

## Orifice Carrier Assembly

### Introduction

The **Orifice Carrier Assembly (ARO-OPA-CR)** by Arrotop ensures precise flow measurement in high-pressure and high-temperature environments. It features an orifice plate with a carrier ring for perfect alignment and sealing between standard pipe flanges, suitable for various applications.

### Product Overview



The **Orifice Carrier Assembly (ARO-OPA-CR)** by Arrotop combines precision engineering with robust construction to deliver reliable fluid flow measurement solutions.

Designed for seamless integration into industrial piping systems, this assembly ensures accurate flow measurement across various applications.

### Technical Specification

Orifice Plate Types	Concentric, Square Edge, Quadrant Edge, Eccentric, Conical Entrance, Segmental
Material	SS 304/L, 316/L, Duplex, Super Duplex, Hastelloy, Monel, Inconel
Sizes Range	DN25 (1") and above
Pressure Classes	300, 600, 900, 1500, 2500
Flange Ratings	ANSI B16.36, ISO 5167-2, ASME MFC-3M
Plate Thickness	3.18 mm, 6.35 mm, 9.52 mm, 12.7 mm
Standards	ISO 5167, AGA 3 ASME MFC-3M, JIS Z 8762, BS 1042
Pressure Taps	Flange Taps, Corner Taps, Annular Chambers
Markings	Upstream, bore type, size, line size, tag number, flange rating
Flow Turndown	Typically > 10:1
Accuracy	$\pm 0.6\%$ for $\beta < 0.6$ ; $\pm 1\%$ with calibrated spool for higher $\beta$ values
Pressure Tap Sizes	3/8", 1/2" BSP male, $\varnothing$ 12 mm, 1/2" NPT
Carrier Ring Diameter	Matches PCD of corresponding flange
Carrier Ring Thickness	Minimum 37.5 mm, varies with pressure class
Pressure Tap Lengths	Standard 150 mm, other lengths on request
Tap Location	Typically on the same side of the carrier ring, variations for vertical installations

### Advantages

- ➡ Multiple Configurations
- ➡ Enhanced Measurement
- ➡ Cost Effective
- ➡ Ease of Replacement

### Applications

- ➡ Chemical Processing
- ➡ Oil and Gas
- ➡ Power Generation
- ➡ Industrial Piping

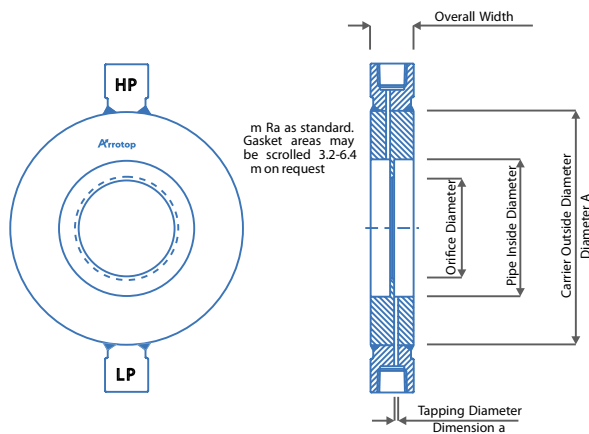
## Single Ring Orifice Carrier (ARO-OPA-CR.S)



### Features

**Compact Design :** Occupies minimal space between pipeline flanges.

**Application :** Suitable for high-pressure and high-temperature environments with space constraints.



## Double Ring Orifice Carrier (ARO-OPA-CR.D)

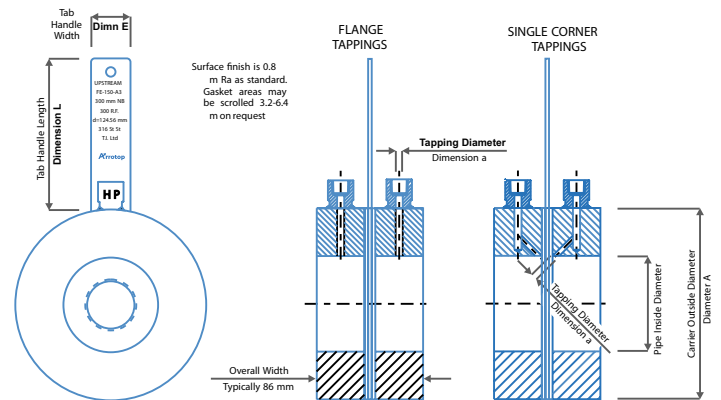


### Features

**Enhanced Support :** Provides additional stability and alignment for the orifice plate.

**Multiple Tapping Options :** Available with flange tapplings, single corner tapplings.

**Versatile Design :** Suitable for a wide range of applications, including complex flow systems.



## Installation and Maintenance

**Installation :** Ensure proper alignment and centring of the carrier ring and orifice plate according to flange standards. Accurate alignment is critical for optimal performance and leak prevention.

**Maintenance :** Regularly inspect and maintain the assembly to ensure continued accuracy and integrity. Check for wear, proper alignment, and sealing periodically.

## Conclusion

The **Orifice Carrier Assembly (ARO-OPA-CR)** series by Arrotop offers robust and precise fluid flow measurement, designed to meet a wide range of industrial needs. With configurations for both single and double ring designs, the assembly provides versatility and reliability for various applications.

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