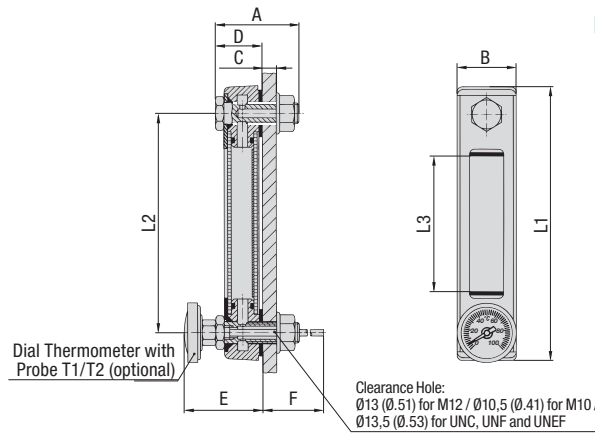
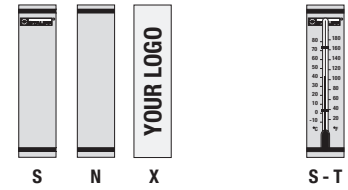


Level Gauge Type SNA



Design of Scale Plates Thermometer Options

Capillary Tube Thermometer with a dual Celsius / Fahrenheit scale up to +80 °C / +180 °F



Characteristics

Visual fluid level indication in hydraulic reservoirs with maximum tank pressures not exceeding 2 bar / 29PSI

Nominal Sizes and Designs

- 7 nominal sizes from 76 mm / 2.99 in to 381 mm / 15.00 in
- Display either undivided (SNA-076 ... 176) or subdivided by strut(s) into 2 (SNA-254) or 3 sections (SNA-305 and SNA-381)

Please see page 15 for alternative nominal sizes and designs.

Media Compatibility

- Suitable for use with mineral and petroleum based hydraulic fluids (HL and HLP)

Materials

- Housing made of Steel St 12, black powder-coated
- Sight tube and plugs made of Polyamide (PA)
- Seals made of NBR (Buna-N®)
- Scale plate made of PVC

For the individual components of the level gauge (sight glass, housing, Seals, bolts), alternative materials for improved UV or chemical resistance, low-temperature applications down to -50°C / -58 °F and use with special media (such as bio-degradable fluids, diesel oils, gasolines) are available on request.

Technical Data

- IP 65 protection rating: Dust tight and protected against water jets
- Operating temperature range: -30°C ... +80 °C / -22 °F ... +176 °F
- Recommended tightening torque: 8 N·m / 5.9 ft·lb

Accessories / Options

- Red / blue capillary tube thermometers with a temperature display range of up to +80 °C / +180 °F
- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100 °C / +200 °F
- Thermo Switches
- Temperature Sensors
- Floating Ball
- Deutsch Adaptor Cable

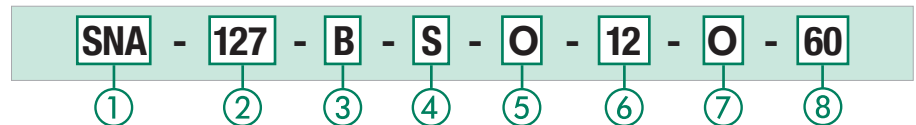
Please see pages 18 / 19 / 20 for details.

Dimensions

Maximum admissible tolerance for the bolt center spacing (dimension L2) according to DIN ISO 2768-f: ±0,20 mm / .008 in for all nominal sizes.

| Nominal Size | Dimensions (mm/in) | | | | | | | | | |
|--------------|--------------------|------|----------|------|------|-------------|-------------|-------|-------|-------|
| | A | B | C (Max.) | D | E | F (with T1) | F (with T2) | L1 | L2 | L3 |
| SNA-076 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 108 | 76 | 31 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 4.25 | 2.99 | 1.22 |
| SNA-127 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 159 | 127 | 76 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 6.26 | 5.00 | 2.99 |
| SNA-150 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 182 | 150 | 99 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 7.17 | 5.91 | 3.90 |
| SNA-176 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 208 | 176 | 124 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 8.19 | 6.93 | 4.88 |
| SNA-254 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 286 | 254 | 192 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 11.26 | 10.00 | 7.56 |
| SNA-305 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 337 | 305 | 244 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 13.27 | 12.00 | 9.61 |
| SNA-381 | 45 | 34,5 | 8 | 28 | 43,5 | 165,5 | 265,5 | 413 | 381 | 319 |
| | 1.77 | 1.36 | .32 | 1.10 | 1.71 | 6.52 | 10.45 | 16 | 15 | 12.56 |

