OFS PRE-INSTALLATION CHECK LIST

The following conditions have to be met before OSI's engineer can proceed with the installation. A brief introduction of the OFS-2000 and the flange and optional purge requirements are attached in pages 2-5. Check each box below to indicate completion:

1. Four inch ANSI pipe flange is mounted/fabricated at Transmitter side ☐
2. Four inch ANSI pipe flange is mounted/fabricated at Receiver side ☐
3. Power source (120-240 Volt 50/60 Hz) is available at Transmitter ☐
4. Power source (120-240 Volt 50/60 Hz) is available at Control Box side ☐
5. If purchased from OSI, the interconnect cable (P/N 1910-217) should be routed from the Receiver Unit (P/N 1910-200) to the Control Box (P/N 1910-300 for NEMA4, 1910-500 for Rack Mount). Or if the user uses its own cable, a 10 conductor shielded cable should be routed between the Receiver Unit and the Control Box. ☐
6. If the user is interfacing the OFS to a DAS, a data cable is routed from OSI's Control Box to the user's DAS ☐
7. It is vital that the stack is up and running during installation day. Thus, OSI's engineer can check the performance of the OFS with a load. ☐

This form must be filled out completely, all boxes above checked, signed and faxed back to OSI [fax: (301) 948-4674] prior to the scheduling of an OSI engineer's visit.

Once OSI receives this completed form and a valid purchase order for the installation or installation & training visit, an OSI engineer will call the technical contact indicated below to schedule the trip. Normally the trip date is scheduled for one to two weeks following receipt of this form and the purchase order.

IF THE VISITING OSI FACTORY AUTHORIZED SERVICE ENGINEER FINDS THAT ONE OF THE ABOVE CHECKED ITEMS IS INCOMPLETE, THE CUSTOMER MAY BE CHARGED $1280 PER DAY FOR THE EXTRA DAYS THE ENGINEER HAS TO WAIT UNTIL THE INSTALLATION CONDITIONS ARE COMPLETED.

SIGNATURE _____ **DATE** _____

NAME, TITLE_____

COMPANY _____

TECH. CONTACT _____ **TEL** _____

DESCRIPTION OF OFS UNITS

The OFS-2000 is composed of three main elements, the Transmitter (TX) Unit (P/N 1910-100), the Receiver (RX) Unit (P/N 1910-200), and the Control Box (P/N 1910-301 for nema-4, P/N 1910-500 for rack mount). The relationship of units is shown in Figure 1.

The TX and RX Units use identical packaging to house the optical and electronic subsystems. All parts are made from aluminum and are painted with powder-coat type paint for durability. Both housings have nominal 1-inch diameter holes for the user to make power and signal connections. The use of 1/2-inch flex conduit is recommended to protect the wiring from the harsh industrial environment.

There are two kinds of Control Box – NEMA-4 and Rack Mount. The box houses the DSP processor, power supply, and interface components. The Box is connected to the RX Unit via a shielded cable (P/N 1910-217) supplied with the OFS. The NEMA-4 Control Box has nominal 1-inch diameter holes for the user to make power and signal/communications connections. The rack-mount Control Box has a power cord socket and a terminal block for the user to make signal/communication connections. The user normally supplies signal and communication cables. The use of 1/2-inch flex conduit is recommended to protect the wiring from the harsh industrial environment.

