



SPECIFICATION // DATA SHEET

Vertical Instrument Chambers

Introduction

Manufactured for over 40 years (previously Alan Cobham Engineering), the AMS-IAC range of instrument chambers are designed to mount externally onto vessels to suit a wide range of different manufacturers level instrumentation.

Key advantages:

- Isolation of Instrument
- Avoid 'internal' constraints
- Overcome Turbulent Conditions

Isolation:

Isolation of the chambers from the vessels allows for routine maintenance of level products whilst enabling the process to remain operational.

In addition to allowing live maintenance, the ability to isolate before commencing work offers considerable safety benefits, especially when dealing with hazardous liquids, high pressures and high temperatures.

Internal Constraints:

The use of chambers where storage vessels have internal constraints or structures which prevent the required measurement technology from being installed enables a customer to continue with their preferred method of measurement and achieve the accuracy they require.

Turbulent Conditions:

Where an application includes a vessel with turbulent conditions fitting a chamber acts as a stilling well ensuring that conditions are at their best to get the desired reading.

The ability to isolate before commencing work offers considerable safety benefits, especially when dealing with hazardous liquids, high pressures and high temperatures.

At a Glance

- **Material Origins:**

The origin of the materials used in the construction can be sourced as European, Worldwide or to meet EN 10204-3.1 Material specification.

- **Nace Construction:**

AMS-IAC Chambers can be constructed to meet NACE MR 0175 / ISO 15156 for sour service applications.

- **Chamber Design:**

AMS-IAC Chambers are designed to meet the ASME B31.3 - Process Piping Codes.

- **Pressure Equipment Directive:**

AMS-IAC Chambers are designed to meet the European Pressure Directive (PED) 97/23/EC Guidelines.

- **ISO Approved:**

AMS-IAC are an ISO9001 approved company with our quality systems also assessed to meet ATEX standards.

- **Process Connections:**

AMS-IAC Supply chambers with a wide range of process connections to meet ASME/ANSI B16.5 and EN1092-1.

- **Coded Welders:**

Welders are certified to ASME Boiler and Pressure Vessel Code Section IX and ISO9606-1.

- **Optional Weld Inspection:**

- X-Ray for full penetration butt welds
- Magnetic particle for Carbon Steel Chambers
- Dye Penetrant Inspection of branch welds (all chambers).

- **Hydrostatic Testing (Optional):**

The Chambers can be hydrostatically tested to meet the ASME B31.3 Process Piping Code (1.5 X Design Pressure @ ambient temperatures).

- **Painting (Optional):**

The chambers can be painted to meet individual customer specifications, including offshore environments.

