no longer function. For these reasons, we recommend the installation of an insulation monitor (see page 15).

Power cable types with IEC-C19 plug-in coupling for different countries

Power cable 2 m long	Type F (Germany)	Type E (France)	Type G (British standard)	Type L (Italy)	Type J (Switzerland)	Adapter cable for cable systems 0.5 m long
Ref. no.	21920	21920	21923	21924	21925	21926

2. Undermounted isolating transformer for fuego equipment cart



Delivery includes a mounting support (aluminium sheet, RAL 9006), a POAG cable and a power cable (type E/F), each min. 3 m long.

Please note: the **fuego** equipment carts with height-adjustable lift mechanism cannot be equipped with isolating transformers.

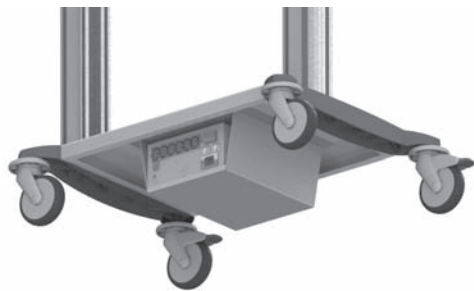
Undermounted isolating transformer	Ref. no.
Model U 600	19549

Technical data:

Nominal power	600 VA
Input voltage	230 VAC
Output voltage	230 VAC
Fuses Primary	3,15 A 5 x 20 mm
Maximum output current	2,6 A
Typical leakage current for Unom +10 %	< 200 µA
Test voltage between input and output	4 KV
Switch-on current limiter	electronic
Equipotential bonding	via pin on rail in accordance with DIN 42801
Outlet	6 x IEC 320 in one multiple socket outlet at base of carrier profile
Max. operating temperature	40 °C
Protection class	1 protective earthing
Isolating transformer casing	aluminium sheet RAL 7035
Isolating transformer – weight without power cable and packaging	8 kg
Tested by TÜV, according to the following standards	EN60601-1/A2:1995, IEC60601-1/1A2:1995, IEC 60601-1:1.2006 EN60601-1-2:2001, IEC60601-2:2001

Note: The insulation monitor can be retrofitted.

3. Undermounted isolating transformers for equipment carts swingo 60 and toro 63 / toro 45



There are 4 different versions available for the **swingo 60** and **toro 63 / toro 45** equipment cart series. Please state the respective version when ordering.

Delivery includes a central off-switch on the inside of the carrier profile, a POAG cable, a power cable (type E/F), each min. 3 m long and a mounting support (aluminium sheet, RAL 9006).

Please note: For equipment carts **swingo 60**, castors from at least \varnothing 125 mm are required! The equipment carts **swingo 45** cannot be equipped with isolating transformers.

Isolating transformers for equipment carts	U 1300	U 1300	U 2200	U 2200
	Ref. no.	Ref. no.	Ref. no.	Ref. no.
toro 63 / toro 45 swingo 60	20413 20414	20415 20416	20417 20418	20419 20420
Output	1300 V	1300 V	2200 V	2200 V
Insulation monitor	without	with	without	with
Voltage	230 V	230 V	230 V	230 V
Frequency	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz	50 / 60 Hz

Note: Isolating transformer for swingo 60 equipment cart series, Germany-specific version.

Technical data:

Undermounted isolating transformer models	U 1300	U 1300	U 2200	U 2200
Nominal power	1300 VA	1300 VA	2200 VA	2200 VA
Input voltage	230 VAC		230 VAC	
Output voltage	230 VAC		230 VAC	
Fuses Primary	6,3 A	5 x 20 mm	10 A	5 x 20 mm
Maximum output current	5,5 A	5,5 A	9,37 A	9,37 A
Typical leakage current for $U_{nom} + 10\%$	< 500 μ A		< 500 μ A	
Test voltage between input and output	4 KV		4 KV	
Switch-on current limiter	electronic			
Equipotential bonding	via pin on cart in accordance with DIN 42801			
Outlet	9 x IEC 320	8 x IEC 320	9 x IEC 320	8 x IEC 320
Protection class	1 protective earthing			
Isolating transformer casing	aluminium sheet RAL 7035			
Isolating transformer – weight without power cable, mounting support and packaging	13,5 kg	13,5 kg	19 kg	19 kg
Tested by TÜV, according to the following standards	EN60601-1/2006, EN60601-1-2:2007			

4. LAN isolator

To operate IT-devices within the medical safety area - especially when they are connections with medically electrical devices - it is necessary, besides using isolating transformers, to separate the 10/1000 MBit network connection galvanically from the rest of the IT network.

