

2600T Series Pressure Transmitters Cost Effective Flanged Level Measurements

Pressure Measurement
Engineered solutions for all
applications



Premium performance measurements

Get the best performance for your level measurements with the 266DHH flanged level transmitter.

Reduce instrument costs an average 15%

In many cases level measurements do not need a diaphragm seal but just a flanged connection.

Flanged mounted level transmitter convenience

266DDH is more performing and less expensive compared to conventional diaphragm seal equipped devices.

2600T Series Pressure Transmitters

Cost Effective Flanged Level Measurements

General description and introduction

A huge part of the direct mount pressure transmitters are installed on level measurement applications. Very often users or even engineering companies specify flanged process connection and as a consequence they ideally link the flanged connection to a diaphragm seal. Thanks to our product portfolio we do have the opportunity to be proactive and help our customer in defining a better solution for clean fluid level or pressure measurement.

Understanding the difference

To appreciate how to eliminate diaphragm seals in these applications, you must first gain an understanding of how seal systems function. The diaphragm seal system is an additional hydraulic circuit installed between the sensor diaphragm and the process. A diaphragm seal system can be used for many different reasons such as:

- Highly viscous process fluid which may clog a conventional transmitter pressure ports.
- Extreme process fluid temperatures which are not compatible with the transmitter and may not be reduced within the transmitter temperature limits through traditional methods of using condensation pots or bending sensing lines.

266DHH Fast and reliable solution for the common level measurement

The 266DHH has been especially designed for the most common level measurement applications.

1. Improve the reliability of the product

The transducer diaphragm is directly in contact with the process fluid that enters the cavity. This design does not require any further separation and thanks to the generous diameter of the transducer diaphragm (40 mm/1.5 in.) it is not prone to clogging.

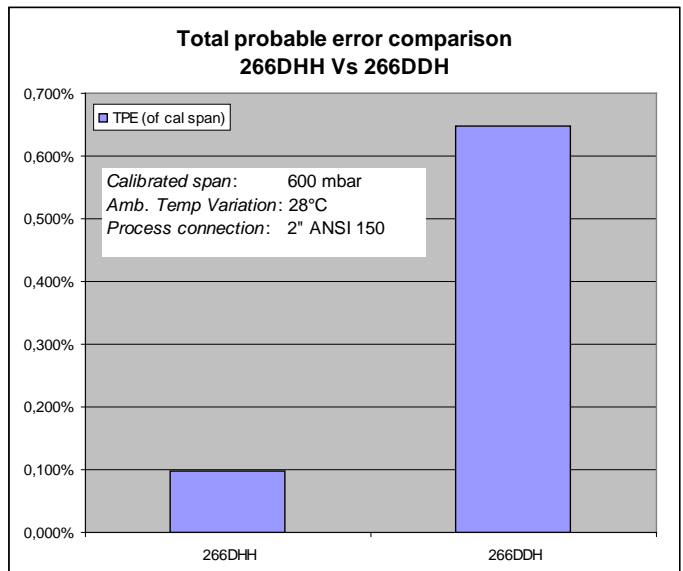
2. Improve the accuracy of the measurement

With the shortest and the most simple hydraulic circuit, total performances are significantly improved.

Just to make an example:

In a level measurement where the calibrated span is 6000 mmH₂O (236"wc), considering an ambient temperature variation of 28°C (82° F) and a process connection of 2" ANSI 150 the Total Probable Error of the 266DHH is 0,098% of calibrated span, while the error of ABB's diaphragm level model 266DDH with a 2" ANSI 150 S26F high performance diaphragm is 0,648% of calibrated span.

This tells us that the 266DHH is 6 times more accurate in real operating conditions compared with diaphragm seal equipped devices.



266DDH Perfect application for the critical condition in level measurement

266DDH with S26 series diaphragm seal can be used when higher process temperature (>120°C / 248°F) fluids need to be measured or where Stainless steel is not compatible with the corrosion resistance requirement of the process fluid. When the process fluid is or can become very viscous, a diaphragm flush to the wall of the tank may be needed. The S26 diaphragm seal with extended diaphragm is the obvious solution also when exotic wetted materials are needed.

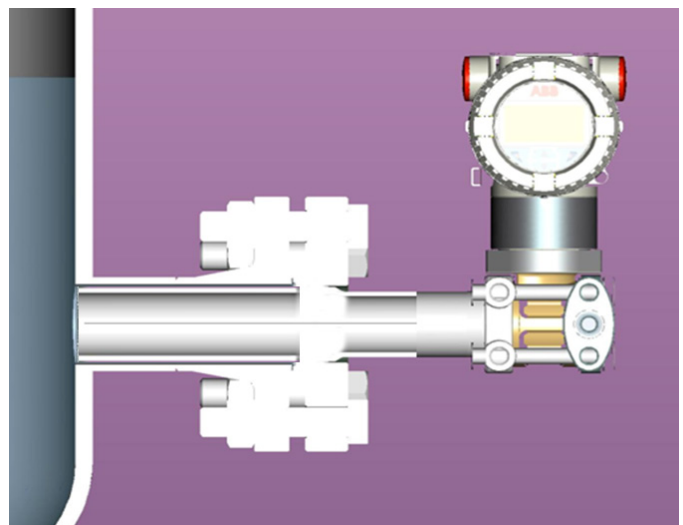


Figure 1: Extended diaphragm seal. The extension allows the diaphragm to be flush to the internal walls of the tank.

