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**1 INTRODUCTION**

This Operating Manual contains fundamental and essential advice to be followed for the installation, operation and servicing of the N5500. It must be reviewed prior to assembly and start-up of the N5500. This Operating Manual must be available at all times. The following sections about general safety information (2) and also the following specific advice regarding the intended purposes (2.2) contain important safety information which, if not followed, may result in risks for people and animals, or to property and buildings.

**2 SAFETY**

**2.1 General sources of hazards**

Pressure gauges are pressurized parts where failure can result in hazardous situations. The selection of pressure gauge should be made in accordance with the rules set out in EN 837-2.

**2.2 Use in accordance with intended purpose**

The N5500 is only to be used for the intended purpose as described by the manufacturer.

The N5500 is used for direct display of pressure, vacuum and compound pressure. The use of the N5500 in explosion risk areas is not allowed.

**2.3 Operator's responsibility**

Safety instructions for proper operation of the N5500 must be respected. They are to be provided by the operator for use by the respective personnel for installation, servicing, inspection and operation. Risks from electrical energy and from the released energy of the medium, from escaping media and from improper connection of the device must be eliminated.

Conversion works or other technical alterations to the N5500 by the customer are not permitted. This also applies to installation of spare parts.

The operational safety of the N5500 is only guaranteed where it is used for its intended purpose. The specification of the N5500 must be adapted to the medium used in the plant. The limit values indicated in the technical data must not be exceeded.

The safety information detailed in this Operating Manual, existing national regulations for accident prevention, and the operator's internal regulations regarding working, operations and safety must be respected.

The operator is responsible for all specified servicing, inspection and installation works being carried out by authorized and qualified personnel.

## 2.4 Operator qualifications

The device may only be installed and started by operators who are familiar with installation, start-up and operation of the product.

## 2.5 Signs/Safety markings

The N5500 and its surrounding packaging carry markings. These markings show the article number, measurement range and manufacturer. The N5500 can be provided with additional signs and safety markings advising on special conditions:

- Advice on the filling liquid
- Advice on calibration
- Safety marking pursuant to EN 837-3
- Silicone-free

## 2.6 Safety Equipment

This N5500 is fitted with a rear wall or plug capable of being blown out. For a description, please refer to Chapter 6.3.4. The window of model N5500 uses instrument glass (optional multi-layer safety glass).

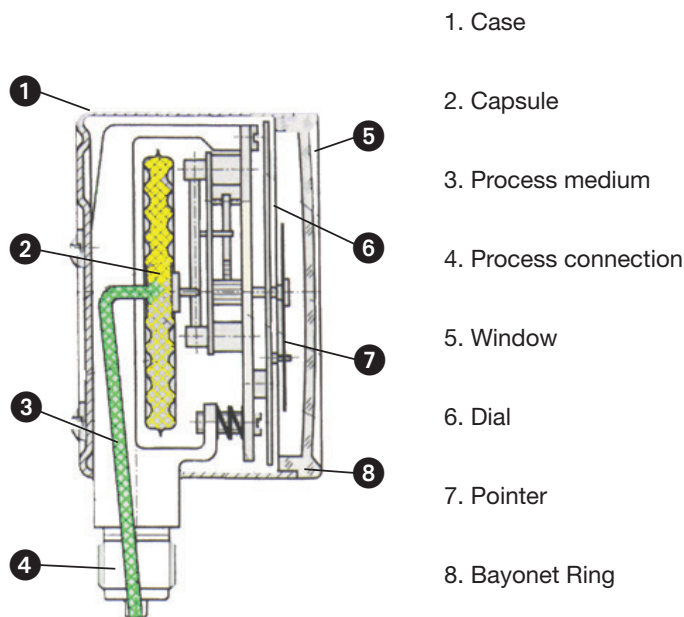
## 3 TECHNICAL DATA

Detailed technical information and data sheet is available from the Ashcroft website. Please visit [www.ashcroft.com](http://www.ashcroft.com).

## 4 CONSTRUCTION AND FUNCTION

The label with the serial number and type designation is located on the outside of the housing. The materials identifier is encoded in the type designation.

### 4.1 Overview



### 4.2 Description of function

The sensing element is a capsule which consists of two diaphragms that are assembled pressure tight at the edge. The pressure is led to the central point of the diaphragm and

acts on the inside of the capsule. The hereby produced lifting movement is a measure for the pressure.

### 4.3 Description of components

#### 4.3.1 Scale with pointer

The pressure gauge is equipped with a dial face and pointer pursuant to EN 837-3, nominal size 100 mm or 160 mm.

