

DOKUMENTACJA  
POWYKONAWCZA

|   |  |  |   |  |  |
|---|--|--|---|--|--|
| Data:<br><b>19.01.2024 r.</b>   |  | <b>KARTA ZATWIERDZENIA / ZAMIANY<br/>MATERIAŁÓW I URZĄDZEŃ DO WBUDOWANIA</b> |   | Nr karty                                       |  |
| Nazwa zadania: Rozbudowa budynku S-1<br>o zachodnie skrzydło  |  |  | Inwestor:<br><b>Akademia Górniczo-Hutnicza</b> Im.<br><b>Stanisława Staszica w Krakowie</b> |  |  |
| Generalny Wykonawca:<br><b>Baudziedzic Sp. z o.o. Sp. K.</b>  |  | Odpowiedzialny od GW:<br>Stanisław Kielbicki                                 |   | Branża : budowlana/<br>sanitarna / elektryczna |  |
| Nazwa dokumentacji lub projektu<br><b>Projekt wykonawczy instalacji gazów<br/>technicznych</b>  |  | Numer dokumentacji :<br>KR-D3-1.02.23.PW                                     |   | Nr rysunku:<br><b>GT-6</b>                     |  |
| Przekazujący:   |  | <b>Baudziedzic Sp. z o.o. Sp. K.</b>   |   |  |  |
| Adresat:<br><input type="checkbox"/> Akademia Górniczo-Hutnicza<br><input type="checkbox"/> Projektant<br><input type="checkbox"/> Inspektor Nadzoru  |  |  |   |  |  |
| Element/ materiał/ urządzenie/ system, którego dotyczy zgłoszenie:<br>Instalacja ciekłego azotu<br><br>Według poniższego zestawienia przekazuje się w celu:<br>Producent: KRIOSYSTEM SP. Z O.O.   |  |  |   |  |  |
| <input checked="" type="checkbox"/> Do akceptacji   |  | <input type="checkbox"/> Do realizacji                                       |   | <input type="checkbox"/> Do informacji         |  |
| <b>1. Lista dokumentów załączonych:</b><br>1. Karta katalogowa- zawór elektromagnetyczny<br>2. Karta katalogowa- manometr<br>3. Karta katalogowa- zawór bezpieczeństwa<br>4. Karta katalogowa- zawory kulowe<br><br><b>2. Miejsce wbudowania /zainstalowania:</b><br><b>3. AGH Budynek S1- skrzydło zachodnie D3</b><br><br><b>4. Uzasadnienie:</b> |  |  |   |  |  |
| Podpis składającego   |  |  | Przyjęto:   |  |  |

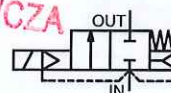
STANOWISKO (OPINIA) PROJEKTANTA:

**DOKUMENTACJA  
POWYKONAWCZA**

☐ Zatwierdzono bez uwag   ☐ Do uzupełniania danych   ☐ Zatwierdzono z uwagami   ☐ Odmowa zatwierdzenia

☐ Zatwierdzono bez uwag   ☐ Do uzupełniania danych   ☐ Zatwierdzono z uwagami   ☐ Odmowa zatwierdzenia

|       |      |        |
|-------|------|--------|
| Osoba | Data | Podpis |
|-------|------|--------|



### FEATURES

- The solenoid valves will withstand the severe service encountered in controlling cryogenic fluids, such as liquid oxygen (-183°C), liquid argon (-186°C) and liquid nitrogen (-196°C)
- Hung piston construction
- Valves do not require a minimum operating pressure
- Reliable control in low pressure, high flow systems
- All valves are degreased, cleaned, tested and packed to keep them free from moisture. In addition liquid oxygen (LOX) valves are "black light" tested to check for any hydrocarbons
- The solenoid valves satisfy all relevant EU directives

### GENERAL

Differential pressure 0 - 9 bar [1 bar = 100 kPa]  
Response time 75 - 100 ms

| fluids (*)       | temperature range (TS) | seal materials (*) |
|------------------|------------------------|--------------------|
| cryogenic fluids | - 196°C to + 90°C      | PTFE               |

### MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified

|                  |                    |
|------------------|--------------------|
| Body             | Brass              |
| Core tube        | Stainless steel    |
| Core and plugnut | Stainless steel    |
| Springs          | Stainless steel    |
| Piston           | Brass              |
| Seat             | Brass              |
| Seals            | PTFE               |
| Piston rings     | PTFE carbon filled |
| Core disc        | PTFE reinforced    |
| Piston disc      | PTFE               |
| Shading coil     | Copper             |

