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## Introduction

**PANAM**<sup>®</sup>has emerged as renowned name in Global market for 'Instrumentation Fittings & Valves'. Since its inception in 1998 to present day, **PANAM**<sup>®</sup> has added new product every year and has broadened its product portfolio and its clientele base by supplying to potential customers worldwide. Key core values like Timely Delivery, Quality Consistency, Product Improvisation and after sales service has been instrumental in the phase wise evolution of company. Continuous improvement is the key to success, Customer feedback are taken with positive attitude and product are constantly groomed to a new quality and performance level to cope up with the competition. Our products are known for providing high-quality, high-reliability, low-cost options for the oil and gas industry. Over the year, the company has evolved from a product based company to a complete system solution provider. Over the coming years the entity of the company will attain state of the art operational efficiency for maintaining a competitive edge, with the advent increase in the utilization of its products in oil, gas and power sector.

**PANAM**<sup>®</sup> is having state of the art manufacturing facility span over an area of 65,000 sqft with a fleet of CNC machines, VMC machines, Semi-Automatic Lathe machines, High pressure test bench with SCADA control, Configuration centre for transmitters and dedicated R&D Team.

**PANAM**<sup>®</sup> offers a large variety of Condensate Pots from Stainless Steel & Other Alloys. **PANAM**<sup>®</sup> offers Condensate Pots with a volume from 0.5 to 4 liters with different thread connections (NPT tapered female) or weld connections.

**PANAM**<sup>®</sup> product meets and the requirements of ASME and MSS Series Standards. All materials are supplied in compliance with ASTM Specifications and verified by NABL approved third party laboratories. Condensate Pots are subject to 100% factory testing, comply with NACE MR0175 and NACE MR0103, with Heat Code Traceability. Maximum working pressure up to 6000 psi (414 bar).

# **Contents** Features ...... Technical Characteristics ...... Connection Types and Sizes ..... Identification .....

Other Products

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## **Features**

- Used as liquid or condensate traps, sealed vessels, steam chambers and a separation chamber.
- Chambers are made from seamless tube and welded bonnets.
- Tungsten arc welding of the seam provides high strength and tightness.
- Weld seams are X-ray tested.
- The branch ports in the form of half-couplings made at a 90 degree angle.
- The ratings of the half-coupling are selected based on the ratio of the fitting class to the gauge number or seamless
  pipe wall thickness as specified in ASME B16.11 for socket and threaded connections.
- · Additional port connections can be provided upon request.
- **PANAM**<sup>®</sup> high-quality ball valves and needle valves can be installed at the outlets and drain.

## **Technical Characteristics**

- Pipe size NPS 2 (DN15), NPS 3 (DN80), NPS 4 (DN100) or larger (upon request).
- Pipe size 40, 80, 160, XXS seamless tube.
- Temperature rating up to 200 °C (392 °F).
- Working pressure up to 6000 psi (414 bar).
- · Various port connection
- Butt weld according to ANSI B16.9., socket welding according to ANSI B16.11.
- All NPT tapered threads are in accordance with ASME B1.20.1.
- Material 316 SS, 304 SS, Carbon Steel. Other materials upon request.
- Possible from the materials for sour gas application in accordance with NACE MR0175 / ISO 15156 or NACE MR0103 / ISO 17495.
- Welds according to ASME BPVC Section IX by certified operators.
- Radiographic testing and dye-penetrant test.
- All condensate pots are tested prior to shipment to the customer.
- The hydrostatic test is carried out in clean water at a pressure of 1.5 times the working pressure.
- Pneumatic test is carried out in air / nitrogen environment at 500 psi.
- All products are traceable to the heat number.
- All threads s are protected by plastic caps.
- Laser marking when possible.
- Test reports according to EN10204 3.1B.

