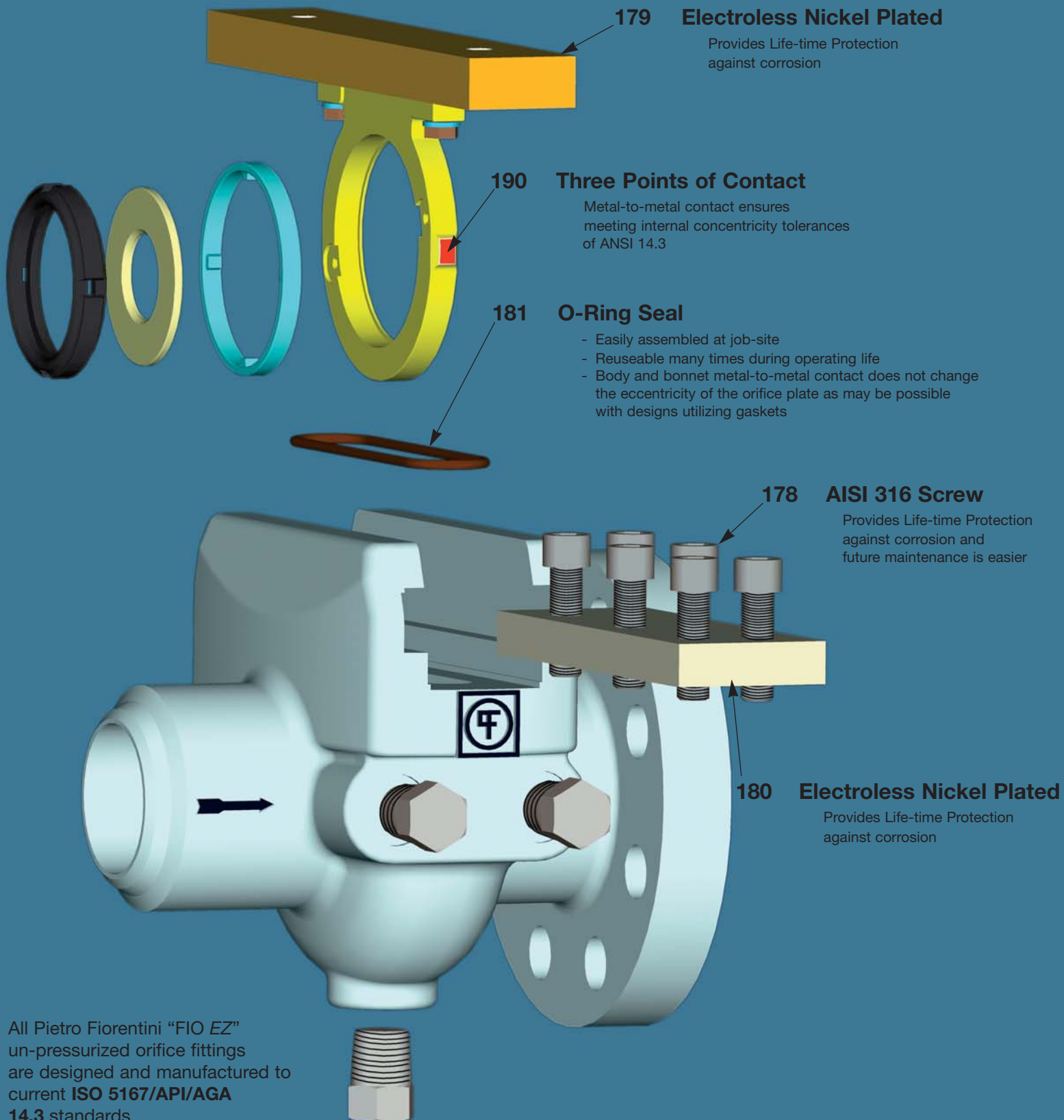




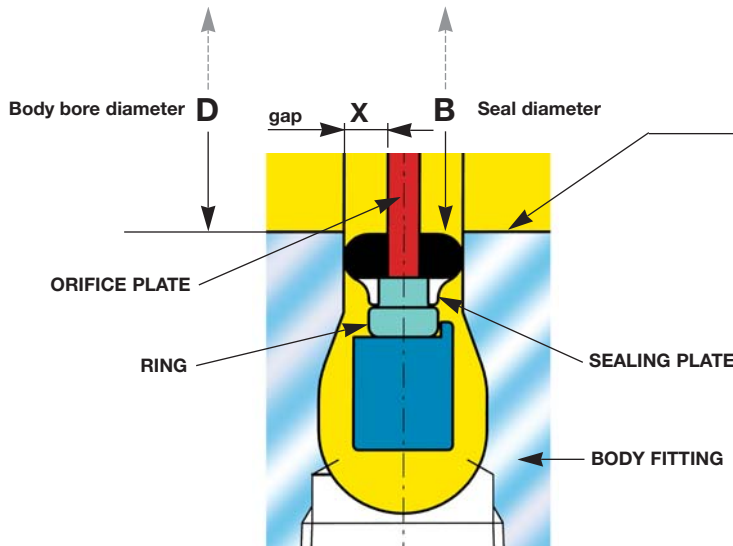
# UN-PRESSURIZED ORIFICE FITTINGS



# FIO EZ



Alternate fittings are available in socket weld, threaded and weld ends upon request.



**ROUGHNESS OF INTERNAL BODY SURFACES**

<p>API/AGA 14.3 Report N°3 SECTION: 2.5.1.1</p> <p>300 microinches per Beta ≤ 0.6 200 microinches per Beta &gt; 0.6</p>
---------------------------------------------------------------------------------------------------------------------------------

**API/AGA 14.3 Report N°3 - SECTION: 2.5.1.4**

The orifice plate surfaces 'B' must not protrude into the bore 'D'.