### ELECTRICAL CHARACTERISTICS

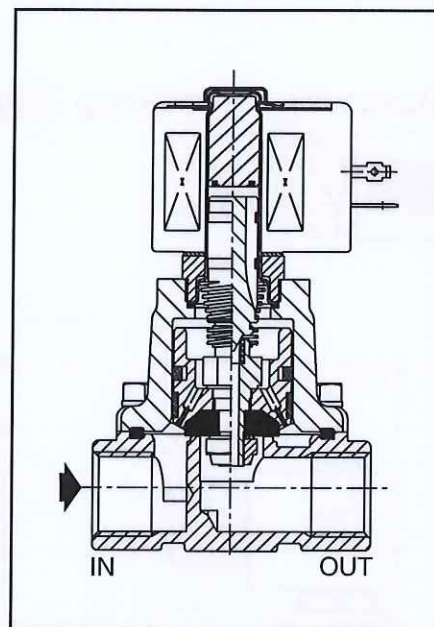
Coil insulation class H  
Connector Spade plug (cable Ø 6-10 mm)  
Connector specification ISO 4400 / EN 175301-803, form A  
Electrical safety IEC 335  
Electrical enclosure protection Moulded IP65 (EN 60529)  
Standard voltages DC (=) : Contact us  
(Other voltages and 60 Hz on request) AC (~) : 24V - 48V - 115V - 230V / 50 Hz

| prefix<br>option | power ratings |              |      |               | operator<br>ambient<br>temperature<br>range (TS) | replacement coil |   | type <sup>(1)</sup> |
|------------------|---------------|--------------|------|---------------|--|------------------|---|---------------------|
|                  | inrush<br>~   | holding<br>~ |      | hot/cold<br>= |  | ~                | = |                     |
|                  | (VA)          | (VA)         | (W)  | (W)           |  | 230 V/50 Hz      | - |                     |
|                  | (VA)          | (VA)         | (W)  | (W)           |  | -                | - |                     |
| SC               | 78            | 35           | 16.7 | -             | -20 to +75                                       | 400426-217       | - | 01                  |

<sup>(1)</sup> Refer to the dimensional drawings on the following page.

### SPECIFICATIONS

| pipe<br>size         | orifice<br>size | flow<br>coefficient<br>Kv |         | min. |  | operating pressure<br>differential (bar) |                      | power coil<br>(W) |   | catalogue<br>number | options |   |   |   |
|----------------------|-----------------|---------------------------|---------|------|--|--|----------------------|-------------------|---|---------------------|---------|---|---|---|
|                      |                 |                           |         |      |  |  |                      |                   |   |                     |         |   |   |   |
|                      |                 |                           |         |      |  |  |                      |                   |   |                     |         |   |   |   |
| Rp                   | (mm)            | (m³/h)                    | (l/min) |      |  | max. (PS)                                | cryogenic fluids (*) |                   |   |                     |         |   |   |   |
|                      |                 |                           |         |      |  |  | ~                    | ~                 | = | ~                   |         |   |   |   |
| NC - Normally closed |                 |                           |         |      |  |  |                      |                   |   |                     |         |   |   |   |
| 1/2                  | 16              | 3,3                       | 55      | 0    |  | 9  |                      | 16,7              | - | SCE222E002LT        | -       | - | - | - |
| 3/4                  | 19              | 5,1                       | 85      | 0    |  | 9  |                      | 16,7              | - | SCE222F003LT        | -       | - | - | - |





### OPTIONS

- Waterproof enclosure with embedded screw terminal coil according to protection class IP67, CEE-10
- Compliance with "UL", "CSA" and other local approvals available on request
- Other pipe connections are available on request
- Connector with visual indication and peak voltage suppression or with cable length of 2 m ([www.asco.com](http://www.asco.com))

### INSTALLATION

- The solenoid valves must be mounted vertical and upright
- Pipe connection identifier is E = Rp (ISO 7/1)
- Installation/maintenance instructions are included with each valve

### SPARE PARTS KITS

| catalogue number | spare parts kit no. |   |
|------------------|---------------------|---|
|                  | ~                   | = |
| SCE222E002LT     | C304065LT           | - |
| SCE222F003LT     | C304065LT           | - |

