



Sample gas probe GAS 222.31 Ex2

In many applications gas analysis is the key for safe and efficient control of process flows, environmental protection and quality assurance. In extractive gas analysis the location of the gas sampling point is crucial for the reproducibility and accuracy of the analysis results.

The specific filter capacity, corrosion resistance and functional equipment requirements for the probe arise from the composition of the sample gas.

However, operating costs are also an important criterion in the selection, as the sampling points are frequently located at hard to access points in the system. Effective particle filter backwashing options and low maintenance characterise the extensive GAS probe series.

Versions with Atex and IECEx approval

Heated probe with shut-off valve, upstream filter and weather hood

The probe body and the area around the screw connection for the heated sample gas line are completely insulated

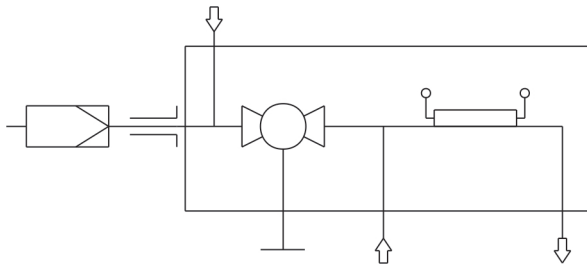
Heater self-regulating to approx. 120 °C (T3)/70 °C (T4) with low temperature alarm

For dust loads up to 200 g/m³

This probe is suitable for use in explosive areas



Flow chart



Technical Data

Gas Probe Technical Data

| | | |
|--|--|------------------------------------|
| Ambient temperature without accessories: | -20 to +80 °C | |
| Ambient temperature for accessories: | Component | Ambient temperature range |
| | Compressed air valve: | -30 °C < T _{amb} < +60 °C |
| | Solenoid valve for pneumatic drive: | -10 °C < T _{amb} < +55 °C |
| | Pneumatic drive: | -20 °C < T _{amb} < +80 °C |
| | Limit switch: | -25 °C < T _{amb} < +60 °C |
| | Terminal box: | -20 °C < T _{amb} < +70 °C |
| Max. gas inlet temperature: | +195 °C (T3)/+130 °C (T4) | |
| Medium temperature (blowback): | Component | Medium temperature range |
| | Compressed air valve: | -10 °C to +80 °C |
| | Solenoid valve for pneumatic drive: | -10 °C to +100 °C |
| Self-regulating heater: | +120 °C (T3)/+70 °C (T4) | |
| Low temperature alarm: | Contact switches at < 95 °C (T3) or < 50 °C (T4); Simple electrical equipment according to EN 60079-11; U _i 30 V, I _i = 100 mA; C _i /L _i ~0 | |
| Electrical data: | 230 V, 2.0 A, 50/60 Hz 115 V, 3.8 A, 50/60 Hz | |
| Max. operating pressure | 6 bar | |
| Material: | 1.4571; ball valve 1.4408 | |
| Parts in contact with media: | Seals: Graphite/1.4404 and see filter | |
| Markings: | ATEX: II 3G Ex ec ic mb IIC T3/T4 Gc IECEX: Ex ec ic mb IIC T3/T4 Gc | |

Ordering instructions

The item number is a code for the configuration of your unit. Please use the following model key:

| 4622231 | X | 0 | X | X | X | X | 3 | X | X | X | X | X | X | X | Product Characteristics |
|---------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| | | | | | | | | | | | | | | | Junction Box: |
| | | 0 | | | | | | | | | | | | | No |
| | | 1 | | | | | | | | | | | | | Yes |
| | | | | | | | | | | | | | | | Flange |
| | | 0 | 1 | | | | | | | | | | | | Flange DN65 PN6 |
| | | 0 | 2 | | | | | | | | | | | | Flange DN3"-150 |
| | | | | | | | | | | | | | | | Hazardous area Outside and Inside |
| | | | 2 | 9 | | | | | | | | | | | Ex-Zone 2 outside |
| | | | 2 | 2 | | | | | | | | | | | Ex-Zone 2 outside and inside |
| | | | | | | | | | | | | | | | Temperature class |
| | | | | 3 | | | | | | | | | | | T3 |
| | | | | 4 | | | | | | | | | | | T4 |
| | | | | | | | | | | | | | | | Power supply sample probe |
| | | | | | | | 3 | | | | | | | | 115/230 V |
| | | | | | | | | | | | | | | | Low temperature alarm |
| | | | | | | | | 1 | | | | | | | NC contact (open at operating temperature) (marked "ic") |
| | | | | | | | | 2 | | | | | | | NO contact (closed at operating temperature) (marked "ic") |
| | | | | | | | | | | | | | | | Calibrating gas port |
| | | | | | | | | 0 | | | | | | | No |
| | | | | | | | | 1 | | | | | | | 6 mm |
| | | | | | | | | 2 | | | | | | | 6 mm with check valve |
| | | | | | | | | 3 | | | | | | | 1/4" |
| | | | | | | | | 4 | | | | | | | 1/4" with check valve |
| | | | | | | | | | | | | | | | Capacitive vessel |
| | | | | | | | | 0 | | | | | | | No |
| | | | | | | | | 1 | | | | | | | Yes (not for Zone 2 inside) |
| | | | | | | | | | | | | | | | Valve for pressurized air |
| | | | | | | | | 0 | | | | | | | Ball valve |
| | | | | | | | | 1 | | | | | | | Solenoid valve 115 V (marked "mb") |
| | | | | | | | | 2 | | | | | | | Solenoid valve 230 V (marked "mb") |
| | | | | | | | | 3 | | | | | | | Solenoid valve 24 V (marked "mb") |
| | | | | | | | | 9 | | | | | | | none |
| | | | | | | | | | | | | | | | Pneumatic actuator for internal ball valve |
| | | | | | | | | 0 | | | | | | | No |
| | | | | | | | | 1 | | | | | | | Mono stable depressurized open |
| | | | | | | | | 2 | | | | | | | Mono stable depressurized closed |
| | | | | | | | | | | | | | | | Limit switch for pneumatic actuator |
| | | | | | | | | 0 | | | | | | | No |
| | | | | | | | | 1 | | | | | | | Yes |
| | | | | | | | | | | | | | | | Solenoid valve for pneumatic actuator |
| | | | | | | | | 0 | | | | | | | No |
| | | | | | | | | 1 | | | | | | | Yes (marked "mb") |

