

Technical Bulletin: 101

July 23, 2012

SENTRY XP High Pressure Stainless Steel Pulsation Dampeners New XPA Models to 7,500 psi (517 bar)

BLACOH's new XPA high pressure pulsation dampeners in 316L wetted stainless steel now feature a redesigned threaded end cap. This new design significantly increases the dampener's maximum pressure rating with a more rugged, corrosion-resistant sealing component.

The new end cap on XPA models incorporates a large 2.875 – 20 UNF thread that replaces retaining rings on the original XP models. Larger multiple threads allow the necessary grip area and shear allowance to withstand significantly higher maximum allowable working pressures. The original XP models were rated up to 4,000 psi. Now, with the new threaded cap design, XPA models are rated up to 7,500 psi (517 bar) – almost twice the maximum pressure rating of previous models available.

The XPA's new pressure housing makes it less susceptible to corrosive fluids and environments. With the elimination of the retaining rings used in the original XP design, the XPA model is easier to install and maintain. There is no longer a need to inspect retaining rings for proper fit or possible corrosion that would require replacement parts. Also, there's no alignment hole on the assembly to match up and no need for the special removal tool (PN 800-750) required on original XP models. The new XPA can be easily assembled or disassembled using two cap bolts and a rod or heavy screw driver to thread the end cap into the housing.



SENTRY XPA threaded end cap

Quality and safety are paramount at BLACOH. The new XPA models, like all BLACOH products, have undergone rigorous pressure testing. The rated pressure or Maximum Allowable Working Pressure (MAWP) is the maximum pressure at which an XPA model can continuously operate based on allowable stress values and other functional capabilities. The XPA models in 8, 12 and 24 cubic inch volume housings have been tested to a design burst pressure (without rupture) to at least 3.0 times the Maximum Expected Operating Pressure (MEOP) which is equal to at least 22,500 psi (1,551 bar). It's important to note that the 3.0 times burst factor used for testing is much higher than the standard 1.5 to 2.0 burst factors generally used for high pressure vessels and accumulators. The XPA models in 8 and 12 cubic inch tested successfully with the original 3.25 inch diameter housing. A slight diameter increase to 3.5 inches was necessary to meet the pressure testing criteria on the XPA 24 cubic inch models.

SENTRY XPA dampeners in 8, 12 and 24 cubic inch are available with BUNA-N, EPDM and VITON® bladders and standard ½ inch FNPT inlets (ANSI Class flanges available on request). In addition to the new XPA models, our SENTRY XP dampener series includes 12 cubic inch XPX models, also in 316L wetted stainless steel, with pressure ratings up to 13,500 psi (930.8 bar).

For more information or to speak with an experienced Customer Focus Team member, contact us at 951.342.3100 (toll free 800.603.7867) or email Sales@blacoh.com.

Download **SENTRY XPA** product literature.

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