

8570/GMP und 8125/GMP Cleanroomtechnology

Cleanrooms

Production and fitting can, like surgical operations, be impaired by particles and germs, which are present in the atmosphere of the room.

For this reason sensitive processes and operations are carried out in special rooms or parts of rooms - the cleanrooms.

The particle concentration in the air of cleanrooms is held at a very low level.

This is done on the one hand using powerful ventilation plant with high performance filter systems, and by maintaining an overpressure in the cleanroom, and on the other hand by restricting particle emission from people and objects in the cleanroom.

Cleanroom equipment from R. STAHL

Equipment from R. STAHL SCHALTGERÄTE GMBH has been used successfully for many years in the cleanrooms of pharmaceutical plant, including BAYER and PFIZER.

The equipments and components possess exceptional properties in respect of their particle emission behaviour, their ease of cleaning and the ESD properties.

The surfaces of the devices correspond to the requirements of the following national and international standards for cleanrooms:

Germany: VDI 2083

Europe: GMP Guideline of the EU

International: ISO 14644

USA: FS 209E

Equipment in the cleanroom

For this reason, equipment located in a cleanroom must have a series of special properties:

- Equipment surfaces must:
 - be easy to clean
 - not attract any dust particles
 - restrict particle deposits to a minimum
- Equipment material must:
 - be resistant to the cleaning agents used
 - not emit any particles into the room
 - not emit any softener vapours
 - behave neutrally to any micro-organisms

STAHL



11210E00

8570/GMP

Technical Data see page 2



05563E00

8125/GMP

Technical Data see page 5



11210E00

Socket Panel for Cleanrooms Series 8570/GMP

- Explosion protection according
 - CENELEC
 - IEC
 - NEC
- Can be used in cleanrooms of
 - Zone 1 and Zone 2
 - Zone 21 and Zone 22
- Stainless steel enclosure (AISI 316L)
- For flush mounting
 - to be mounted from frontside
 - with inclined bottom for easy cleaning / disinfection
 - lockable, with particle protection
 - with latching flap for the cable
- Equipped with 1 or 2 sockets 16 A or 32 A

Socket panels for the use in cleanrooms are available in 2 sizes for 1 or 2 sockets 16 A or 32 A

The panels are easy to clean and anti-static. The sockets comply with IEC/EN 60 309-1/-2 (CEE) and the European standards EN 60079-0 and the following IEC 60079.

Zones 1 & 2, 21 & 22






Selection table

| Version | Description | Ordering code | Weight* kg |
|--|-----------------------------------|-------------------|---------------|
| Socket panels for cleanrooms Series 8570/GMP | with 1 socket 16 A or 32 A | 8570/GMP-1 | 12,500 |
| | with 2 sockets 16 A and / or 32 A | 8570/GMP-2 | 19,100 |

The socket-outlet assemblies are manufactured to order depending on the application.
* can vary slightly according to the built-in sockets.

Selection table

| Version | Number of pins | Voltage [V] | Colour | Frequency [Hz] | h | Ordering code |
|---------------------------------------|--|-------------------|--------|-------------------|---|--------------------|
| Sockets 16 A low voltage type 8570/11 |  06190E00 3 P (2 P + 1) | 100 - 130 | yellow | 50/60 | 4 | 8570/11-304 |
| | | 200 - 250 | blue | 50/60 | 6 | 8570/11-306 |
| |  06556E00 4 P (3 P + 1) | 200 - 250 | blue | 50/60 | 9 | 8570/11-409 |
| | | 380 - 415 | red | 50/60 | 6 | 8570/11-406 |
| | | 480 - 500 | black | 50/60 | 7 | 8570/11-407 |
| | | 600 - 690 | black | 50/60 | 5 | 8570/11-405 |
| |  06555E00 5 P (3 P + N + 1) | 120/208 - 144/250 | blue | 50/60 | 9 | 8570/11-509 |
| | | 200/346 - 240/415 | red | 50/60 | 6 | 8570/11-506 |
| | | 277/480 - 288/500 | black | 50/60 | 7 | 8570/11-507 |
| | | 347/600 - 400/690 | black | 50/60 | 5 | 8570/11-505 |
| Sockets 32 A low voltage type 8571/11 |  06556E00 4 P (3 P + 1) | 200 - 250 | blue | 50/60 | 9 | 8571/11-409 |
| | | 380 - 415 | red | 50/60 | 6 | 8571/11-406 |
| | | 480 - 500 | black | 50/60 | 7 | 8571/11-407 |
| | | 600 - 690 | black | 50/60 | 5 | 8571/11-405 |
| |  06555E00 5 P (3 P + N + 1) | 200/346 - 240/415 | red | 50/60 | 6 | 8571/11-506 |
| | | 277/480 - 288/500 | black | 50/60 | 7 | 8571/11-507 |