- Not available

### ORDERING EXAMPLES:

|    |   |     |   |     |    |              |
|----|---|-----|---|-----|----|--------------|
| SC | E | 222 | E | 002 | LT | 230V / 50 Hz |
| SC | E | 222 | F | 003 | LT | 24V / 50 Hz  |

prefix      pipe thread      basic number      voltage      suffix

### ORDERING EXAMPLES KITS:

|         |
|---------|
| C304065 |
|---------|

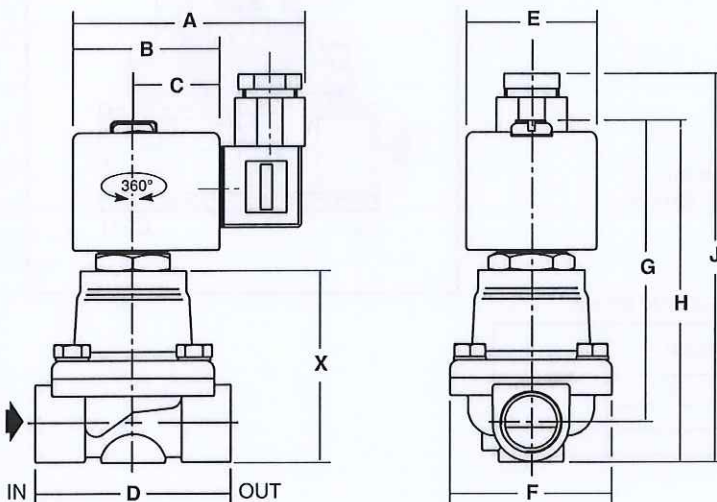
basic number

### DIMENSIONS (mm), WEIGHT (kg)



#### TYPE 01

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65



| type | prefix option | catalogue number | A  | B  | C  | D  | E  | F  | G   | H   | J   | X  | weight <sup>(1)</sup> |
|------|---------------|------------------|----|----|----|----|----|----|-----|-----|-----|----|-----------------------|
| 01   | SC            | SCE222E002LT     | 80 | 50 | 30 | 70 | 45 | 59 | 104 | 119 | 131 | 69 | 1,1                   |
|      |               | SCE222F003LT     | 80 | 50 | 30 | 73 | 45 | 58 | 108 | 125 | 137 | 75 | 1,2                   |

<sup>(1)</sup> including coil and connector.

All leaflets are available on: [www.asco.com](http://www.asco.com)

# Globe Valves

## Type 01311 - Globe Valve

### Cryogenic-Globe and Globe/Check Valves, PN50

Bronze body and topwork  
 "live loaded" gland packing  
 "cleaned and degreased for oxygen service"

**Part No. 01311.X.0017 (H=270mm)**

**Part No. 01311.X.0027 (H=370mm)**

**Part No. 01311.X.5017 (H=270mm) Globe/Check Valve**

**Part No. 01311.X.5027 (H=370mm) Globe/Check Valve**

Complete with stainless steel stubs acc. to DIN EN 10216-5 or ASTM A312

Available options - on request only:

- Extension H up to 900mm
- Valve with control disc (tapered design)
- Further pipe wall thicknesses

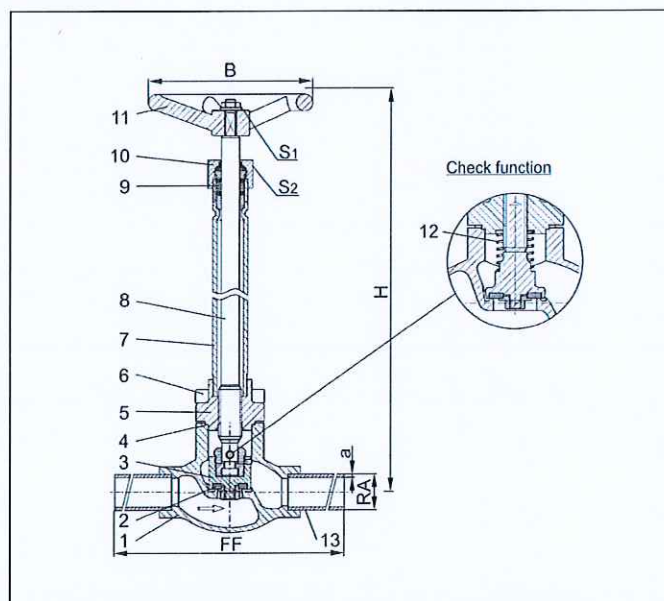


### Applications:

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +120°C / +248°F (393K)