#### **Connection Types and Sizes**

| Connection Type |             | Size          | Standard     |
|-----------------|-------------|---------------|--------------|
| For Welding     | Socket Weld | 1/2" (DN 15)* | ASME B16.11  |
|                 | Buttweld    |               | ASME B16.9   |
| Threaded        | NPT         |               | ASME B1.20.1 |

\* 1/2" is the standard end fittings. Other sizes are available on request

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| terials        |                |                        |               |
|----------------|----------------|------------------------|---------------|
| Material       | Pipe           | Bonnet                 | Half-Coupling |
| Carbon Steel   | A106 Grade B   | A234                   | A105          |
| SS 316         | A312 TP316     | A182 F316, A240 SS316  | A182 F316     |
| SS 316L        | A312 TP316L    | A182 F316, A240 SS316L | A182 F316L    |
| SS 304         | A312 TP304     | A182 F304, A240 SS304  | A182 F304     |
| SS 304L        | A312 TP304L    | A182 F304, A240 SS304L | A182 F304L    |
| Ferritic Steel | A335 Grade P11 | A182 F11               | A182 F11      |
| Ferritic Steel | A335 Grade P12 | A182 F12               | A182 F12      |
| Ferritic Steel | A335 Grade P22 | A182 F22               | A182 F22      |