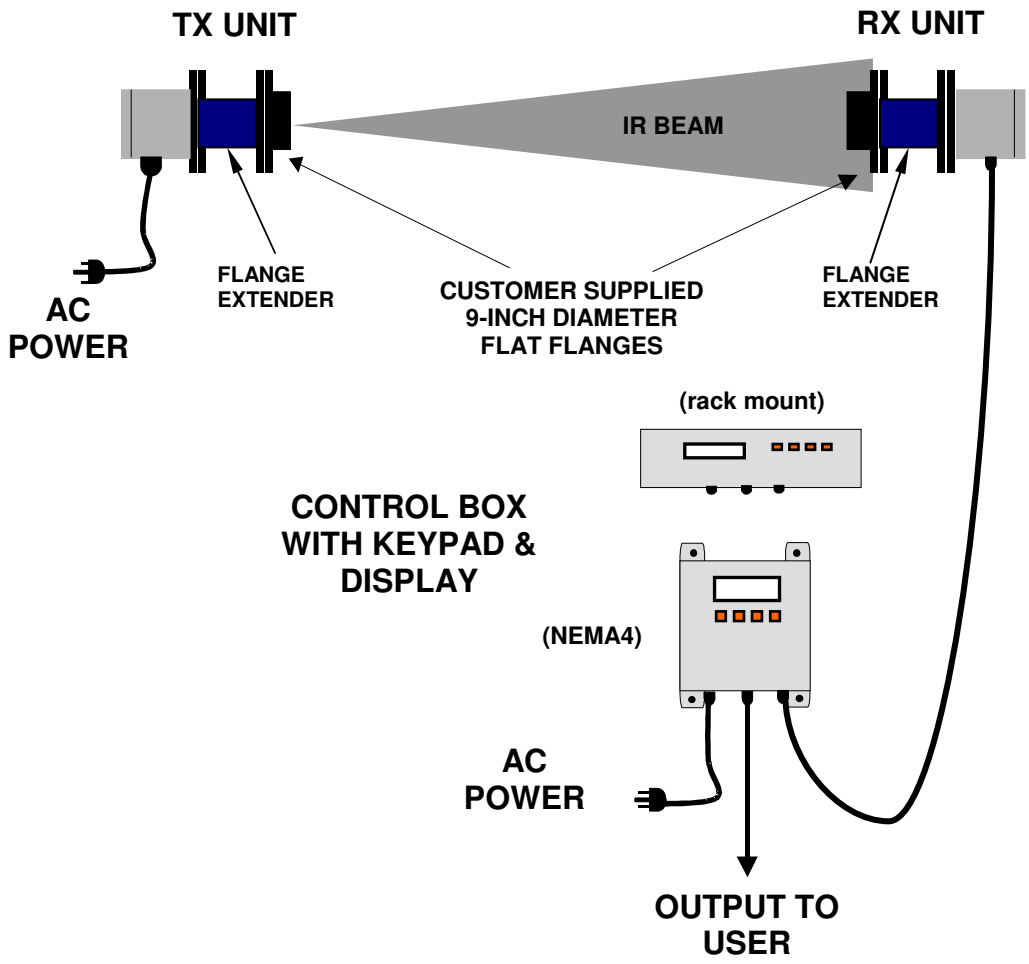
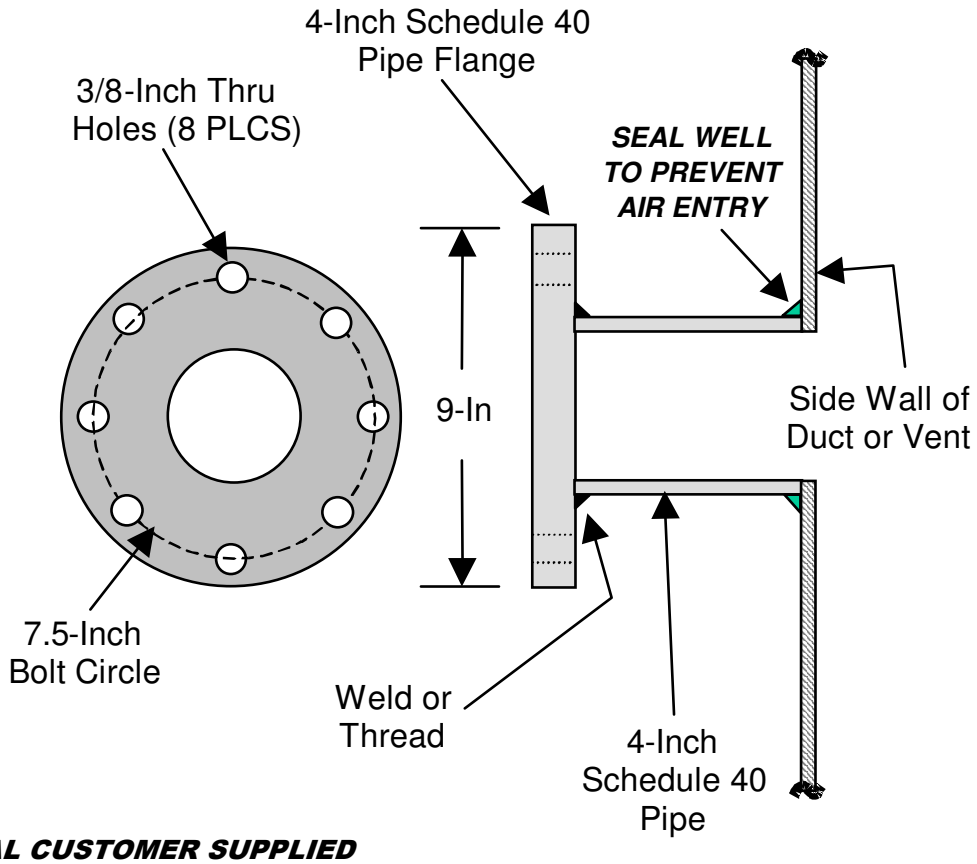