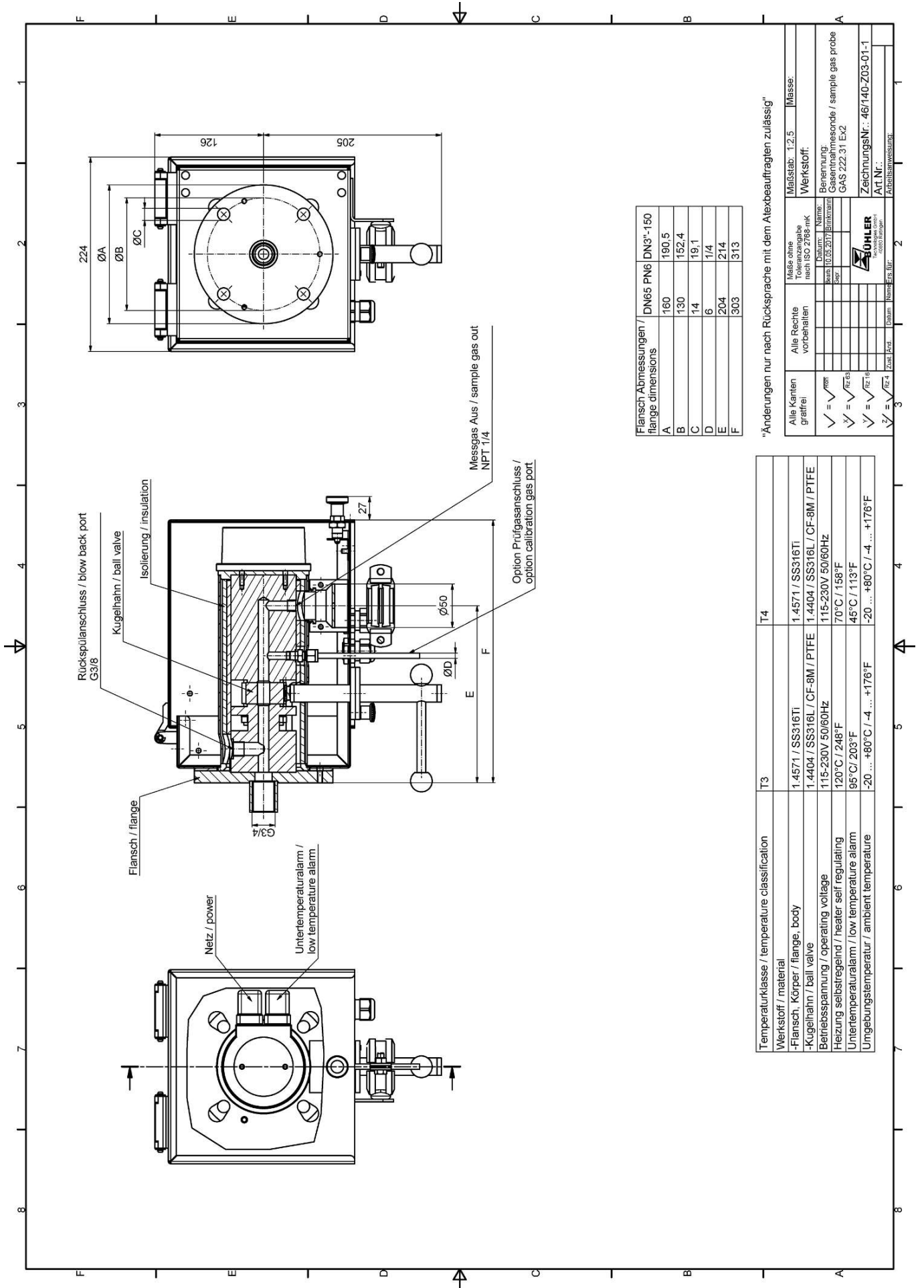
Options

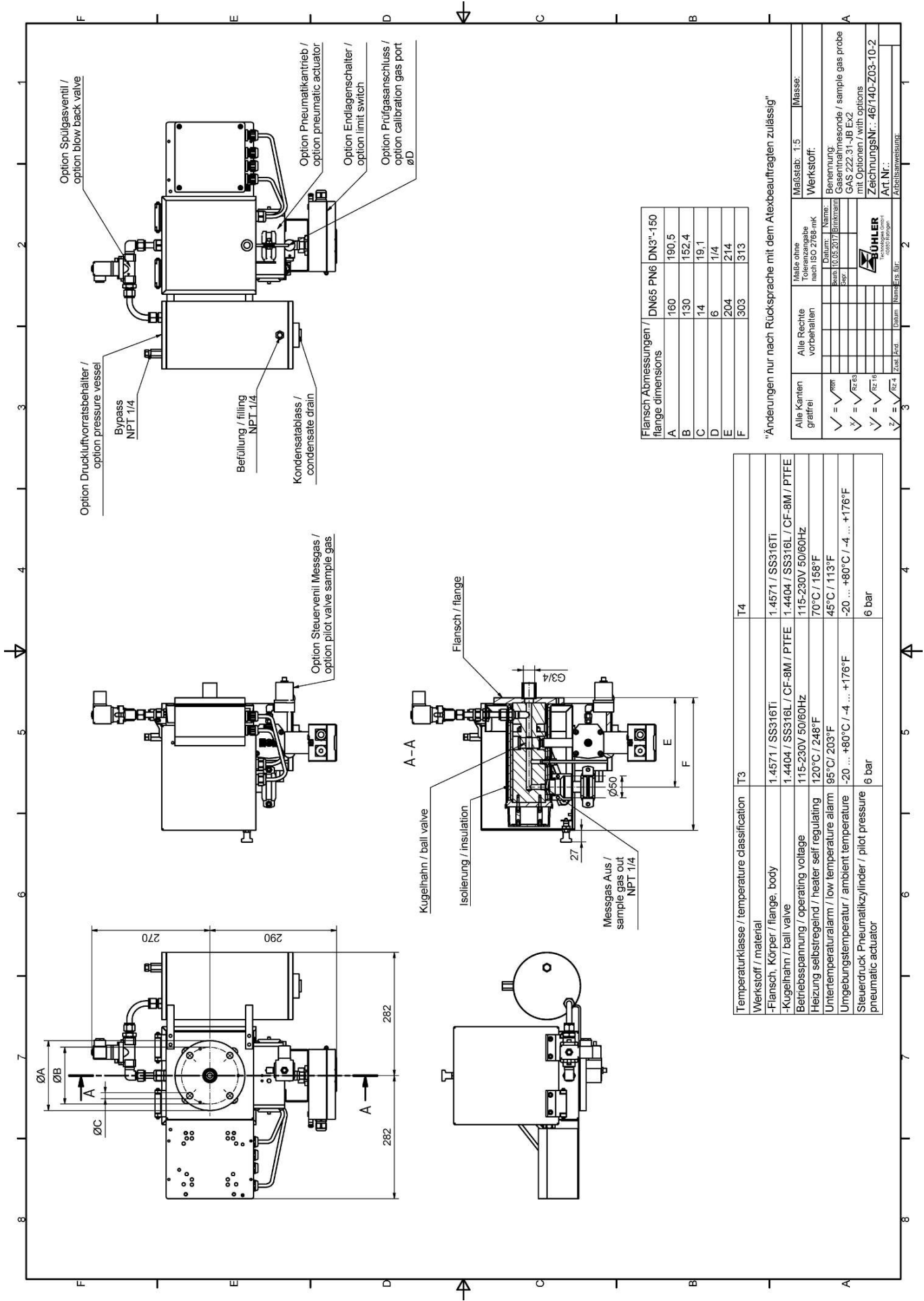
The base unit becomes functional by adding accessories suitable for the application. Please refer to accessory data sheet no. 461099 for information.