Other sockets on request



Socket Panel for Cleanrooms Series 8570/GMP

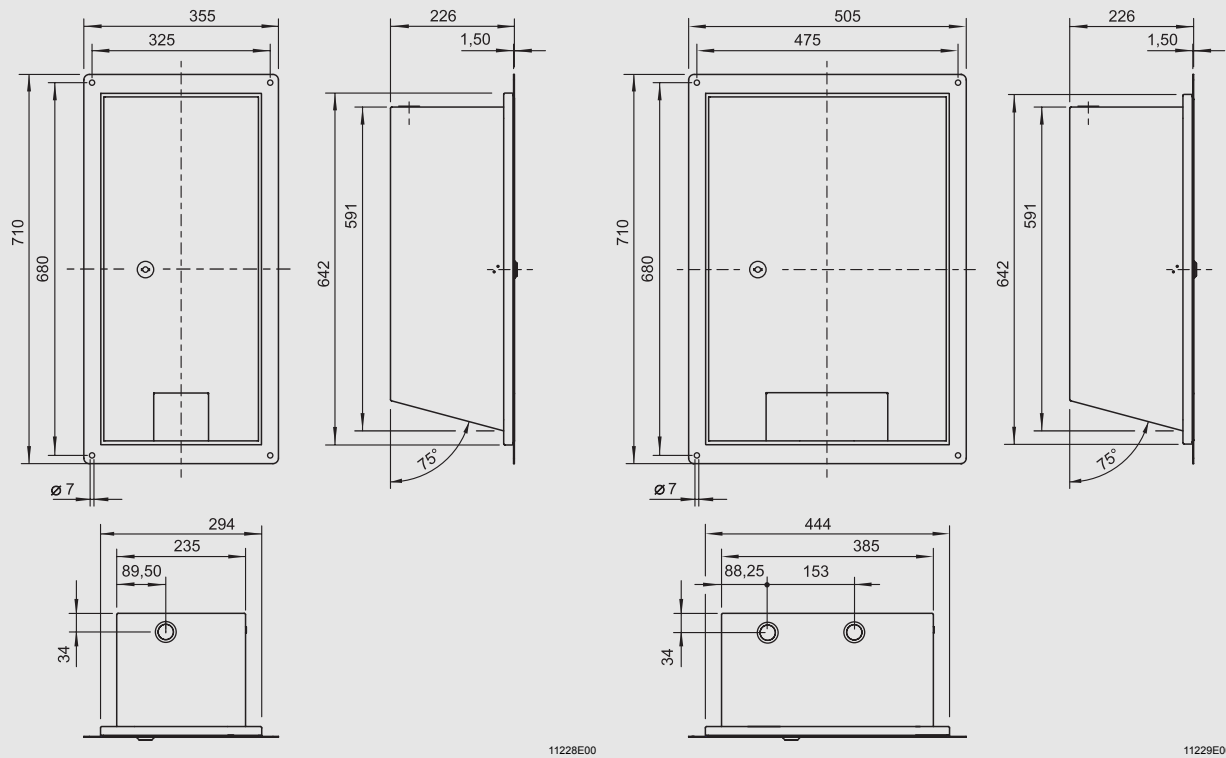
Technical Data

| | | | | | |
|---------------------------|--|----------------------|---------------|----------|-------------|
| Socket | 16 A | 32 A | | | |
| Explosion protection | | | | | |
| Gas explosion protection | II 2 G EEx ed IIC T6 | II 2 G EEx ed IIC T6 | | | |
| Dust explosion protection | II 2 D IP 66 T80 °C | II 2 D IP 66 T80 °C | | | |
| Certificates | PTB 03 ATEX 1227 | PTB 04 ATEX 1060 | | | |
| | Additional technical data see sockets | | | | |
| Panel | | | | | |
| Explosion protection | Because of the mounting of the sockets inside of an enclosure the temperature class of the whole panel is T4 | | | | |
| Housing | | | | | |
| Material | Stainless steel 1.4404 (AISI 316L) electro-polished | | | | |
| Cover seal | Polyurethane, foam | | | | |
| Degree of protection | IP 55 (with closed door and latched flap) | | | | |
| Ambient temperature | - 20 °C ... + 40 °C (other ambient temperatures on request) | | | | |
| Cable entry | Standard from above | | | | |
| | 8570/GMP-1 | Drilling | 1 x Ø 32,5 mm | Grommet: | 1 x Ø 25 mm |
| | 8570/GMP-2 | Drilling | 2 x Ø 32,5 mm | Grommet: | 2 x Ø 25 mm |

Dimension drawings (all dimensions in mm) - Subject to alterations

8570/GMP-1

8570/GMP-2



We reserve the right to make alterations to the technical data, weights, dimensions, designs and products available without notice. The illustrations cannot be considered binding.