Figure 1. OFS-2000 Major Components

FLANGE INSTALLATIONS

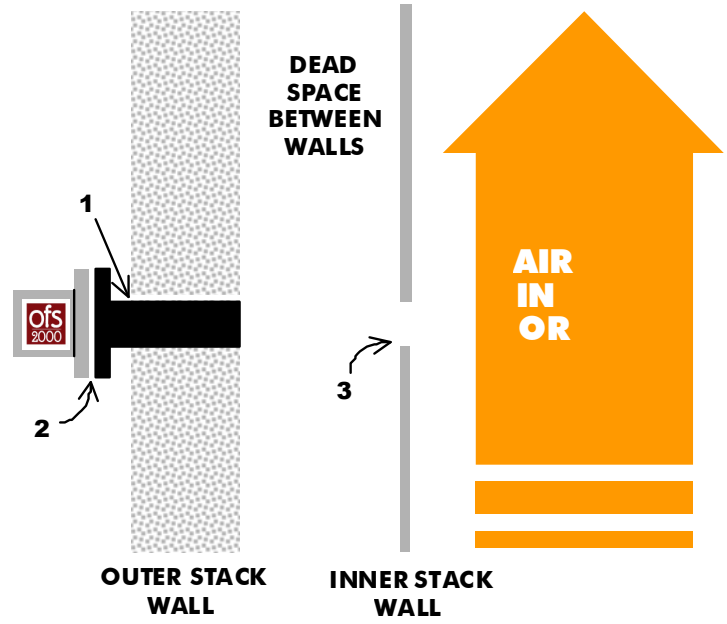
Customer supplied flanges must be installed such that the OFS TX and RX Units mount opposite each other and perpendicular to the movement of the media. The flanges may be made from commercially available 4-inch Schedule 40 pipe and flat-faced flanges as shown in Figure 2.

Air infiltration through improperly sealed flanges or from double walled stacks with dead space between the inner and outer walls may cause incorrect velocity readings. Figure 3 illustrates the incorrect (top) and correct (bottom) methods of installing the OFS. Insure that the mounting flange is well sealed to the stack wall (arrow 1), the OFS flange is well sealed to the stack flange with the supplied gasket (arrow 2), and that any dead space between double walled stacks is penetrated with pipe (arrow 3).

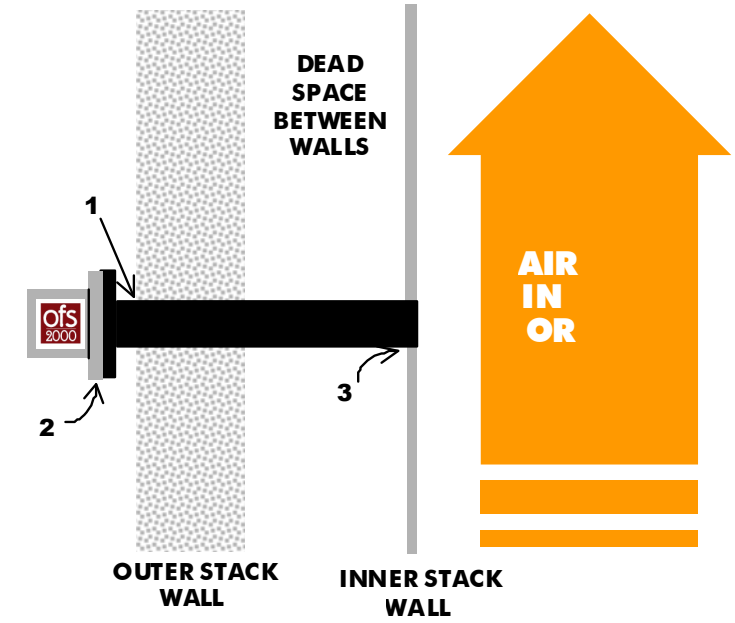


TYPICAL CUSTOMER SUPPLIED MOUNTING FLANGE

Figure 2



Improper installation allows external air to contaminate true air velocity shown as arrows 1, 2, & 3