| Materials                | DIN EN                     | ASTM             |
|--------------------------|----------------------------|------------------|
| 1 Body                   | CC491K                     | B 62 UNS C83600  |
| 2 Valve seal             | PTFE / Carbon filled (25%) |                  |
| 3 Disc                   | CW614N                     | B 283 UNS C38500 |
| 4 Bonnet gasket          | PTFE                       |                  |
| 5 Headpiece              | CC493K                     | B 505 UNS C93200 |
| 6 Bolts                  | 1.4301/A2                  | A 194 B8         |
| 7 Elongation tube        | 1.4541                     | A 213 TP 321     |
| 8 Stem                   | 1.4301                     | A 276 Grade 304  |
| 9 Gland packing          | Graphite / PTFE / MICA     |                  |
| 10 Gland nut             | CW614N                     | B 283 UNS C38500 |
| 11 Handwheel             | Aluminium alloy            |                  |
| 12 Spring                | CW452K                     | B 159 UNS C51900 |
| 13 Stainless steel stubs | 1.4306                     | A 312 TP304L     |



| Type 01311 - Standard design  |                   | Technical data                |       |       |       |      |       |       |       |
|-------------------------------|-------------------|-------------------------------|-------|-------|-------|------|-------|-------|-------|
| Nominal size                  | DN                | 10                            | 10    | 15    | 20    | 25   | 32    | 40    | 50    |
| Dimension code                | .X.               | 1012                          | 1017  | 1521  | 2027  | 2533 | 3242  | 4048  | 5060  |
| Face-to-face dimension        | FF                | 210                           | 210   | 235   | 235   | 265  | 265   | 290   | 310   |
| Height                        | H                 | 270mm or 370mm                |       |       |       |      |       |       |       |
| Outside pipe-Ø ISO 1127       | RA                | 12.0                          | 17.2  | 21.3  | 26.9  | 33.7 | 42.4  | 48.3  | 60.3  |
| Wall thickness pipe ISO 1127  | a                 | 1.0                           | 2.3   | 2.6   | 2.9   | 3.2  | 3.2   | 3.6   | 3.6   |
| Outside pipe-Ø ASTM A312      | RA                | -                             | 17.15 | 21.34 | 26.67 | 33.4 | 42.16 | 48.26 | 60.33 |
| Wall thickness pipe ASTM A312 | a                 | dimensions acc. to S10 or S40 |       |       |       |      |       |       |       |
| Handwheel-Ø                   | B                 | 100                           | 100   | 100   | 100   | 100  | 125   | 125   | 125   |
| Wrench size across flats      | S <sub>1</sub>    | 7                             | 7     | 7     | 7     | 7    | 10    | 10    | 10    |
| Wrench size across flats      | S <sub>2</sub>    | 30                            | 30    | 30    | 30    | 30   | 36    | 36    | 36    |
| Weight                        | ca. kg            | 1.45                          | 1.55  | 2.0   | 2.4   | 2.8  | 3.7   | 5.2   | 7.8   |
| Kvs-Value                     | m <sup>3</sup> /h | 2.2                           | 2.2   | 4.3   | 6.7   | 11.5 | 12.1  | 22.6  | 37.1  |
| Cv-Value                      | gal/min           | 2.6                           | 2.6   | 5.0   | 7.8   | 13.4 | 14.1  | 26.3  | 43.2  |

Dimensions in mm.

1. Project Name  
 2. Project Number  
 3. Project Manager  
 4. Project Sponsor  
 5. Project Start Date  
 6. Project End Date  
 7. Project Budget  
 8. Project Status  
 9. Project Location  
 10. Project Description



The project is currently in the planning phase. The project manager has identified the key stakeholders and has begun to define the project scope. The project sponsor has approved the project charter and has allocated the necessary resources. The project team has been formed and has begun to develop the project plan. The project is expected to be completed by the end of the year.

The project is currently in the execution phase. The project manager has identified the key stakeholders and has begun to define the project scope. The project sponsor has approved the project charter and has allocated the necessary resources. The project team has been formed and has begun to develop the project plan. The project is expected to be completed by the end of the year.