Specifications

Temperature Ratings

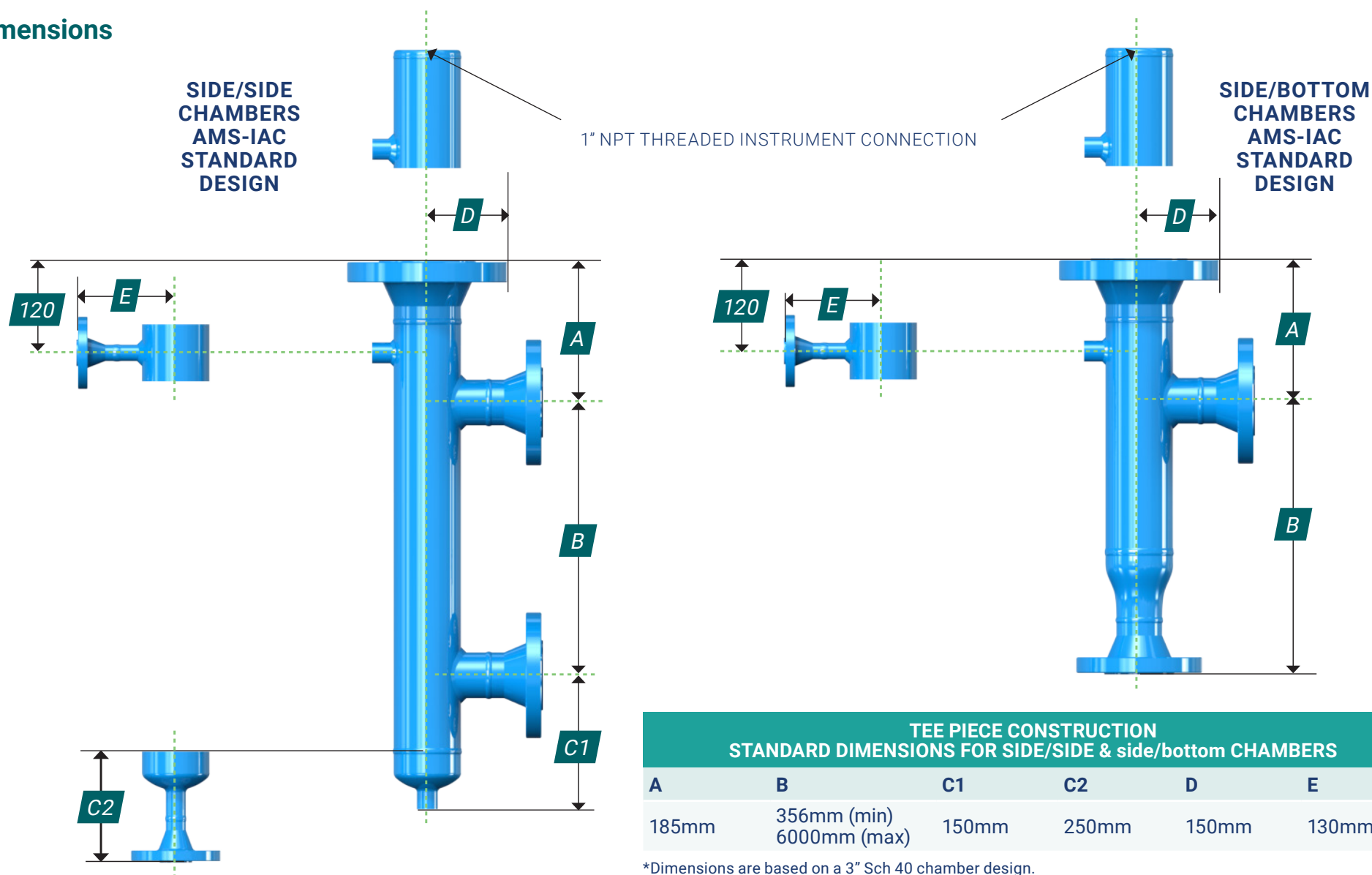
Material	Chamber Temperature Range
Stainless Steel	-100 to 400 °C
Carbon Steel	-10 to 400 °C

Material	Chamber Temperature Range	Carbon Steel
Chamber Body	316L (ASTM A312 316/316L)	ASTM A106 Grade B
Instrument Flange	316L (ASTM A182 F316/F316L)	ASTM A105
Branch	316L (ASTM A312 316/316L)	ASTM A105
Chamber End Cap	316L (ASTM A403 WP316/WP316L)	ASTM A234 WPB
Process Flange	316L (ASTM A182 F316/F316L)	ASTM A105
T Pieces & Reducers	ASTM A403 WP316/WP316L	ASTM A234 WPB
Vent/Drain Flange	316L (1.4404)	ASTM A106 Grade B
Vent/Drain Screwed	316/316L to ASTM A182 or A403	ASTM A105
Bolts	ASTM A193 Grade B8m	ASTM A307 Grade B
Nuts	ASTM A193 Grade B8m	ASTM A307 Grade B

NOTE: As standard materials suitable for pressure use and certified to ASME B31.3 are used in the construction of chambers. Other materials available on request.

The AMS-IAC range of instrument chambers are designed to mount externally onto tanks/vessels to suit a wide range of level instrumentation from various manufacturers.