Please also refer to data sheet no. 461000 "GAS 222 Gas Probes" for a general description.

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Dimensions





| Flansch Abmessungen / flange dimensions | DN65 PN6 | DN3"-150 |
|--|----------|----------|
| A | 180 | 190,5 |
| B | 130 | 152,4 |
| C | 14 | 19,1 |
| D | 6 | 1/4 |
| E | 204 | 214 |
| F | 303 | 313 |

| | | |
|---|-------------------------------|--------------------------------|
| Temperaturklasse / temperature classification | T3 | T4 |
| Werkstoff / material | 1.4571 / SS316Ti | 1.4571 / SS316Ti |
| -Flansch Körper / flange, body | 1.4404 / SS316L | 1.4404 / SS316L / CF-8M / PTFE |
| -Kugelhahn / ball valve | 115-230V 50/60Hz | 115-230V 50/60Hz |
| Betriebsspannung / operating voltage | 120°C / 248°F | 70°C / 158°F |
| Heizung selbstregulend / heater self regulating | 95°C/ 203°F | 45°C / 113°F |
| Untertemperaturalarm / low temperature alarm | -20 ... +80°C / -4 ... +176°F | -20 ... +80°C / -4 ... +176°F |
| Umgebungstemperatur / ambient temperature | 6 bar | 6 bar |
| Steuerdruck Pneumatikzylinder / pilot pressure pneumatic actuator | | |

Änderungen nur nach Rücksprache mit dem Atexbeauftragten zulässig

| Alle Rechte vorbehalten | Maßstab: 1:5 | Messe: | | | | | | | | | | | | | | | | | | |
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| <table border="0"> <tr> <td>Alle Kanten gratfrei</td> <td>✓ = ✓_{min}</td> <td>✓ = ✓_{max}</td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> </tr> <tr> <td></td> <td>✓ = ✓_{max}</td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> </tr> <tr> <td></td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> <td>✓ = ✓_{100%}</td> </tr> </table> | | Alle Kanten gratfrei | ✓ = ✓ _{min} | ✓ = ✓ _{max} | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | | ✓ = ✓ _{max} | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | ✓ = ✓ _{100%} | <table border="0"> <tr> <td>Alle Rechte vorbehalten</td> <td>Maßstab: 1:5</td> <td>Messe:</td> </tr> </table> | Alle Rechte vorbehalten | Maßstab: 1:5 | Messe: |
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| Alle Rechte vorbehalten | Maßstab: 1:5 | Messe: | | | | | | | | | | | | | | | | | | |
| <p>Mitteilung nach ISO 2768 mK</p> <p>Werkstoff:</p> <p>Bearbeitung:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>Gasreinigung / gas cleaning</p> <p>Gasreinigungsmittel / gas cleaning agent</p> <p>Zeichnungsnr.: 461740-Z03-10-2</p> | | | | | | | | | | | | | | | | | | | | |
| <p>Art.Nr.:</p> | | | | | | | | | | | | | | | | | | | | |
| <p>Arbeitsweise:</p> | | | | | | | | | | | | | | | | | | | | |