# **Configuration of Condensate Pots**



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|  |            |                  | L  |                     | -            |              |               |
|--|------------|------------------|--|---------------------|--------------|--------------|---------------|
| /2" Connection                         |            |                  |  |                     | - //         | 2" Connectio |               |
| /2" Connection                         | ļ          |                  |  |                     |              |              | 2" Connection |
|  |            |                  |  |                     |              |              |               |
| ţ                                      |            |                  |  | _                   | ╞═╧          | <b>t</b>     |               |
|  | ĺ          |                  |  |                     |              |              |               |
|  |            | Welding          |  | Ī                   |              |              |               |
|  |            |                  |  |                     |              |              |               |
|  |            | - L2             | L1   | ► <mark>- L2</mark> | -            |              |               |
| Pipe size (DN)                         | Rating     | Capacity         | Part Number  | Diameter            | L1           | L2           | L             |
|  | 80         | 1 Ltr.           | P-CONPOT-1L-2-80-2A-8-NF-SS                                  |                     | 563          |              | 639           |
|  | 160        | 1 Ltr.           | P-CONPOT-1L-2-160-2A-8-NF-SS                                 |                     | 720          |              | 796           |
|  | XXS        | 1 Ltr.           | P-CONPOT-1L-2-XXS-2A-8-NF-SS                                 | _                   | 1201         |              | 1277          |
|  | 80         | 2 Ltr.           | P-CONPOT-2L-2-80-2A-8-NF-SS                                  |                     | 1158         |              | 1234          |
|  | 160<br>XXS | 2 Ltr.<br>2 Ltr. | P-CONPOT-2L-2-160-2A-8-NF-SS<br>P-CONPOT-2L-2-XXS-2A-8-NF-SS |                     | 1468<br>2424 |              | 1544<br>2500  |
|  | 80         | 3 Ltr.           | P-CONPOT-3L-2-80-2A-8-NF-SS                                  |                     | 1752         |              | 1828          |
| NPS 2-1/2                              | 160        | 3 Ltr.           | P-CONPOT-3L-2-160-2A-8-NF-SS                                 | 60.3                | 2215         | 38           | 2291          |
| (DN 65)                                | XXS        | 3 Ltr.           | P-CONPOT-3L-2-XXS-2A-8-NF-SS                                 |                     | 3647         |              | 3723          |
|  | 80         | 4 Ltr.           | P-CONPOT-4L-2-80-2A-8-NF-SS                                  |                     | 2346         |              | 2422          |
|  | 160        | 4 Ltr.           | P-CONPOT-4L-2-160-2A-8-NF-SS                                 | _                   | 2963         |              | 3039          |
|  | XXS        | 4 Ltr.           | P-CONPOT-4L-2-XXS-2A-8-NF-SS                                 | _                   | 4870         |              | 4946          |
|  | 80         | 5 Ltr.           | P-CONPOT-5L-2-80-2A-8-NF-SS                                  |                     | 2940         |              | 3016          |
|  | 160        | 5 Ltr.           | P-CONPOT-5L-2-160-2A-8-NF-SS                                 |                     | 3711         |              | 3787          |
|  | XXS<br>80  | 5 Ltr.<br>1 Ltr. | P-CONPOT-5L-2-XXS-2A-8-NF-SS<br>P-CONPOT-1L-3-80-2A-8-NF-SS  |                     | 6093<br>185  |              | 6195<br>287   |
|  | 160        | 1 Lu.<br>1 Ltr.  | P-CONPOT-1L-3-160-2A-8-NF-SS                                 |                     | 242          |              | 344           |
|  | XXS        | 1 Ltr.           | P-CONPOT-1L-3-XXS-2A-8-NF-SS                                 |                     | 334          |              | 436           |
|  | 80         | 2 Ltr.           | P-CONPOT-2L-3-80-2A-8-NF-SS                                  | -                   | 420          |              | 522           |
|  | 160        | 2 Ltr.           | P-CONPOT-2L-3-160-2A-8-NF-SS                                 |                     | 528          |              | 630           |
|  | XXS        | 2 Ltr.           | P-CONPOT-2L-3-XXS-2A-8-NF-SS                                 | _                   | 707          |              | 809           |
| NPS 3                                  | 80         | 3 Ltr.           | P-CONPOT-3L-3-80-2A-8-NF-SS                                  |                     | 655          |              | 757           |
| (DN 80)                                | 160        | 3 Ltr.           | P-CONPOT-3L-3-160-2A-8-NF-SS                                 | 88.9                | 815          | 51           | 917           |
|  | XXS        | 3 Ltr.           | P-CONPOT-3L-3-XXS-2A-8-NF-SS                                 |                     | 1080         |              | 1182          |
|  | 80<br>160  | 4 Ltr.<br>4 Ltr. | P-CONPOT-4L-3-80-2A-8-NF-SS<br>P-CONPOT-4L-3-160-2A-8-NF-SS  | -                   | 889<br>1101  |              | 991<br>1203   |
|  | XXS        | 4 Lu.<br>4 Ltr.  | P-CONPOT-4L-3-XXS-2A-8-NF-SS                                 |                     | 1453         |              | 1555          |
|  | 80         | 5 Ltr.           | P-CONPOT-5L-3-80-2A-8-NF-SS                                  |                     | 1124         |              | 1226          |
|  | 160        | 5 Ltr.           | P-CONPOT-5L-3-160-2A-8-NF-SS                                 |                     | 1388         |              | 1490          |
|  | XXS        | 5 Ltr.           | P-CONPOT-5L-3-XXS-2A-8-NF-SS                                 |                     | 1826         |              | 1928          |
|  | 80         | 1 Ltr.           | P-CONPOT-1L-4-80-2A-8-NF-SS                                  |                     | 70           |              | 198           |
|  | 160        | 1 Ltr.           | P-CONPOT-1L-4-160-2A-8-NF-SS                                 |                     | 109          |              | 237           |
|  | XXS        | 1 Ltr.           | P-CONPOT-1L-4-XXS-2A-8-NF-SS                                 | _                   | 145          |              | 273           |
|  | 80         | 2 Ltr.           | P-CONPOT-2L-4-80-2A-8-NF-SS                                  | _                   | 205          |              | 333           |
| NPS 4<br>(DN 120)<br>160<br>160<br>160 |            | 2 Ltr.<br>2 Ltr. | P-CONPOT-2L-4-160-2A-8-NF-SS<br>P-CONPOT-2L-4-XXS-2A-8-NF-SS | -                   | 276<br>344   |              | 404<br>472    |
|  |            | 2 Lu.<br>3 Ltr.  | P-CONPOT-2L-4-XX5-2A-6-NF-SS<br>P-CONPOT-3L-4-80-2A-8-NF-SS  | -                   | 344          |              | 472           |
|  | 160        | 3 Ltr.           | P-CONPOT-3L-4-160-2A-8-NF-SS                                 | 114.3               | 443          | 64           | 571           |
| (DN 100)                               | XXS        | 3 Ltr.           | P-CONPOT-3L-4-XXS-2A-8-NF-SS                                 |                     | 542          |              | 670           |
|  | 80         | 4 Ltr.           | P-CONPOT-4L-4-80-2A-8-NF-SS                                  |                     | 474          |              | 602           |
|  | 160        | 4 Ltr.           | P-CONPOT-4L-4-160-2A-8-NF-SS                                 |                     | 609          |              | 737           |
|  | XXS        | 4 Ltr.           | P-CONPOT-4L-4-XXS-2A-8-NF-SS                                 | _                   | 741          |              | 869           |
|  | 80         | 5 Ltr.           | P-CONPOT-5L-4-80-2A-8-NF-SS                                  |                     | 609          |              | 737           |
|  | 160        | 5 Ltr.           | P-CONPOT-5L-4-160-2A-8-NF-SS                                 | _                   | 776          |              | 904           |
|  | XXS        | 5 Ltr.           | P-CONPOT-5L-4-XXS-2A-8-NF-SS                                 |                     | 939          |              | 1067          |