The project is currently in the monitoring phase. The project manager has identified the key stakeholders and has begun to define the project scope. The project sponsor has approved the project charter and has allocated the necessary resources. The project team has been formed and has begun to develop the project plan. The project is expected to be completed by the end of the year.

| Project Name | Project Number | Project Manager | Project Sponsor | Project Start Date | Project End Date | Project Budget | Project Status | Project Location | Project Description         |
|--------------|----------------|-----------------|-----------------|--------------------|------------------|----------------|----------------|------------------|-----------------------------|
| Project A    | 101            | John Doe        | Jane Smith      | 2023-01-01         | 2023-12-31       | \$1,000,000    | In Progress    | New York         | Develop new software        |
| Project B    | 102            | Jane Smith      | John Doe        | 2023-02-01         | 2023-11-30       | \$500,000      | Completed      | Los Angeles      | Upgrade existing system     |
| Project C    | 103            | John Doe        | Jane Smith      | 2023-03-01         | 2023-10-31       | \$750,000      | On Hold        | Chicago          | Implement new process       |
| Project D    | 104            | Jane Smith      | John Doe        | 2023-04-01         | 2023-09-30       | \$250,000      | Completed      | San Francisco    | Optimize database           |
| Project E    | 105            | John Doe        | Jane Smith      | 2023-05-01         | 2023-08-31       | \$300,000      | In Progress    | London           | Conduct market research     |
| Project F    | 106            | Jane Smith      | John Doe        | 2023-06-01         | 2023-07-31       | \$150,000      | Completed      | Paris            | Develop marketing plan      |
| Project G    | 107            | John Doe        | Jane Smith      | 2023-07-01         | 2023-06-30       | \$200,000      | In Progress    | Madrid           | Implement security measures |
| Project H    | 108            | Jane Smith      | John Doe        | 2023-08-01         | 2023-05-31       | \$100,000      | Completed      | Rome             | Conduct user training       |
| Project I    | 109            | John Doe        | Jane Smith      | 2023-09-01         | 2023-04-30       | \$120,000      | In Progress    | Berlin           | Develop project plan        |
| Project J    | 110            | Jane Smith      | John Doe        | 2023-10-01         | 2023-03-31       | \$80,000       | Completed      | Munich           | Conduct risk assessment     |



# Safety Valves

## Type 06001 - gastight

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**Cryogenic Safety Valves, angle type, brass, PN63, type tested TÜV-SV.1048. S/G/L**

Standard Safety Valve,  
complete with carbon filled PTFE valve seal, closed bonnet, gastight  
Outlet: female thread Rc 3/8 acc. to ISO 7/1  
"cleaned and degreased for oxygen service"

### Part No. 06001.X.0000

Inlet: male thread type R (BSPT) acc. to ISO 7/1

### Part No. 06001.X.2000

Inlet: male thread type G (BSPP) acc. to ISO 228/1

### Part No. 06001.X.5000

Inlet: male thread NPT acc. to ANSI B 1.20.1

Available options - on request only:

- with installed elbow at the outlet



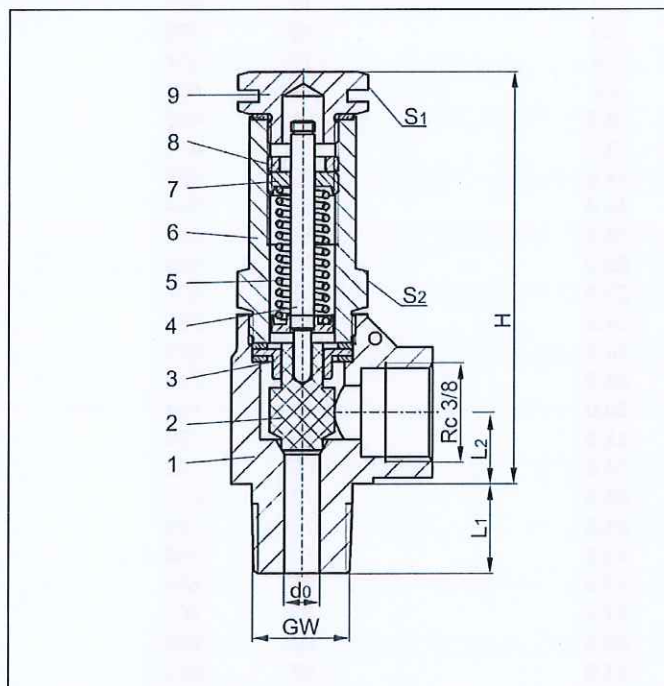
### Applications:

Provided as safety device for protection against thermal expansion in pipeworks and parts of facilities.