#### 4.3.2 Instrument connection

The instrument connection is located on the bottom, side or at the back side of the pressure gauge.

#### 4.3.3 Vent valve

The vent valve for the housing is located on the top side. If the nipple is pulled out, the housing is ventilated and the pressure which has built up in the housing due to the influence of temperature is discharged. With the valve closed, protection class IP 65 is achieved.

#### 4.3.4 Rear wall/plug with blow-out capability

The pressure gauge has a plug capable of blowing out on the rear wall of the housing. These act as a safety feature pursuant to EN 837-3 and simultaneously allow for temperature compensation for the housing, via a rubber membrane.

### 4.4 Accessories

Please contact the manufacturer regarding special tools and accessories.

## 5 TRANSPORT

### 5.1 Safety

The N5500 should be protected against the effects of knocks and impacts. The device should only be transported in the packaging provided, to protect against glass breakage. The N5500 should only be transported in a clean condition (free of residues of measuring media).

### 5.2 Inspection

Upon receipt, the N5500 should be checked for any possible damage that may have occurred during transport. In the event of damage during transport, the delivery must not be accepted.

### 5.3 Storage

The N5500 must be stored in dry, clean conditions, within a temperature range of -40 to +158°F, protected against direct exposure to sunlight and protected against impact damage.

## 6 ASSEMBLY/INSTALLATION

### 6.1 Safety

To ensure safe working during installation and servicing, suitable shut-off valves should be installed in the plant to allow for:

- Gauge to be depressurized or taken out of operation;
- Gauge to be disconnected from the mains supply for repair or checks within the plant.
- Gauge to be tested as part of standard maintenance.

During the works to mount/install the gauge, the plant must be protected against being switched back on.

## 6.2 Installation

Devices with a blow-out require a minimum spacing to the rear (1.0').

- Connection to be undertaken by authorized and qualified personnel only
- Use only with the mechanical process connection provided – regarding the configuration, see order code on the device type label, with a matching threaded seal.
- When connecting the device, the pipes must be depressurized.
- The pressure metering pipe must be kept as short as possible and laid without sharp bends, to avoid the occurrence of delays.
- Devices with a blow-out require a minimum spacing to the rear (1.0').

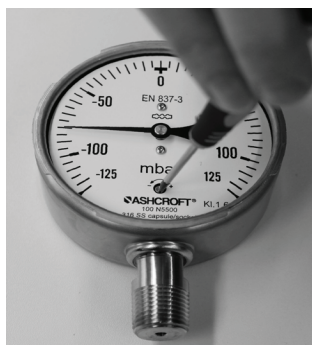
## 6.3 Start Up

The precondition for start-up is proper installation of all electrical feed lines and metering pipes. All connecting lines must be laid such that no mechanical forces can act on the device. Before start-up, the seal on the pressurized connection line must be checked

## 6.4 Zero point adjustment

The N5500 are supplied calibrated, so that as a rule there is no need for calibration works at the installation point. Zero point adjustment on site is standard. For this, proceed as follows: Depressurize the pressure metering pipe.

- Open the bayonet ring and remove ring and window.
- Hold the pointer in place while turning the screw, until the pointer (after releasing again) has the correct position.
- Close the case again and pay attention to correct fit of window, gasket and bayonet ring.
- Liquid filled gauges must be demounted before the zero point adjustment can be done (on a horizontal area to prevent leaking).



## 7 SERVICING

The N5500 is maintenance-free. However, to ensure reliable operation and a long lifetime, it is recommended that it is checked regularly.

## 7.1 Safety

When undertaking servicing work on the N5500, the pressure lines must be depressurized and the plant secured against being switched on again.

## 7.2 In-service inspection

The check on function and recalibration is carried out at regular intervals, depending on the application. The precise testing cycles should be adjusted in line with the operating conditions and ambient conditions. In the event of various device components interacting, the operating instructions for all other devices should also be taken into account.

- Check on display.
- Check on function, in conjunction with downstream components
- Check of pressurized connection pipes for seal condition.
- Remove gauge from service should any leaks be identified.

## 7.3 Cleaning and maintenance

Cleaning is carried out using a non-aggressive cleaning agent, with the ventilation valve closed and respecting the protection category of the N5500.

## 8 APPENDIX

The N5500 is maintenance-free. However, to ensure reliable operation and a long lifetime for the N5500, we recommend that it is checked regularly.

### 8.1 Data sheet for capsule pressure gauge N5500

Detailed data sheet is available from the Ashcroft website. Please visit [www.ashcroft.com](http://www.ashcroft.com) for more details