## **Class Designation for Couplings and Hexagonal Plugs**

| Pipe Used for Rating Basis |                | Fitting Class            | Fitting Type  |  |
|----------------------------|----------------|--------------------------|---------------|--|
| Gauge Number               | Wall Thickness | According to ASME B16.11 | гиинд туре    |  |
| 40                         | STD            | 2000                     | Threaded      |  |
| 80                         | XS             | 2000                     | Threaded      |  |
| 160                        | -              | 3000                     | Threaded      |  |
| -                          | XXS            | 6000                     | Threaded      |  |
| 40                         | STD            | 3000                     | Socket Welded |  |
| 80                         | XS             | 3000                     | Socket Welded |  |
| 160                        | -              | 3000                     | Socket Welded |  |
| -                          | XXS            | 3000                     | Socket Welded |  |

## Identification

Every condensate pot is identified with laser marking made on an austenitic stainless steel strip or directly onto the pipe of the condensate pot. The marking includes the following information:

| Information              | Sample (Translation)                    |
|--------------------------|---|
| Serial Number            | PCDPT101255                             |
| Code Number              | On Request                              |
| Description              | Condensate Pot (Condensation vessel)    |
| Material                 | Stainless Steel SS316L                  |
| Pressure Rating          | LP 133 barg / HP 192 barg               |
| Maximum Working Pressure | LP 133 barg / HP 192 barg               |
| Testing Pressure         | LP 199.5 barg / HP 288 barg             |
| Temperature Range        | From 0°C Min. to 200°C Max.             |
| Outlet Size              | 1/2" NPT (F) (Internal Thread 1/2" NPT) |
| Date                     | Manufacturing Date                      |
| Manufacturer             | PANAM <sup>°</sup>                      |

## Testing

Every condensate pot is pneumatically tested in air / nitrogen at pressure 500 psi per sq. inch. The casing is hydrostatically tested in clean water at a pressure of 1.5 times above the operating pressure.

The following weld seam tests can be carried out on request:

- Welds test by dye-penetrant method according to ASME BPVC Section V Article 6 and certification according to ASME BPVC Section VIII Division 1 Appendix 8.
- Radiographic weld test according to ASME BPVC Section V Article 2 and certification according to ASME BPVC Section VIII Division 1 UW-51.

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NOTE:- Continuous product development from time to time necessitate changes in the details contained in this catalogue. **PANAM**<sup>®</sup> reserves the right to make such changes at their discretion and without prior notice. The Selection of a Condensate Pot for any application or system design must be considered to ensure safe performance. Condensate Pot function, rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. **PANAM**<sup>®</sup> accepts no liability for any improper selection, installation, operation or maintenance.

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# **Other Products**



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