Approved for air gases, vapours and cryogenic liquefied gases incl. LNG.

Working temperature: -196°C / -321°F (77K) up to +65°C / +149°F (338K), suitable for horizontal installation

| Materials      | DIN EN                     | ASME/ASTM                        |
|----------------|----------------------------|----------------------------------|
| 1 Body         | CW617N                     | EN12165 CW617N<br>Code Case 1750 |
| 2 Disc         | PTFE / Carbon filled (25%) |                                  |
| 3 Guide plate  | CW614N                     | EN12164 CW614N<br>Code Case 1750 |
| 4 Stem         | CW614N                     | EN12164 CW614N<br>Code Case 1750 |
| 5 Spring       | 1.4571                     | A 313 Grade 316Ti                |
| 6 Bonnet       | CW614N                     | EN12164 CW614N<br>Code Case 1750 |
| 7 Spring clamp | CW614N                     | EN12164 CW614N<br>Code Case 1750 |
| 8 Thread ring  | CW614N                     | EN12164 CW614N<br>Code Case 1750 |
| 9 Cap          | CW614N                     | EN12164 CW614N<br>Code Case 1750 |



| Type 06001               | Technical data |          |          |          |
|--------------------------|----------------|----------|----------|----------|
| Nominal size             | GW             | 1/4      | 3/8      | 1/2      |
| Orifice                  | d <sub>0</sub> | 6.0      | 6.0      | 6.0      |
| Dimension code           | .X.            | 0200     | 0300     | 0400     |
| Set pressure range       | bar            | 5.0-55.0 | 5.0-55.0 | 5.0-55.0 |
| Height                   | H              | 70       | 70       | 70       |
| Length                   | L <sub>1</sub> | 13       | 15       | 17       |
| Length                   | L <sub>2</sub> | 13       | 13       | 13       |
| Wrench size across flats | S <sub>1</sub> | 19       | 19       | 19       |
| Wrench size across flats | S <sub>2</sub> | 19       | 19       | 19       |
| Weight                   | ca. kg         | 0.18     | 0.195    | 0.21     |
| Coefficient of discharge | α <sub>w</sub> | 0.09     | 0.09     | 0.09     |

Dimensions in mm.

## Safety Valves

### Type 06001 - gastight

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#### Discharge capacities

Calculation of flow rate acc. to AD2000-Merkblatt A2 / DIN EN ISO 4126-1

Medium:

Air in m<sup>3</sup>/h at 0°C and 1013.25 mbar

Water in kg/h

The capacity indicated below is for a fully opened valve.

d<sub>0</sub> - orifice

A<sub>0</sub> - flow area

| Set<br>pressure<br>in bar (g) | GW                                | 1/4, 3/8 &<br>1/2 | 1/4, 3/8 &<br>1/2 |
|-------------------------------|-----------------------------------|-------------------|-------------------|
|                               | d <sub>0</sub> (mm)               | 6.0               | 6.0               |
|                               | A <sub>0</sub> (mm <sup>2</sup> ) | 28.3              | 28.3              |
|                               | Medium                            | Air               | Water             |
| 5.0                           |                                   | 11                | 304               |
| 6.0                           |                                   | 13                | 333               |
| 7.0                           |                                   | 15                | 360               |
| 8.0                           |                                   | 17                | 384               |
| 9.0                           |                                   | 19                | 408               |
| 10.0                          |                                   | 21                | 430               |
| 12.0                          |                                   | 25                | 471               |
| 14.0                          |                                   | 29                | 508               |
| 16.0                          |                                   | 33                | 544               |
| 18.0                          |                                   | 36                | 577               |
| 20.0                          |                                   | 41                | 608               |
| 22.0                          |                                   | 45                | 637               |
| 24.0                          |                                   | 48                | 666               |
| 26.0                          |                                   | 52                | 693               |
| 28.0                          |                                   | 56                | 719               |
| 30.0                          |                                   | 61                | 744               |
| 32.0                          |                                   | 65                | 769               |
| 34.0                          |                                   | 68                | 792               |
| 36.0                          |                                   | 72                | 815               |
| 38.0                          |                                   | 76                | 838               |
| 40.0                          |                                   | 81                | 859               |
| 42.0                          |                                   | 85                | 881               |
| 44.0                          |                                   | 89                | 901               |
| 46.0                          |                                   | 93                | 922               |
| 48.0                          |                                   | 97                | 941               |
| 50.0                          |                                   | 102               | 961               |
| 52.0                          |                                   | 106               | 980               |
| 54.0                          |                                   | 110               | 999               |
| 55.0                          |                                   | 112               | 1008              |



