

Quality Control & Testing Procedure Information

Product Category: Breather Valves, Gauge Hatch, Emergency Vents

At Fidicon, We Believe in setting a benchmark of Its Quality and Durability of the Products, assuring its Conformance with the Relevant International Standards and Testing Acceptance Criteria are being fulfilled. We believe that product quality should reveal itself to the eye of the observer.

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Internal Inspection of the Raw Materials

Raw Materials such as	Body, Flanges, Reducers, Plates, Pipes, Fasteners, Gaskets
Cast Bodies	<p>Cast Body Inspection for Surface Defects:</p> <p>Type : Material in Lot</p> <p>Sampling: 30% Random or 100%, Depending on the Quantity of the Lot Size.</p> <p>Defects Observation : Pinholes, Subsurface Blowhole, Open Holes, Shrinkage, Cuts and Washes, Fusion, Runout, Swells, Drops, Rat Tails / Veins and Buckles, Metal Penetration, Hot Tears, Hot/Hard Spots, Cold Shuts, Slag Inclusion, Shift / Mismatch, Flash / Fins / Burrs, Warping, etc.</p> <p>Acceptance / Rejection: Based on the Relevant Standard.</p> <p>Action If Rejection Threshold Reached: Re-Sampling Inspection or Return Goods and Replace the Material Lot with Fresh One.</p>
Material Verification	<p>MTC 3.1, PMI Test , (Mechanical + Chemical) Vendor Certificate Verification</p> <ul style="list-style-type: none"> - Initiate and Accept / Reject Material Based on the In-House Verification (if Necessary). <p>Sampling: 30% Random or 100%, Depending on the Quantity of the Lot Size.</p>
Dimensional Verification	<p>Type : Material in Lot</p> <p>Sampling: 30% Random or 100%, Depending on the Quantity of the Lot Size.</p> <p>Acceptance / Rejection: Based on the Relevant Standard / Internal Documents / GAD / MFD.</p>
QC Engineer Accepts or Rejects the Goods based on the Test Results and Allowable Acceptance of the Lot as per guidelines and consultation with Production Head when Necessary.	

In-Process Checks and Quality Control

In Process Components such as	Body, Flanges, Reducers, Plates, Pipes, Fasteners, Gaskets
Dimensional Verification	<p>Type : Material in Lot (Before & After Assembly of the Product)</p> <p>Sampling: 30% Random or 100%, Depending on the Quantity of the Lot Size.</p> <p>Acceptance / Rejection: Based on the Relevant Standard / Internal Documents / GAD / MFD.</p>
QC Engineer Accepts or Rejects the Goods based on the Test Results and Allowable Acceptance of the Lot as per guidelines and consultation with Production Head when Necessary.	

Final In-House Inspection and Performance Testing

Final Inspection (In House)	Product (Before Dispatch Condition)
Dimensional Verification	<p>Type : Material in Lot (Before & After Assembly of the Product)</p> <p>Quantum of Check : 100%</p> <p>Acceptance / Rejection: Based on the Relevant Standard / Internal Documents / GAD / MFD.</p>
Painting & Coating Verification	<p>Type : DFT Verification</p> <p>Quantum of Check: 30% to 100% depending upon the Lot Size, (Min. 150 Microns Including All Layers for External Paint of the Product and for Coating Min. 1000 to 1500 Microns Thickens as our standard or Customer Specified & Approved PO)</p> <p>Acceptance / Rejection: Standard Factory Acceptance / Based on Fidicon's Proprietary Brand Recognition Colour & Coating Thickness and Layers.</p>
Pressure Testing	<p>Hydro Test: Based on the Relevant Standard (ASME 31.1 / ASME 31.3) / 1.5 x Design Pressure of the Product. <i>(not applicable for Open to Atmosphere Type of Product)</i></p> <p>Leak Test: Bubble Test on the Product at Rated Pressure of Product with Compressed Air.</p>
Flame Propagation Test (for Inbuilt & Assembled Models – in Breather Valve Only)	<p>As per ISO 16852, with Customized Test Bench of Fidicon Facility.</p> <p>Deflagration: Short Time Burn: up to 3 Mins, Endurance Burn: up to 15 Mins, at Top or the Tank.</p> <p>Detonation: Unstable Detonation / Stable Detonation as per L/D Ratio given behalf of Customer otherwise on top of Tank Fire Test with Min. (10*D) Distance Ratio from Source of Explosion.</p> <p>Fluid Used for Test: Mixed Petroleum Gases with Relevant to the Given Gas Group behalf of Customer.</p>
Calibration Test	Not Applicable
Set Pressure / Vacuum Test	<p>With reference to the GAD / QAP / Customer PO / Offer Specifications, as per API 2000, Re-Seat Within 75% of the Set Pressure / Vacuum, Leak Rate Acceptance as per API 2000 Table 10 – Maximum Allowable Leak Rates, Additional Leak Class will not be considered with Set Pressure and Vacuum Test, if considered it will be performed at 70 to 90 % of the demanded Set Values of the Valve.</p>
QC Engineer Accepts or Rejects the Goods based on the Test Results and Allowable Acceptance of the Lot as per guidelines and consultation with Production Head when Necessary.	

Third Party Inspection & Testing (Optional)

Third Party Inspection (Customer / Agency)	As per Final Inspection (In House) / Document Review and Performance Test Observation.
Customer Accepts the Goods as per Visual Observation of the Product Performance in presence of QC In Charge, In Event of the Additional Test or Documents Requested it shall be furnished to the customer / agency, within 1 - 2 working day only if it was considered along with the offer, otherwise additional commercial change in offer will be take place and customer can proceed further, otherwise upon Final In-house Inspection Results Products will be considered as Ready for Dispatch Condition Regardless of the Additional Requests Asked.	

Pre-Dispatch Checks

Product (Unit & Lot)	<ul style="list-style-type: none"> • Visual Checks for Aesthetically Appealing Product (Surface Finish & Paint – Product Cleaning) • Any Change of Gaskets / Bushes may take place due to used condition of the same during Final In House Inspection • With Volume & Weight of Each Item at Approx. Wooden Boxes Prepared having Bubble Wraps and Plastic Wrapping for Cushioning Effect and No External Contaminants Enter the Product. • Spares are Added along with the Box Container (if Considered) • Fumigation of the Wooden Box for Exports with Certificate is Prepared.
No Additional Record Keeping is Required for this stage, Material is in Ready to Dispatch Condition.	

Guarantee / Warranty

Product (Unit & Lot)	<ul style="list-style-type: none"> • As per Confirmation of the Customer for Dispatch, Guarantee / Warrantee Certificate is Prepared and Sent to Customer Along with Courier or by E-Mail with all the mentioned QC Documents of the raised PO. • Guarantee / Warranty as per the clause mentioned in Commercial Offer as Presented. • Not Applicable to the Offers / Purchase Orders for Product in Service / Maintenance Category.
Any Record for such a Raised Purchase Orders will be kept for the Maximum 3 Years from the Date of the Preparation.	