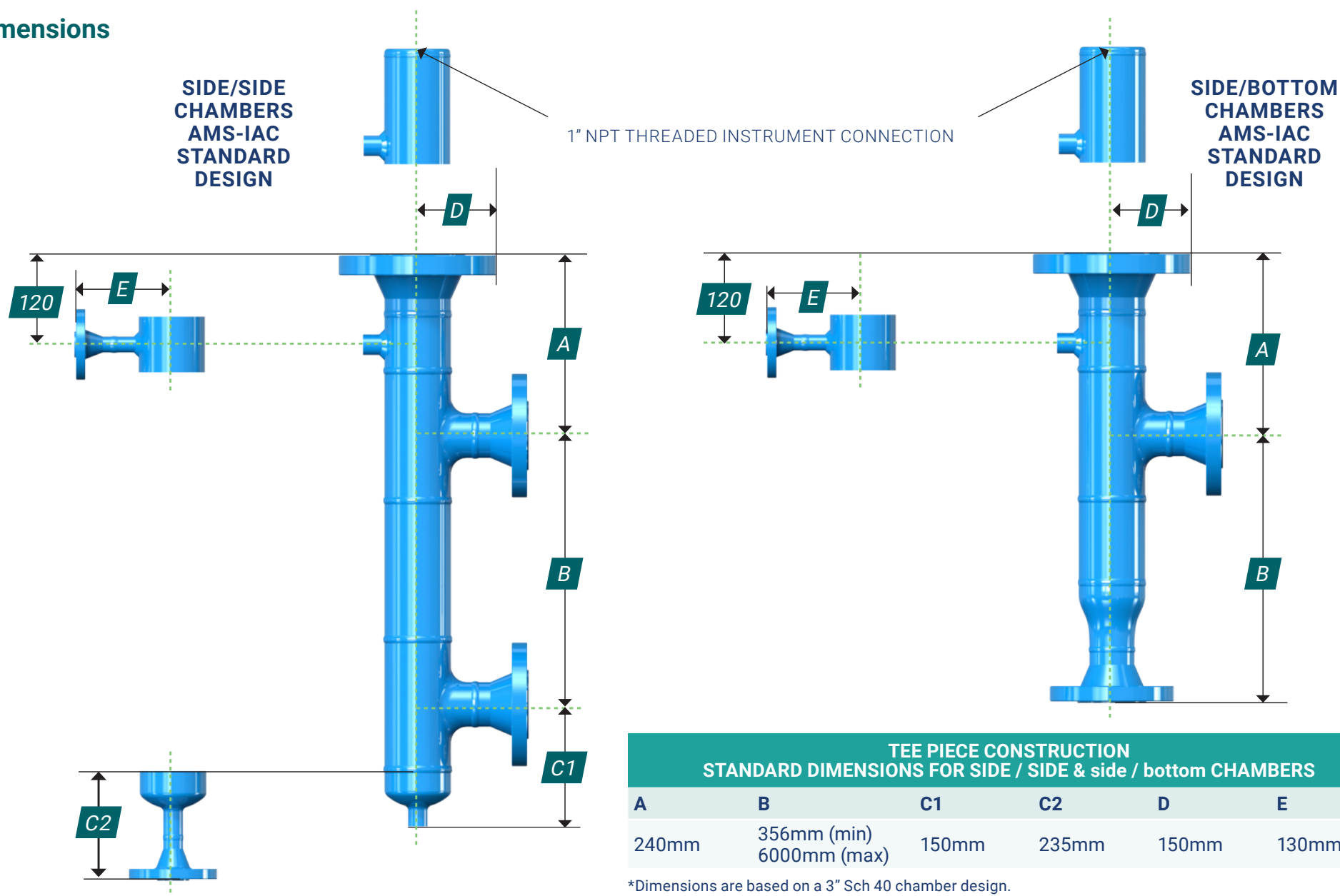
Dimensions



*Dimensions are based on a 3" Sch 40 chamber design.

NOTE: All dimensions can be adjusted to suit individual customer requirements.

Dimensions



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Documentation and Testing

AMS-IAC can produce a full documentation package to support the chamber products.

A data book containing the documents required by each customer is produced and shipped with each chamber. Documents available include (not restricted to!):

- Welder Qualification Certs
- Weld Procedure Qualifications
- Weld Procedure Specifications
- GA Drawings
- Pressure Test Certificates
- Certificate of Conformity to NACE and PED
- QA Plan
- Welder and NDT Inspection Records
- X-ray, Dye Pen and PMI Tests
- Instrument Tag Lists
- Instrument Data Sheets
- Material Certificates

In addition to the above AMS-IAC can also provide:

- **Accessories:**

AMS-IAC offer a range of accessories for use in conjunction with the chambers such as valves, gaskets, nuts / bolts and fittings.

- **Instrumentation:**

AMS-IAC offer a wide range of process instrumentation, including various level measurement technologies, which when used in conjunction with our chambers provide complete level measurement solutions for any application.



AMS Instrumentation & Control Ltd
Unit 8b, A30 Business Park
Lodge Way, Indian Queens
Cornwall TR9 6FZ

t +44 (0)1726 839909
e info@ams-iac.com
www.ams-iac.com

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