Zastosowano:

Manometr kwasoodporny 232.50.063-R/0...16bar/G1/4/KI.1,6/do tlenu, wolny od oleju i smaru

**Manometr z rurką Bourdona****Wersja ze stali CrNi****Model 232.50 suchy / 233.50 z płynnym wypełnieniem**

Karta katalogowa WIKA PM 02.02

**Zastosowanie**

- Manometry z wypełnieniem do wysokich i dynamicznych pulsacji ciśnienia oraz wibracji
- Do pomiaru mediów gazowych i ciekłych, nie dla mediów krystalicznych, które nie zatykają układu pomiarowego
- Przemysł chemiczny, petrochemiczny, elektrownie, przemysł górniczy, przemysł morski, technologia ochrony środowiska, inżynieria mechaniczna oraz budowa dużych instalacji przemysłowych

**Cechy szczególne**

- Wysoka stabilność eksploatacyjna oraz odporność na wstrząsy i wibracje
- Kompletna konstrukcja ze stali nierdzewnej
- Zatwierdzenie German Lloyd i Gost
- Zakres pomiarowy do 0 ... 1600 bar



Manometr z rurką Bourdona, model 232.50

**Opis****Konstrukcja**  
EN 837-1**Rozmiar nominalny**  
63, 100, 160**Klasa dokładności**  
NS 63: 1,6  
NS 100, 160: 1,0**Zakres pomiarowy**  
NS 63: 0 ... 1 do 0 ... 1000 bar  
NS 100: 0 ... 0,6 do 0 ... 1000 bar  
NS 160: 0 ... 0,6 do 0 ... 1600 bar  
lub równoważność w innych jednostkach pomiaru ciśnienia  
lub w próżni**Ciśnienie robocze**

|              |                  |                    |
|--------------|------------------|--------------------|
| NG 63:       | stałe:           | pełen zakres       |
|              | zmienne:         | 0,9 x pełen zakres |
|              | pomiar chwilowy: | 1,1 x pełen zakres |
| NS 100, 160: | stałe:           | pełen zakres       |
|              | zmienne:         | 0,9 x pełen zakres |
|              | pomiar chwilowy: | 1,1 x pełen zakres |

**Temperatura robocza**

|            |   |
|------------|---|
| Otoczenie: | -40 ... +60 °C bez płynu wypełniającego           |
|            | -20 ... +60 °C z płynem wypełniającym (gliceryna) |
| Medium:    | max. +200 °C bez płynu wypełniającego             |
|            | max. +100 °C z płynem wypełniającym               |

**Błąd temperaturowy**

Gdy temperatura elementu pomiarowego różni się od temperatury odniesienia (+20°C): max. ± 4 % /10K zakresu

**Stopień ochrony obudowy**

IP 65 (EN 60 529 / IEC 529)

## Wersja standardowa

**DOKUMENTACJA  
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### Przylącze procesowe

Stal CrNi 316L, gwint zewnętrzny dolny i tylny

NS 63: G 1/4 B, SW 14

NS 100, 160: G 1/2 B, SW 22

### Element pomiarowy

Stal CrNi 316L,

< 100 bar: sprężyna typu C

≥ 100 bar: sprężyna typu heliakalnego

### Mechanizm

Stal CrNi

### Podzielnia

Białe aluminium z czarną skalą,

NS 63 z wypustem ograniczającym

### Wskazówka

Czarne aluminium

### Obudowa

Stal CrNi, zabezpieczenie przeciwybuchowe dla NS 63 na godzinie 12 i dla NS 100 oraz 160 z tyłu obudowy.

