

# AC-250NX DIAPHRAGM METER

Proven Honeywell Technology for the Next Generation

The Honeywell American Meter class AC-250NX is the new standard for residential compact metering, delivering high performance measurement at an economical price. The smallest and lightest diaphragm gas meter in the US market, AC-250NX is easy to install and fits in tighter spaces, such as meter trees in apartment complexes.

Precision manufacturing through cutting-edge industrial automation yields a next-generation solution while honoring a legacy of design expertise. AC-250NX provides a highly engineered design with only a single sealing surface (O-ring) and a convoluted, injection molded diaphragm.

More than 90 million meters based on this measurement cartridge design have been sold worldwide. AC-250NX meets and exceeds ANSI B109.1 requirements.



## PRODUCT DESIGN HIGHLIGHTS



### ROBUST DESIGN

The AC-250NX has been tested extensively in a real world, outdoor environment to simulate long term performance. AC-250NX meters have been tested to over 2 million cubic.



### WARRANTY

Honeywell has extended the industry-leading AC-250 warranty to the AC-250NX. For 15 years or 1 million cubic feet, whichever comes first, Honeywell guarantees that no less than 85% of each shipment of the AC-250NX non-temperature compensating meters will maintain or be adjustable to plus or minus 2% of zero error at check test rate of flow or the applicable requirement proscribed by the utility commission having jurisdiction over where a Meter is deployed, whichever is greater. If not, Honeywell will repair or replace the meters. Please see the express written accuracy guarantee for details.



### DESIGNED FOR THE FUTURE

The measurement module contained within the AC-250NX are built in an advanced, highly automated facility. Over 90 million meters based on this design platform have been sold globally since 1987. Additionally, this design will be used for the next generation of smart gas meters, launching in 2020.

**Honeywell**



### CONVOLUTED DIAPHRAGM

Honeywell has leveraged decades of experience with the AC-250 meter manufactured in Nebraska City to design the AC-250NX diaphragm. The convoluted diaphragm combines the performance of the AC-250 design, with the modular measurement cartridge to reduce wear points, and ensure a smooth acting, long life meter.



### FASTER RE-CALIBRATION

The meters will rarely require re-calibration, but if they do, the process is easy. The adjustment gears are external to the meter, so the pressure vessel is not opened during re-calibration. This eliminates the need to perform leak testing on the meter once completed. The AC-250NX has just a single gasket sealing surface, potentially reducing the likelihood for leaks.



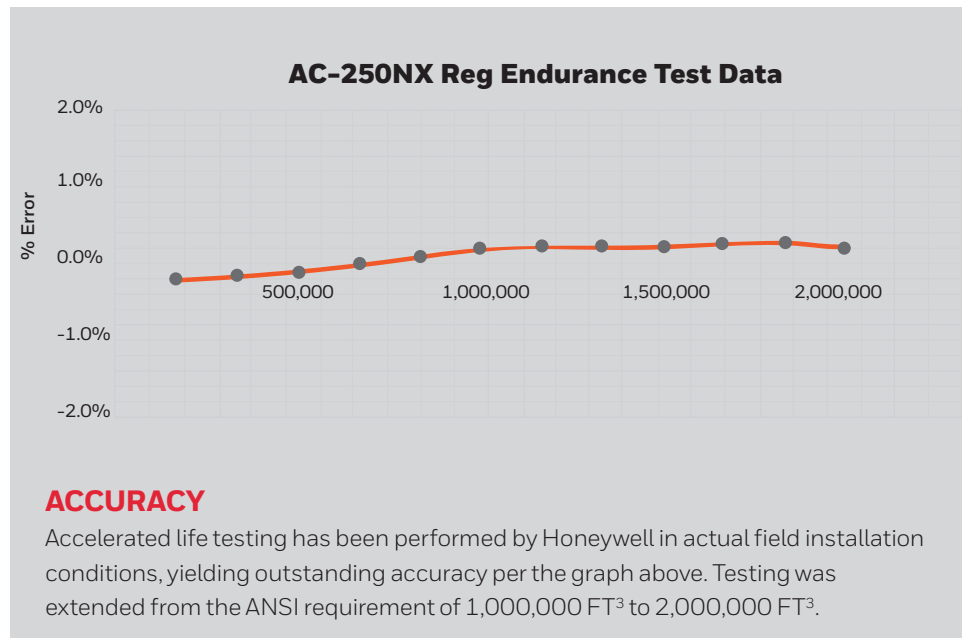
### COMPACT SIZE

The AC-250NX meter is 33% smaller in size than the AC-250, allowing it to fit better in tight spaces and reducing the burden on the teams installing and servicing the meter.