Regarding data transfer the LAN isolator is absolutely neutral and needs no software or driver installation. Between the network beyond the medical safety range and the medical safety area itself the LAN isolator builds up an isolation barrier with 4 kV AC isolation strength. In this way harmful residual currents are kept away from the patient. **Therefore the isolation barrier on the LAN connections is absolutely necessary.**

LAN isolator



new

Ref. no.

21455

Technical data:	LAN isolator
Isolation voltage:	4 KV
Input / output connector:	RJ45
Supported network protocols:	10BaseT, 100BaseTx, 1000BaseT
Insertion loss / return loss:	+1,3 dB max. / -8 dB min.
Protection:	IP 20
Max. voltage of the connected devices:	250 Vac rms
Operating temperature / storage temperature:	-10 to +70°C / -40 to +85°C
Humidity:	10 to 90% (without condensation)
Housing / weight:	Plastic / 45 g
Dimensions (w x d x h):	25 x 40 x 66 mm
Conformity acc. to:	EN 60601-1

5. Insulation monitor (retrofitable)

For safety reasons, an insulation monitor is used in medical technology. The insulation monitor tests the insulation resistance of non-earthed AC power networks with superimposed DC voltage. If the insulation resistance of the system falls below the minimum limit, an acoustic warning signal is generated. Suitable for the isolating transformers standing devices (page 12) and undermounted devices (page 14).

Insulation monitor

Without plug-in protection for **fuego**



Ref. no.

16548

Ref. no.

16517

Technical data:	Insulation monitor
Operating voltage:	230 VAC
Protection class:	1 / IP 20
Response value:	≤ 50 K Ohm
Response time:	< 2 seconds
Dimensions:	192 x 34 x 56 mm (w x d x h)
Conformity acc. to:	EN 60601-1 / 60601-1-1 / 60601-1-2

The insulation monitor **can be retro-fitted for all isolating transformers** (also from other manufacturers). It only occupies a C14 socket. The insulation monitor can be fixed anywhere on the equipment cart. The delivery includes a pull-off protection.

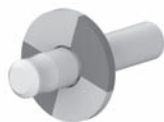
Equipotential bonding system MultiContact POAG in accordance with DIN 42801

Equipotential bonding is the term given to a highly electrically conductive connection, which should prevent differing electrical potentials and thereby, an electrical current between electrical equipment and conductive parts, and should also minimise earth resistance.

In medical technology, as of a specific risk category, equipotential bonding with a greater cross section is additionally required. For this reason, we recommend the installation of the POAG equipotential bonding system from MultiContact.

The MultiContact POAG system is characterised by the following system parts:

POAG pin

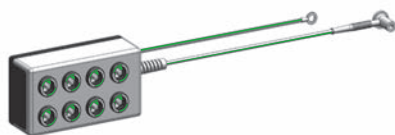


A POAG pin is recommended on every equipment cart system. This must be taken into account when ordering, as retrofitting solutions are only available for **fuego** and **toro equipment carts**, ref. no. 19529. Retro-fitting requires testing of the resistance.

The POAG pin is expertly installed and tested at the HAEBERLE plant by our mechanics. Self-assembly by the customer is not possible.

	Ref. no.
toro or fuego equipment cart POAG pin (at front or rear slot)	19529
swingo equipment cart POAG pin (in the central slot inside)	16279
toro or swingo equipment cart POAG pin (in chassis)	20140
keo functional trolley POAG pin (side or rear of housing)	20140

POAG distributor



Insulated plastic housing with 4 m long POAG connection cable. A spare cable enables the connection of the equipment cart system to the equipotential bonding. Versions with 3, 4, 6 or 8 POAG plugs are available. The POAG distributor replaces the POAG pin.

	Ref. no.
3-fold POAG distributor	21886
4-fold POAG distributor	21887
6-fold POAG distributor	21888
8-fold POAG distributor	21889

POAG bridges



Bridges are required to combine POAG plugs. The lengths 0.5 m, 1 m or 2 m are available for the connection of devices on an equipment cart. POAG bridges of 3 m, 4 m or 5 m in length for the connection of an equipment cart to a mains socket.

	Ref. no.
POAG bridge 0.5 m long	21880
POAG bridge 1 m long	21881
POAG bridge 2 m long	21882
POAG bridge 3 m long	21883
POAG bridge 4 m long	21884
POAG bridge 5 m long	21885

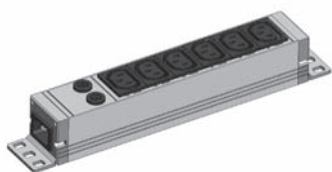
Electrical connection in accordance with IEC 320 C13/C14

The majority of small electrical medical devices have a built-in IEC 320 C14 plug at the power inlet. This internationally uniform plug connection is ideally suitable for the supply of power within equipment cart systems.