Zakres pomiarowy ≤ 0 ... 16 bar z zaworem kompensującym

**Szyba:** szyba wielowarstwowa bezpieczna

**Obejma:** typu twist, stal CrNi

**Płynne wypełnienie (dla modelu 233.50):** gliceryna 99,7 %

## Specjalne wykonanie

**Manometry do pomiaru amoniaku (NS 100 i 160)**

Skala w °C do pomiaru czynnika chłodzącego R 717 (NH<sub>3</sub>)

Zakres pomiarowy: -1 ... 0 ... 15 bar lub -1 ... 0 ... 26 bar

## Wymiary w mm

| NS  | Rozmiar mm |         |                |                |                |                |      |      |         |       | Waga w kg |              |              |
|-----|------------|---------|----------------|----------------|----------------|----------------|------|------|---------|-------|-----------|--------------|--------------|
|     | a          | b       | b <sub>1</sub> | b <sub>2</sub> | D <sub>1</sub> | D <sub>2</sub> | e    | f    | G       | h ± 1 | SW        | model 232.50 | model 233.50 |
| 63  | 9,5        | 33      | 33             | 57             | 63             | 62             | 11,5 | - 1) | G 1/4 B | 54    | 14        | 0,16         | 0,20         |
| 100 | 15,5       | 49,5    | 49,5           | 83             | 101            | 99             | 17,5 | 30   | G 1/2 B | 87    | 22        | 0,60         | 0,90         |
| 160 | 15,5       | 49,5 3) | 49,5 2)        | 83 2)          | 161            | 159            | 17,5 | 50   | G 1/2 B | 118   | 22        | 1,10         | 2,00         |

Przylącze procesowe wg EN 837-1 / 7.3

1) Dla NS 63; przylącze tylne centryczne

2) Przy zakresie pomiarowym ≥ 100 bar zwiększa się rozmiar o 16 mm

3) Przy zakresie pomiarowym 1600 bar zwiększa się rozmiar o 16 mm

### Dane do zamówienia

Model / rozmiar nominalny / zakres pomiarowy / rozmiar przylącza / położenie przylącza / opcje

Zastrzegamy sobie prawo do zmian i podmiiany materiałów.

Opisane przyrządy odpowiadają pod względem konstrukcji, wymiarów i materiałów obecnemu stanowi techniki.

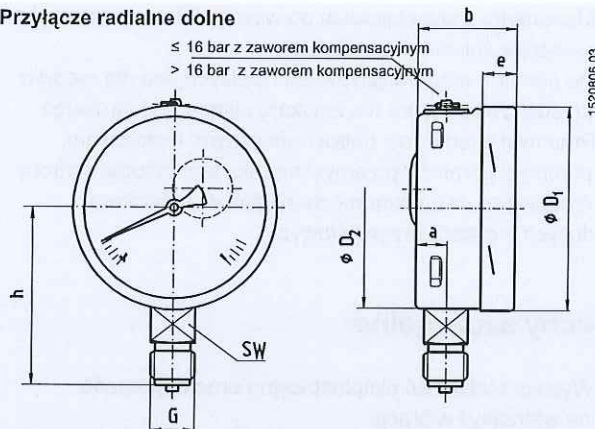
Strona 2 z 2

## Opcjonalnie

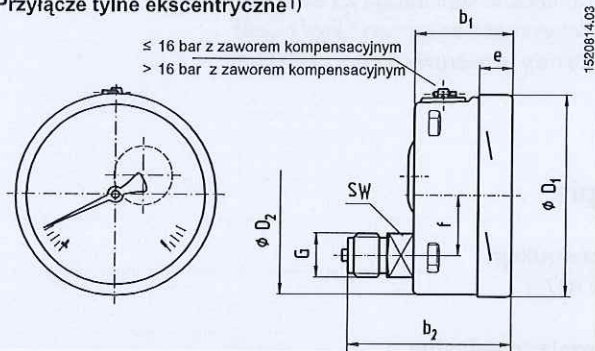
- Inne przylącze procesowe
- Połączenie z separatorami patrz folder separatory
- System pomiarowy z monelu (model 26X.50)
- System pomiarowy ze stali CrNi 1.4571
- Kolnierz przedni lub tylni, stali CrNi
- Kolnierz przedni, stal CrNi polerowana
- Obejma do montażu panelowego, stal CrNi
- Temperatura otoczenia -40 °C: wypełnienie silikonowe
- Urządzenie kontaktowe (karta katalogowa AC 08.01)
- Przetwornik (model 232.30 z wbudowanym przetwornikiem model 89X.34, karta katalogowa PM 02.04 i AE 08.02)
- Wersja z ATEX Ex II 2 GD c

## Wersja standardowa

### Przylącze radialne dolne



### Przylącze tylne ekscentryczne<sup>1)</sup>



Karta katalogowa WIKA PM 02.02 · 03/2007

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