05563E00

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Socket outlet assemblies for use in cleanrooms are available in 2 sizes, for one or two socket-assemblies 16 A or 32 A. The devices are easy to clean and anti-static. The plugs and sockets in the CES system comply with European standards for plugs and sockets IEC / EN 60 309 -1/ -2 (CEE) and European standards EN 60 079-0 ff. The ability to plug the Ex-plug into Non-Ex-sockets is guaranteed, while operation of the Ex-socket using a Non-Ex-plug is reliably prevented.

Socket Panel for Cleanrooms Series 8125

- Explosion protection according
 - CENELEC
 - IEC
 - NEC
- Can be used in cleanrooms of
 - Zone 1 and Zone 2
- Stainless steel enclosure (316L)
- For flushmounting
 - to be mounted from frontside
 - To special order: mounting frame without fixing holes, enclosure with mounting rail for back panel fixing for installation on tiled walls
- Equipped with 1 or 2 sockets 16 A or 32 A
- Degree of protection IP 65
- Low plugging and unplugging forces
- Optimal contact by means of laminated contacts
- Individually encapsulated pins, flexibly embedded
- Switch
 - With large handle
 - with motor switching capacity AC23 to VDE 0660 T107 (IEC 947-3)
 - With auxiliary contact for control and signalling purpose
- Fully colour-coded plug enclosure with colours for voltage and frequency to IEC / EN 60309-1/-2 (CEE)

Zones 1 & 2



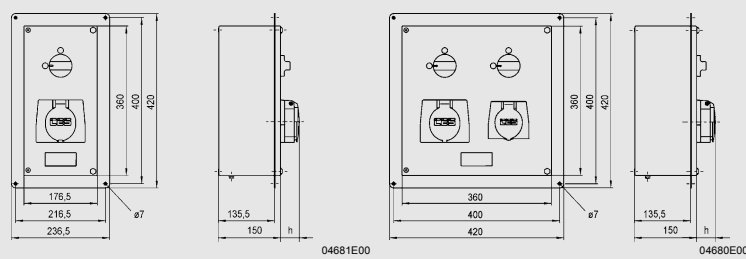
Selection Table

| | |
|-------------------------------------|----------------------|
| Version | Ordering Code |
| 16 A or 32 A | 8125/5073-GMP |
| 16 A or 32 A | 8125/5083-GMP |
| Please specify socket assembly-code | |

Technical Data

| | | |
|---------------------------|--|----------------------------|
| Explosion protection | ⊕ II 2 G EEx ed IIC T6 | |
| Certificates | PTB 01 ATEX 1001 | |
| Other certificates | FM (USA) | |
| Material | | |
| Gaskets | Polyurethane, foam | |
| Housing | Stainless steel (AISI 316L); elektro-polished | |
| Switch handle | Stainless steel | |
| Flange socket | Polyester | |
| Cover fixing | with cover hinges, hinges on right hand side; M 6, cheese head screws with combined slot; captive; stainless steel | |
| Degree of protection | IP 65 | |
| Cable entries | in moulded plastic or metal will be as ordered | |
| Ambient temperature | - 20 °C ... + 40 °C | |
| Explanation | Available versions of socket assemblies are identical to those of the wall-mounted sockets (see data sheet wall-mounted sockets) | |
| | 8800/231 | 8800/232 |
| Rated current | 16 A | 32 A |
| Rated Voltage | 20 V ... 690 V + 5% (depending on socket assemblies used) | |
| Connection | to terminal blocks | |
| Wire size range | | |
| solid leads | 0.5 ... 6 mm ² | 0.5 ... 10 mm ² |
| flexible leads | 0.5 ... 4 mm ² | 0.5 ... 6 mm ² |
| Fuse capacity | | |
| without therm. protection | 16 A | 32 A |
| with therm. protection | 16 A gL | 32 A gL |
| Interlocked switch | 3-pole switch with isolating facility 1 auxiliary contact (ON - delayed, OFF - advanced) | |
| Handle | Actuator, ON-OFF position indicating 0 and I | |

Dimension drawings (all dimensions in mm)



8125/5073

8125/5083

Hight of socket flange

| Version | h [mm] |
|---------|--------|
| 16 A | 38 |
| 32 A | 45 |