**API/AGA 14.3 Report N°3 - SECTION: 2.5.1.4.2**

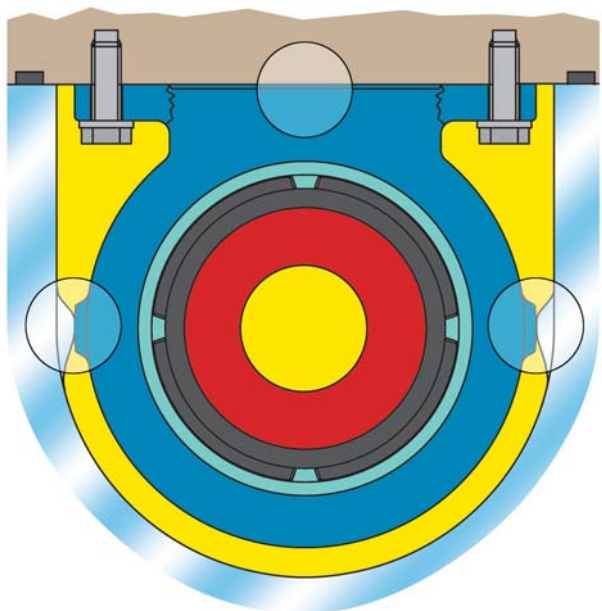
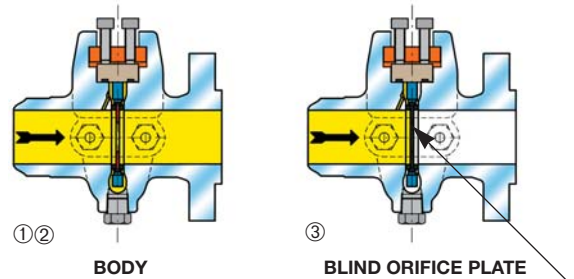
In all Pietro Fiorentini pressurized orifice fittings, the distance 'X' is less than 0.25 inches.

Temperature limits: -20° F +250° F

**① ② TEST PRESSURE IN ACCORDANCE TO API 6D**

CLASS	HYDROSTATIC TEST	PNEUMATIC TEST	
	① BODY AND BONNET psi	② BODY psi	③ PLATE psi
150	425	80	2.9
300	1100	80	2.9
600	2175	80	2.9

The test pressures listed are **NOT** valve operating pressure ratings.