### NEXT GEN SMART GAS METER

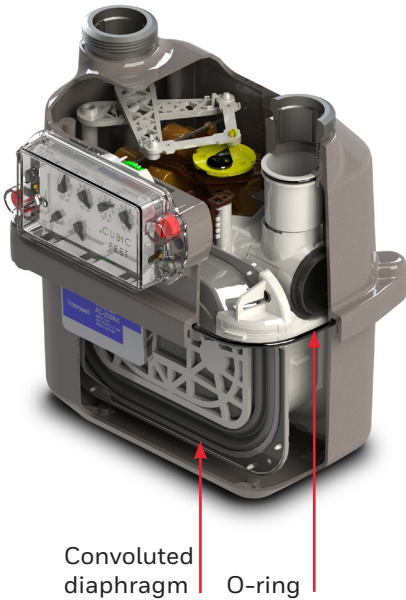
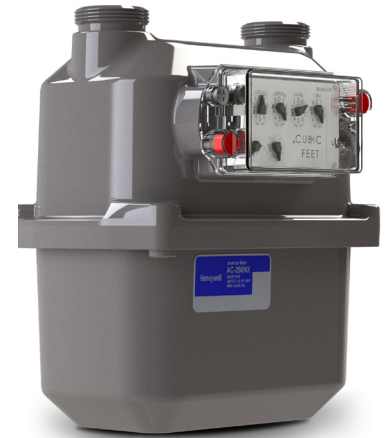
The AC-250NX cartridge is a highly engineered solution, designed for production at the highest consistent levels of quality. The calibration of the meter is done using an automated process, not only ensuring consistency, but ensuring that Honeywell has the capacity to meet the demands of our customers.

In addition, this design is being used to develop the next-generation smart communicating gas meters. By leveraging this cartridge design, Honeywell can build on years of experience to ensure the smart meters launch with a high-level of confidence in performance.



## COMPACT SIZE BUT WITH A STANDARD FORM FACTOR

The AC-250NX meter is significantly smaller than the AC-250 meter, 33% smaller by Volume. This means more meters can fit on a pallet, meaning less space taken up in a warehouse. Also, more meters can fit on a meter tree, driving efficiency especially in places like apartment buildings where space is at a premium. A lighter meter also means less strain on the workforce, reducing chance of injuries leading to lost time or medical fees. The AC-250NX is available with top connections in 10LT, 20LT, 30LT, 1" PITTS, BSP PL, and 1A Sprague.



Convoluted diaphragm | O-ring

## CONVOLUTED DIAPHRAGM

Upgraded for ANSI B109.1

Convoluted rubber diaphragm:

The injection molded convoluted diaphragm has consistent and repeatable diaphragm displacement with long life cycle in a wide range of operating conditions. Its smooth stroke minimizes differential pressure peaks that increase friction and wear. The wrinkle-free operation allows expansion and contraction without any creasing (Eliminates "crow's feet" in diaphragm material).

## PORTION OF EXPOSURE CYCLE

## TIME PERIOD

Direct Ultraviolet Radiation (Light Only)

8 hours

Fresh Water Spray (Light and Spray)

4 hours

Total Exposure Cycle

12 hours

## ROBUST AND WEATHER RESISTANT

The most critical tests are highlighted here.

### Accelerated Weathering

The AC-250NX meter-case finish and other external components have been tested in a QUV light chamber for 2000 hours in accordance with ASTM G154 (using UVA-340 bulbs.) **The result meets the intent of the Section 2.9.1 requirements.**

### SALT SPRAY

The AC-250NX was mounted in a salt spray chamber and subjected to a 1,000-hour salt spray test in accordance with the ASTM Method B117, "Salt Spray (Fog) Testing." Per testing requirements, there was no appreciable signs of blistering, corrosion, or deterioration of the surface. The meters were then placed, without cleaning or washing, in a dry indoor location for a period of six months, after which time there was be no appreciable signs of progressive corrosion or electrolytic action.

## FASTER SERVICING

The AC-250NX is calibrated differently from the traditional AC-250 meter. Instead of having to open up the meter and adjust a set of screws, the AC-250NX works by swapping out a gear on the index. The unit comes with a simple cross-reference guide that tells the technician which component to use based on the distance away from accuracy. Once this is completed, unlike most diaphragm meters, the device does not need to be retested for pressure tightness, as the sealing surface to gas was not broken.

In addition, the AC-250NX has just a single O-ring as the sealing surface, compared to three or more on a traditional diaphragm meter. This means that when the meter needs to be tested or serviced, there are fewer spots to have leaks form and less need for time-consuming dunk test.

## WARRANTY DETAILS

This guarantee applies to non-temperature compensating AC-250NX gas meters manufactured by Elster American Meter Company, LLC.(Supplier). We guarantee that no less than 85% of each shipment of the Meters will maintain or be adjustable to plus or minus 2% of zero error at check test rate of flow or the applicable requirement proscribed by the utility commission having jurisdiction over where a meter is deployed, whichever is greater. This guarantee will remain in effect for each Meter for a period the earlier of 15 years from the date of its shipment by Supplier or until the Meter is taken from service for any reason.

### For more information

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THE  
FUTURE  
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WHAT  
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MAKE IT

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