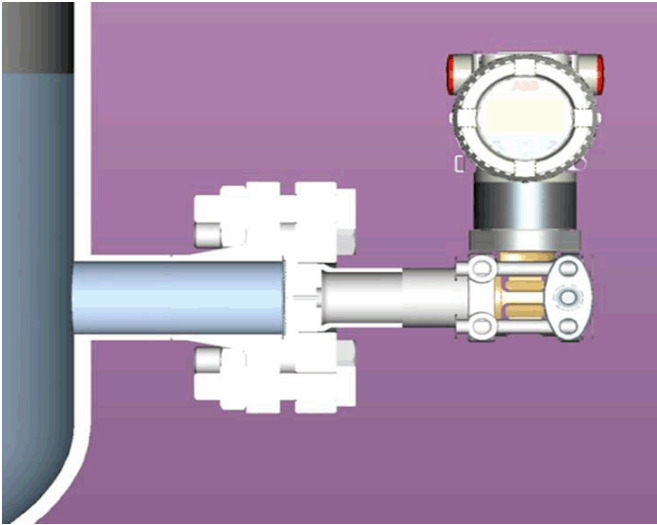


Figure 2: Flush diaphragm seal. The diaphragm is flush to the process connection and the process fluid enters the cavity.

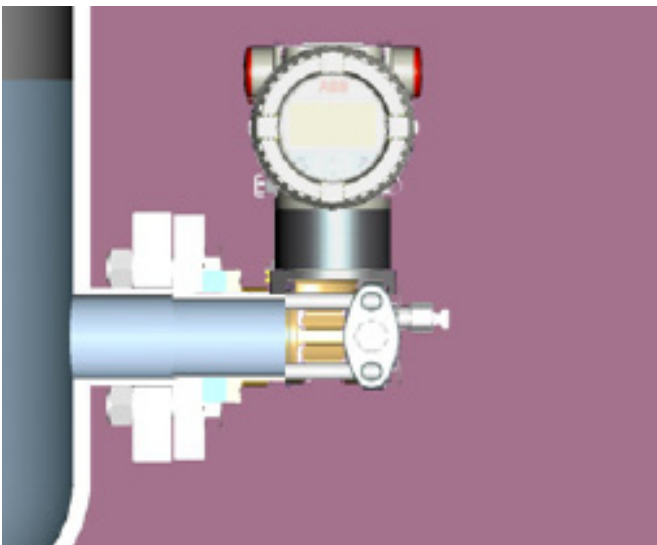


Figure 3: 266DHH design. The process fluid acts directly on the internal transducer diaphragm.

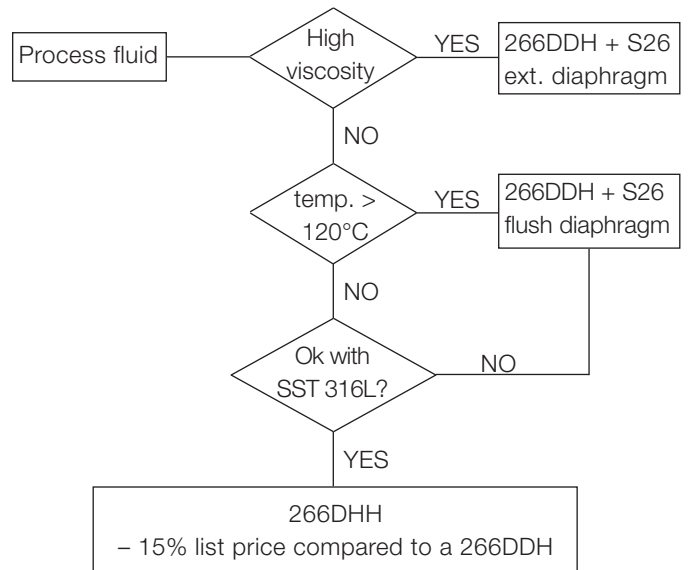
The difference in application between the flush diaphragm and the 266DHH:

Compared with traditional flush diaphragm seal systems, the 266DHH features:

- Compatibility with process connection
- Better performances and response time

The suggestions in application:

266DHH can be used in many level measurement applications where the fluid is clean like water, oil and gasoline etc.



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