**THREE POINTS OF CONTACT**

This system enables the fitting to meet internal concentricity tolerances of the orifice plate as required by ISO 5167/API/AGA 14.3 standards.

**max (ε) ECCENTRICITY FOR 0,75 BETA (β)**

SIZE	Dm	API/AGA 14.3 Report N°3 Section: 2.6.2.1
2	2.066	0.005905
3	3.068	0.009055
4	4.025	0.011811
6	6.066	0.018110

inches

API/AGA 14.3 Report N°3  
Section: 2.6.2.1  
ECCENTRICITY (ε)

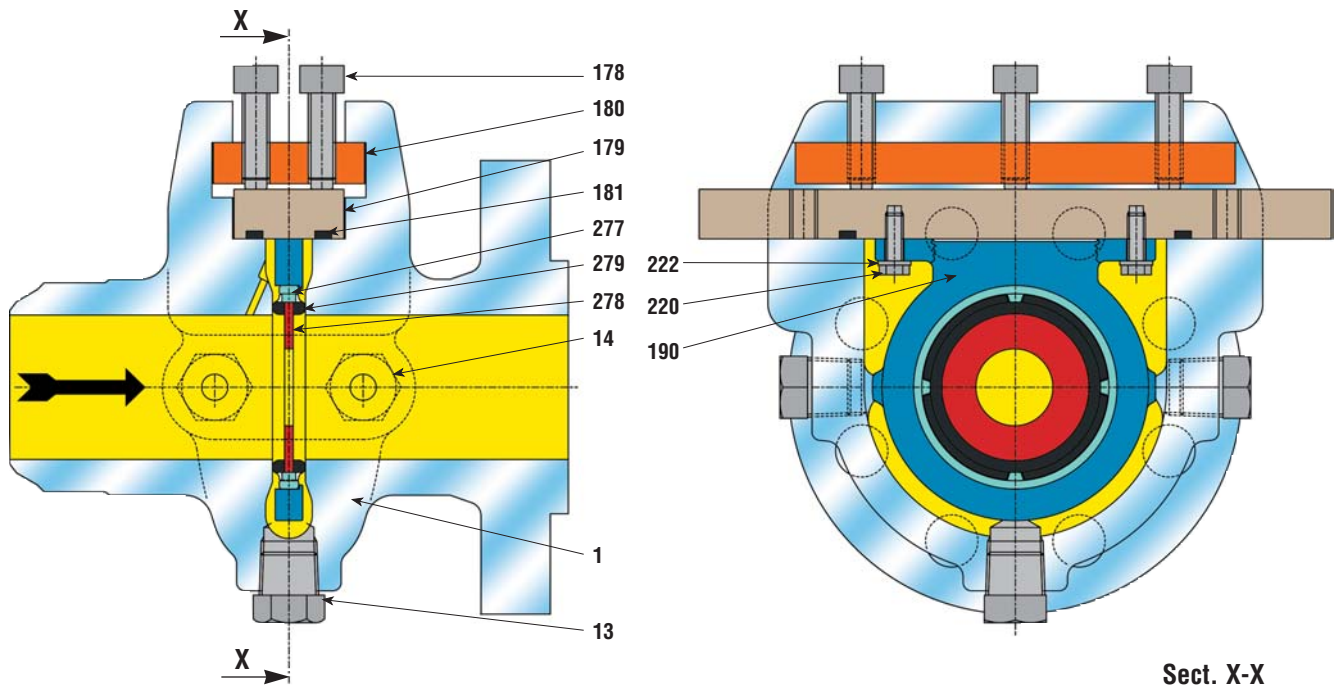
$$\epsilon_{max} = \frac{0.0025 D_m}{0.1+2.3 (\beta_{max})^4}$$

where:

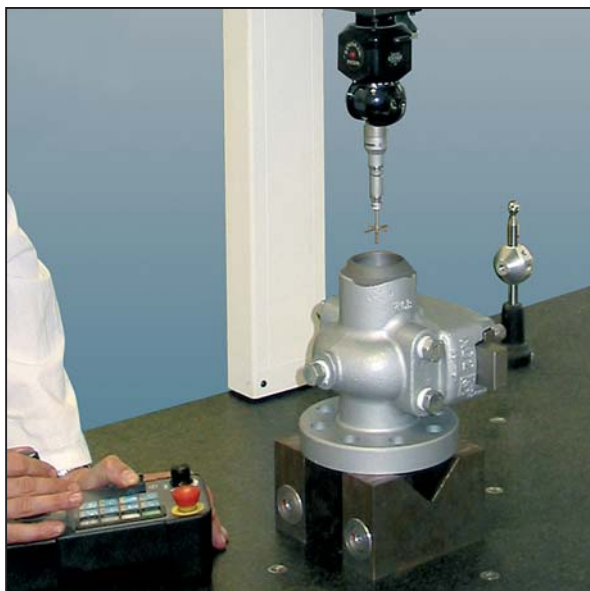
**ε<sub>max</sub>** Allowable plate bore eccentricity measured parallel to the axis of the pressure taps;

**D<sub>m</sub>** is the mean bore diameter;

**β<sub>max</sub>** is the maximum beta ratio of the diameters used.



**Sect. X-X**

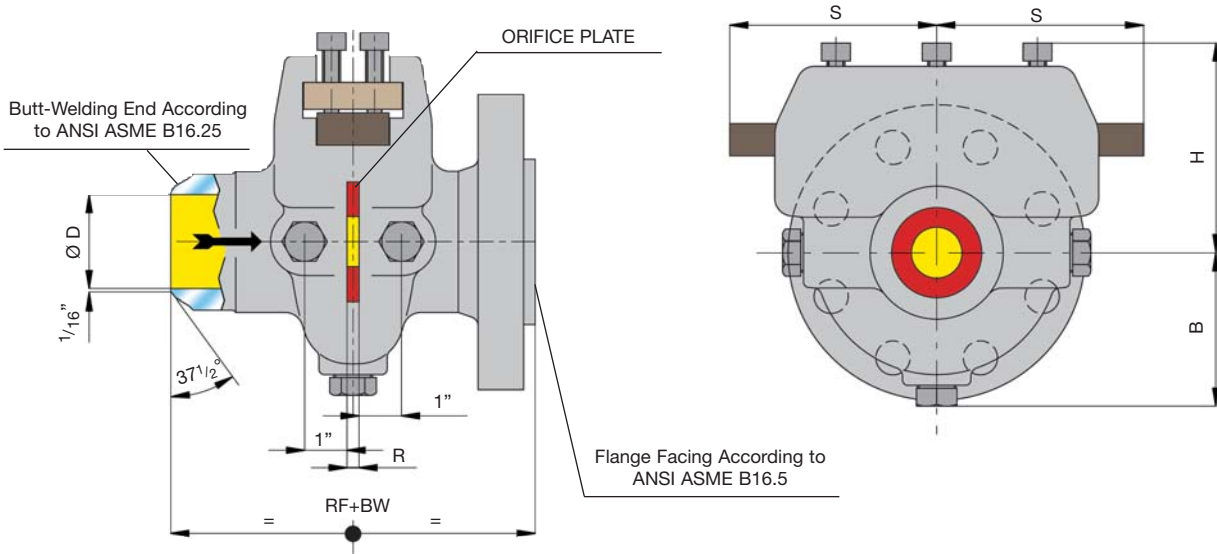


Three-dimensional control

POS.	DESCRIPTION	MATERIALS	NOTES
1	BODY	ASTM A 216 WCB	
13	DRAIN PLUG	ASTM A 105	2
14	PLUG	ASTM A 105	2
178	SCREW	AISI 316	
179	BONNET	AISI 1035	1
180	CLAMP	AISI 1035	1
181	O RING	BUNA-N	
190	PLATE CARRIER	ASTM A 351 Gr CF8	
220	SCREW	CARBON STEEL	2
222	WASHER	CARBON STEEL	2
277	RING	ASTM A 351 Gr. CF8/AISI 410	
278	ORIFICE PLATE	AISI 316	
279	SEALING PLATE	BUNA-N	

**NOTES**

- 1 ENP (Electroless Nickel plated).
- 2 Zinc coated.