Order Codes



1 Type

Level Gauge with visual fluid level indication **SNA**

2 Nominal Size

| | |
|---|------------|
| SNA-076 (nominal size of 76 mm / 2.99 in) | 076 |
| SNA-127 (nominal size of 127 mm / 5.00 in) | 127 |
| SNA-150 (nominal size of 150 mm / 5.91 in) | 150 |
| SNA-176 (nominal size of 176 mm / 6.93 in) | 176 |
| SNA-254 (nominal size of 254 mm / 10.00 in) | 254 |
| SNA-305 (nominal size of 305 mm / 12.00 in) | 305 |
| SNA-381 (nominal size of 381 mm / 15.00 in) | 381 |

Please see page 15 for alternative nominal sizes.

3 Sealing Material

| | |
|---------------------------------|----------|
| NBR (Buna-N®) (standard option) | B |
| FKM (Viton®) | V |

4 Design of Scale Plate

| | |
|--|----------|
| With STAUFF logo (standard option) | S |
| Neutral design without any logo | N |
| Custom-designed scale plate (please specify) | X |

5 Thermometer Option

| | |
|--|-------------|
| Supplied without thermometer (standard option) | O |
| Red Capillary Tube thermometer on scale plate | T |
| Blue Capillary Tube thermometer on scale plate | TB |
| Dial thermometer with probe (200 mm / 7.87 in) and a Celsius scale up to 100 °C | T1C |
| Dial thermometer with probe (300 mm / 11.81 in) and a Celsius scale up to 100 °C | T2C |
| Dial thermometer with probe (200 mm / 7.87 in) and a dual scale up to 100 °C / 200 °F | T1CF |
| Dial thermometer with probe (300 mm / 11.81 in) and a dual scale up to 100 °C / 200 °F | T2CF |

6 Banjo Bolt Size

| | |
|---|-----------|
| Metric ISO thread M12 (standard option) | 12 |
| Metric ISO thread M10 | 10 |
| Unified coarse thread 1/2–13 UNC | U1 |
| Unified fine thread 1/2–20 UNF | U2 |
| Unified extra-fine thread 1/2–28 UNEF | U3 |

7 Thermo Switch / Temperature Sensor / Anti-Drain Valve Option

| | |
|--|--------------|
| Supplied without Thermo Switch / Temperature Sensor / Anti-Drain Valve | - |
| Thermo Switch TS-SNA/SNK; Break contact (normally closed); Equipped with standard connector | O |
| Thermo Switch TS-SNA/SNK; Break contact (normally closed); Equipped with connector M12 | OD |
| Thermo Switch TS-SNA/SNK; Make contact (normally open); Equipped with standard connector | C |
| Thermo Switch TS-SNA/SNK; Make contact (normally open); Equipped with connector M12 | CD |
| Temperature Sensor TS-SNA/SNK-PT100; Equipped with connector M12 | PT100 |
| Anti-Drain Valve Set A | DA |
| Anti-Drain Valve Set B | DB |
| Thermo Switches / Temperature Sensors only available for banjo bolt size M12. Please see pages 18 to 20 for details. | |

8 Switching Temperature

| | |
|--------------------------------------|-----------|
| Contact switches at +60 °C / +140 °F | 60 |
| Contact switches at +70 °C / +158 °F | 70 |
| Contact switches at +80 °C / +176 °F | 80 |
| Contact switches at +90 °C / +194 °F | 90 |

Only to be indicated when using a Thermo Switch.

Options T1C/CF and T2C/CF are not available for banjo bolt size M10 and not be used in conjunction with Thermo Switches or Temperature Sensors. Please see page 18 for details.