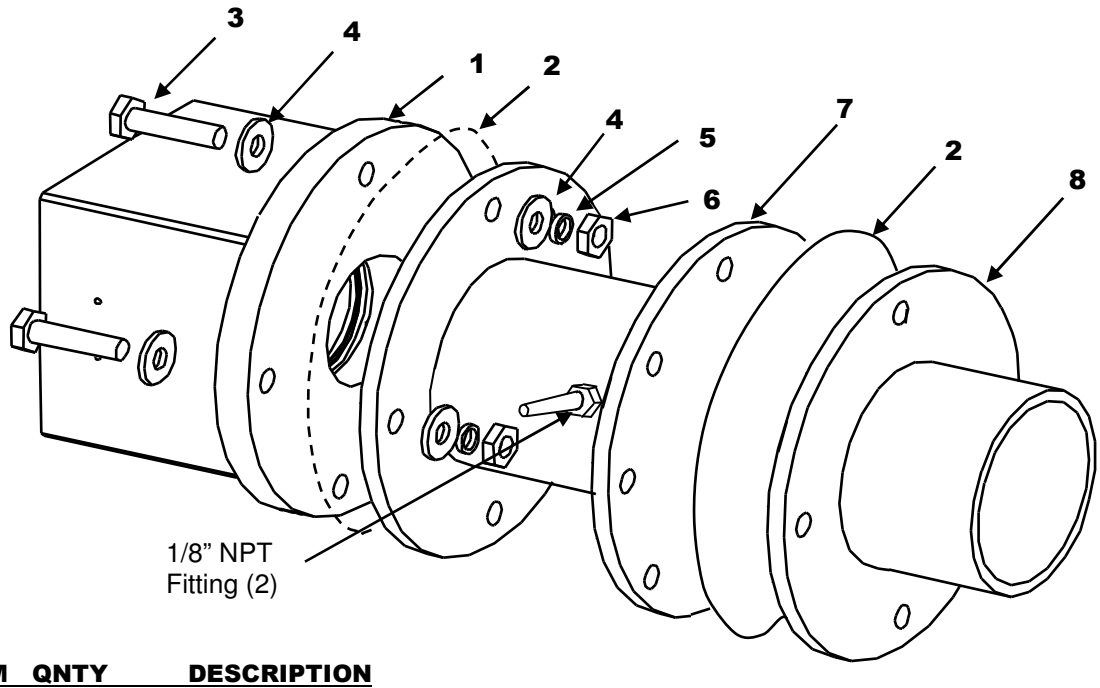
Proper installation prevents external air from contaminating true air velocity shown as arrows 1, 2, & 3

Figure 3

TX/RX Units

Attach the OFS TX & RX Units to the user-supplied flanges using the hardware as shown in Figure 4. Match the OFS, extender and stack flanges at 12-clock position so that the housing door hinge is vertical before tightening the four bolts. Mounting hardware for installation of the units is included.

The flange extenders each have two 1/8" NPT purge holes and are supplied with barbed nipples sized for ¼" ID hose. The flanges must be oriented so that a line drawn between the two holes is perpendicular (NOT PARALLEL) to the direction of the flow measurement. The purge holes should be left open (nipples not installed) to provide passive air purge for negative pressure stacks / ducts. If the stack/duct pressure is positive or the media being measured is excessively dirty, it may be necessary to apply a small amount of compressed instrument-grade air through the NPT fittings. The exact amount of air needed is site dependent, but should not exceed a maximum of 0.5 PSI or 2.0 SCFM. It is recommended that a regulator be installed near the OFS heads to control the airflow. If media pressure is too high, it may be necessary to either plug these purge holes or use a sight glass to seal the test port and isolate the sensor from the media. Contact OSI's customer service for additional assistance if this is your situation.



ITEM	QNTY	DESCRIPTION
1	1	OFS TX OR RX UNIT
2	2	OFS FLANGE GASKET
3	4	3/8-16X2 INCH SS HEX BOLT
4	8	3/8 INCH SS FLAT WASHER
5	4	3/8 INCH SS LOCK WASHER
6	4	3/8-16 INCH SS HEX NUT
7	1	FLANGE EXTENDER
8	1	CUSTOMER SUPPLIED MATING FLANGE

Figure 4: OFS TX / RX Unit Mounting / Installation
Rev: 03/24/05