**Fig. 945-1**

**CLASS 150**

ND	RF+BW	D*	B	H	S	R	WEIGHT
2	7 1/4	2.067	3	4 5/8	4 5/8	1/8	41
3	7 1/2	3.068	4	5 1/8	5 1/4	1/8	49
4	9	4.026	4 7/8	5 5/8	5 3/4	1/8	68
6	10 1/4	6.065	6	7 3/8	6 3/4	1/8	114
inches							pounds

**Fig. 945-3**

**CLASS 300**

ND	RF+BW	D*	B	H	S	R	WEIGHT
2	7 1/4	2.067	3	4 5/8	4 5/8	1/8	42
3	7 1/2	3.068	4	5 1/8	5 1/4	1/8	54
4	9	4.026	4 7/8	5 5/8	5 3/4	1/8	80
6	10 1/4	6.065	6	7 3/8	6 3/4	1/8	130
inches							pounds

**Fig. 945-6**

**CLASS 600**

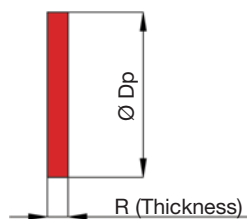
ND	RF+BW	D*	B	H	S	R	WEIGHT
2	8	2.067	3	4 5/8	4 5/8	1/8	47
3	9	3.068	4	5 1/8	5 1/4	1/8	72
4	10	4.026	4 7/8	5 5/8	5 3/4	1/8	98
6	11 1/2	6.065	6	7 3/8	6 3/4	1/8	160
inches							pounds

\* Bore tolerance "D"  $\pm 0.002"$

Other bores are available on special request

**ORIFICE PLATE DIAMETER**

ND	Dp	R
2	2.437	1/8
3	3.437	1/8
4	4.406	1/8
6	6.437	1/8
inches		



## LIMITED WARRANTY

Seller warrants the Goods to be free from defects in materials manufactured by Seller and in Seller's workmanship for a period of one (1) year from the date of shipment by the Seller (the "Warranty Period"). Resale goods and those products incorporated into the Goods shall carry only the warranty extended by the original manufacturer to the original purchaser.

THIS LIMITED WARRANTY (A) IS IN LIEU OF, AND DISCLAIMS AND EXCLUDES, ALL OTHER WARRANTIES, STATUTORY, EXPRESS OR IMPLIED, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, OR OF CONFORMITY TO MODELS OR SAMPLES; (B) does not apply to any Goods which have be (i) repaired, altered or improperly installed, (ii) subject to improper use or storage, (iii) used or incorporated with other materials, or equipment, after Buyer or anyone using the Goods, has, or reasonably should have, knowledge of any defect or nonconformance of the Goods, or (iv) manufactured, fabricated or assembled by anyone other than the seller; (C) shall not be effective unless Buyer notifies Seller in writing of any purported defect or nonconformance within thirty (30) days after Buyer discovers or should have reasonably discovered such purported defect or nonconformance; and (D) shall only extend to Buyer and not to any subsequent buyers or users of the Goods. Buyer shall provide Seller access to the Goods to which Buyer claims purported defect or nonconformance; upon request by Seller, Buyer shall at its own risk and expense, promptly return the Goods in question to Seller's Plant. Seller shall, at its option, promptly repair or replace F.O.B. point of manufacture, that portion of the Goods found by Seller to be defective. Goods repaired and parts replaced during the Warranty Period shall be in warranty for the remainder of the original Warranty Period. A letter signed by an officer of Seller can only modify this warranty.

The specifications and drawings are indicative and not binding. We reserve the right to make changes without prior notice.



10628 Rockley Road - Houston, Texas 77099 (USA) • Tel. 832-328-3403 - Fax 832-328-3853 • [fiorentini@penn.com](mailto:fiorentini@penn.com)