As this plug connection system has a limiting current of 10 A, a suitable limiting current unit must be present for the power supply. The IEC 320 multiple socket outlets and the isolating transformers from the HAEBERLE electrical accessories range, are equipped with corresponding fuses.

1. IEC 320 C14 power multiple socket outlet 6-fold with C14 inlet
2. Country-specific power cable
3. Extension cable / power supply cords
4. Y and distributor cable
5. Plug adaptor on earthed socket
6. IEC 320 type C14 plug / IEC plug socket

1. IEC 320 type C14 multiple socket outlet 6-fold



The C14 multiple socket outlet represents a possible input element. At the inlet is an IEC 320 plug, which is connected to six outlets through a two-pole fuse protection.

IEC 320 C14 multiple socket with 6 outlets for the **fuego** / **swingo** / **toro** equipment cart systems

IEC 320 type C14 multiple socket outlet 6-fold	Ref. no.	Ref. no.	Ref. no.
Equipment cart system	fuego	swingo	toro
without switch	21893	21891	21892
with double-pole green switch	21913	21911	21912

2. Power cable

Different power cables are available for connecting the country-neutral C14 technology.

Power cable approx. 4 m long	Type F	Type E	Type K	Type G	Type L	Type J	Type B
Ref. no.	21460	21461	21462	21463	21464	21465	21467

Type F (Germany), Type E (France), Type K (Denmark), Type G (United Kingdom), Type L (Italy), Type J (Switzerland), Type B (USA Medical Grade).

3. Extension cable

For extension or connection of loads.

Extension cable	0.5 m long	1 m long	2 m long
Ref. no.	21870	21871	21872

4. Y and distributor cables

For the realisation of simple floor wiring. Please note that the total current consumption of the connected devices remains under 10 A.

Outlets	Ref. no.
2-fold y cable	15387
3-fold distributor cable	15388

5. Plug adapter on earthed socket (type F)

This adapter enables the use of a normal power plug type F (Germany).

Plug adapter on earthed socket	Ref. no.
adapter cable, 1 m long	21875

6. IEC 320 type C14 plugs / IEC type C13 plug sockets

IEC 320 type C14 plugs



Should a device have a built-in power cable, the required C14 plug and C13 plug socket are available. The C14 plug is suitable for cables up to H05 VV-F 3G 1.5. The IEC socket C13 is suitable for the production of special power cables.

It should be installed by a qualified electrician and the guarantee of the device to be converted should be taken into consideration.

IEC type C13 plug sockets



	Ref. no.
Plug C14	11275
Plug socket C13	21879

Cable management / IEC plug socket

Practical aids for fixing, bundling or attaching cables.

Cable tie

1 bag of 20 units
(black / 200 mm long / 4.6 mm wide)

Ref. no.
07638

Cable twist tie

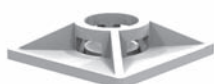
1 bag of 20 units (Polyamide nature colour) for bundling cables (from 13 to 16 mm)

Ref. no.
21418

Cable holder, self-adhesive

1 unit (natural colour / 20 x 20 mm)

Ref. no.
11096



Spiral hose

1 m long, for bundling cables (from 4 to 50 mm)

Ref. no.
21413

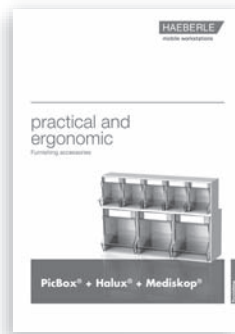
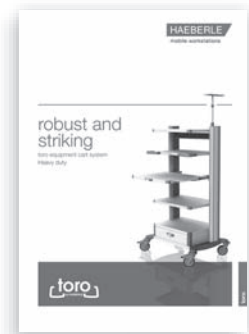
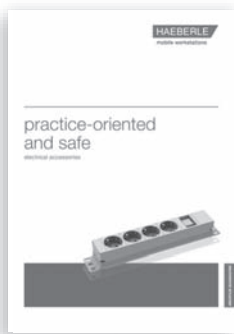
Notes

All prices are understood exclusive of VAT. As an innovative company we reserve the right to amend prices and designs. As for the rest our General Terms of Business in the valid version apply.

WEEE-Reg. no. DE 20235235



Our versatile product range



Your medical distributor

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