

# Specifications For GB-Series Bag-In/Bag-Out Housing

The housing shall be P&G GB-series bag-in/bag-out, gasket seal housing and shall be manufactured from 14 Ga. & 11 Ga. T-304 or T-316 stainless steel (unpainted). The housing shall be adequately reinforced to withstand a negative or positive pressure of 10" water gage. The housing shall be side-servicing for filter installation and change-out. Housing design and filter arrangement shall allow air to enter and exit housings without changing direction. The housing shall accommodate standard size gasket seal filters which do not require any special attachments to function properly within the housing. Seal is effected when filter gasket is compressed onto sealing surface.

## Welding

All "pressure retaining" weld joints and seams shall be continuously welded; weld joints and seams requiring only intermittent welds by design shall not be continuously welded. As a minimum, all weld joints and seams shall be wire brushed and/or buffed to remove heat discoloration, all burrs, and sharp edges. All weld joints and seams that are a portion of any gasket setting surface (i.e., duct connecting flanges) shall be ground smooth and flush with adjacent base metals. All welding procedures, welders, and welder operators shall be qualified in accordance with ASME Boiler and Pressure Vessel Code, Section IX. All production welds shall be visually inspected per the workmanship acceptance criteria described in sections 5 & 6 of ANSI/AWS D9.1-1990, "Specification for Welding of Sheet Metal".

## Bagging Ring

The housing shall have a bagging ring flange around each filter access port, that is sealed by a gasketed filter access door. The filter access door gasket shall be neoprene and shall be manually replaceable. The bagging ring flange shall have two (2) continuous formed raised ridges to secure the PVC change-out bag. The bagging ring flange is hemmed on the outer edge to prevent the change-out bag from tearing. One (1) PVC change-out bag shall be furnished with each filter access port. Change-out bags shall be 8 mil. thick with a yellow translucent, non-sticking, matte textured finish and have a 1/4" dia. elastic shock cord hemmed into the opening of the bag so when stretched around the bagging ring flange, it is a secure fit. Bag shall include three (3) glove ports built into the bag to assist in filter change-out. One (1) security strap shall be furnished per filter access port, to prevent the bag from sliding off the bagging ring flange during the filter change process. All change-out operations shall be within the bag.

## Hardware

All hardware on the housing and mechanical components of the filter sealing mechanism are 300 series stainless steel except for the access door knobs which are cast aluminum (to prevent galling of threads) and brass locking tray nuts.

## Locking Tray

The clamping mechanism shall be operated by means of a wrench from outside the housing front. The mechanism shall include independent pressure bars with spring washers that exert a minimum sealing force of 1,400 lbs. per filter, applied as an even, uniform load along at least 80% of the top and bottom of each filter frame.

## Removal Rod

Multi-wide housing shall be equipped with a filter removal rod to pull the filters to the change-out position. The removal rod shall operate from inside the filter change out bag.

## Quality

Quality assurance and factory testing: The filter housing shall be manufactured under a quality assurance program that addresses the requirements of ANSI/ASME NQA-1, "Quality Assurance Program Requirements for Nuclear Facilities". Housing shall be tested for filter fit, operation of the filter clamping mechanism, knife edge alignment, and leak tightness before leaving the factory. Both the filter sealing surface and the complete assembly pressure boundary shall be leak tested by the "pressure decay method", in accordance with ANSI/ASME N510-1989 (reaffirmed in 1995), "Testing of Nuclear Air-Cleaning Systems", paragraphs 6 & 7 and have a maximum leak rate of 0.0005 CFM per cubic foot of housing volume at 10" water gage. Test duration shall be 5 minutes with pressure readings recorded at 1 minute intervals.

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**P&G MANUFACTURING**  
 WASHINGTON N.C. 27889  
 PHONE NO.: 252-946-9110  
 FAX NO.: 252-946-4823



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