Characteristics

Visual fluid level indication in hydraulic reservoirs with maximum tank pressures not exceeding 2 bar / 29PSI; ideal for custom applications in terms of reservoir capacities and dimensions

Nominal Sizes

- Special sizes beyond the normal of 305 mm / 12 in up to a maximum nominal size of 950 mm / 37.4 in – even for small and medium quantities
- High-precision manufacturing within 1 mm tolerance to customer requirements

Design

- Robust design thanks to one or more struts that subdivide the display into 2 or more sections
- Positioning of the strut(s) based on engineering considerations and/or according to particular customer requirements
- Precise visual indication of the fluid level by use of scale plates (only available for nominal sizes smaller than 670 mm / 26.4 in) or by use of a coloured Floating Ball (recommended option for nominal sizes larger than 670 mm / 26.4 in)

- Plastic dampening clips to reduce vibration of the sight tube are used for nominal sizes larger than 450 mm / 17.7 in

Materials

Depending on the specific application, several different materials are available for the individual components of the level gauge (sight glass, housing, Seals, bolts); please see Inquiry Checklist for details.

STAUFF is always at your service if you need support in choosing the right materials or material combination for improved UV or chemical resistance or for low-temperature applications down to -50°C / -58 °F and use with special media (such as bio-degradable fluids, diesel oils, gasolines).

Level Gauge (Special Options) Type SNA/SNK

Accessories / Options

- Red / blue capillary tube thermometers with a temperature display range of up to +80 °C / +180 °F
- Dial thermometers with probe and a Celsius or a dual Celsius / Fahrenheit scale with a temperature display range of up to +100 °C / +200 °F
- Thermo switches
- Temperature sensors
- Anti-Drain Valve
- Deutsch Adaptor Cable

Please see pages 18 / 19 / 20 for details.



Inquiry Checklist

In case that you require a special property or custom-designed level gauge, please use this checklist to provide us with details. If necessary, please also include further details, like the Type of fluid in use, its temperature and viscosity.

Nominal Size

Bolt centre distance (in mm)

Housing Material

Aluminium Steel Stainless Steel

Housing Design

Regular housing design with positioning of strut(s) based on engineering considerations

Please provide additional details / drawing for custom housing designs.

Banjo Bolt Size

M12 M10 1/2–13 UNC

1/2–20 UNF 1/2–28 UNEF

Banjo Bolt Material

Steel Stainless Steel

Sealing Material

NBR (Buna-N®) FKM (Viton®) EPDM

Alternative sealing materials to be defined separately.

Level Indication

Scale plate (only for nominal sizes smaller than 670 mm / 26.4 in)

- Scale plate made of PVC
- Scale plate made of Aluminium
- Without STAUFF logo
- Neutral design without any logo
- Custom-design (please specify)

- Without thermometer on scale plate
- Capillary tube thermometer with dual Celsius / Fahrenheit scale up to +80 °C / +180 °F

Floating Ball (recommended option for nominal sizes larger than 670 mm / 26.4 in)

Other Types of level indication (magnetic floats, etc.) to be defined separately.

Options

Dial thermometer with probe

- Celsius scale up to +100 °C
- Dual scale up to +100 °C / +200 °F
- Length of probe: 200 mm / 7.87 in
- Length of probe: 300 mm / 11.81 in

Thermo Switch TS-SNA/SNK

- Break contact; Standard connector
- Break contact; Connector M12
- Make contact; Standard connector
- Make contact; Connector M12
- Contact switches at +60 °C / +140 °F
- Contact switches at +70 °C / +158 °F
- Contact switches at +80 °C / +176 °F
- Contact switches at +90 °C / +194 °F

Temperature Sensor TS-SNA/SNK-PT100 Deutsch Adaptor Cable

Anti-Drain Valve Set A Set B

Also available:

Level Gauges - Type SNK in Special Lengths

Visual / electrical fluid level indication in hydraulic reservoirs with level gauges up to a maximum nominal size of 950 mm / 37.4 in.

Please do not hesitate to contact STAUFF for further details.

