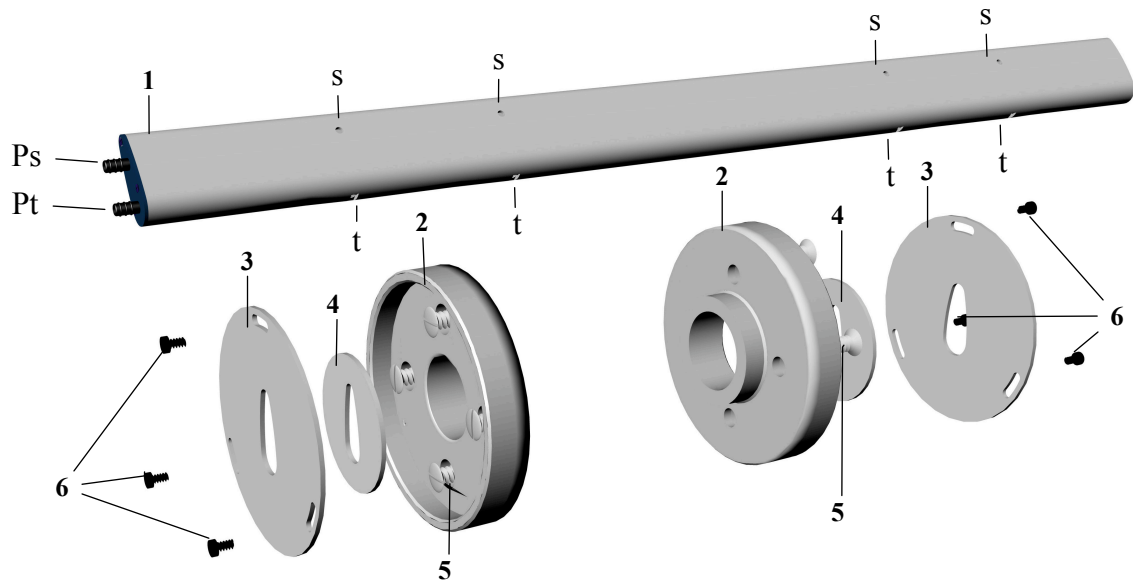


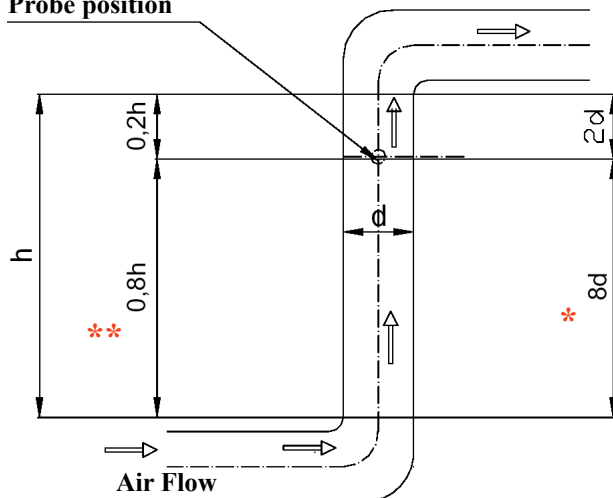
## INSTALLATION INSTRUCTIONS



| Ref. | DOC Note | Code AER Code Supplier | Name  | U.M. | Q.ty   |
|------|----------|------------------------|---|------|--------|
| 1    |          | AER-XXX                | Kflow Probe                                 | N°   | 1      |
| 2    |          | AER-XXX                | Ring  | N°   | 2      |
| 3    |          | AER-XXX                | Probe holding disk                          | N°   | 2      |
| 4    |          | AER-XXX                | Gasket                                      | N°   | 2      |
| 5    |          | AER-XXX                | Self-thread screws $\varnothing$ 3,9 - L_25 | N°   | 8      |
| 6    |          | AER-XXX                | Allen screws $\varnothing$ 5 - L_10         | N°   | 6      |
| s    |          |                        | Static pressure holes                       | N°   | varies |
| t    |          |                        | Total pressure holes                        | N°   | varies |
| Ps   |          | AER-XXX                | Static pressure hose                        | N°   | 1      |
| Pt   |          | AER-XXX                | Total pressure hose                         | N°   | 1      |

**Fig\_1**

**Probe position**



**\* Ideal**

Velocity pressure measure is more precise when the measuring position is in a palce with low turbulence.

Ideal position is 8 diameters after last section variation and 2 diameters before the next one. In practice this condition is rare.

**\*\* Practical**

Probe's place is then that one, in the longest available straigh piece of duct, which is at 0.8 times that length.

When this distance is near to the last section variation, the probe will be in a high turbulence place.

Signal will fluctuate.

Fluctuations may be minimized by mean of the rotation of the probe-holding disk 3.

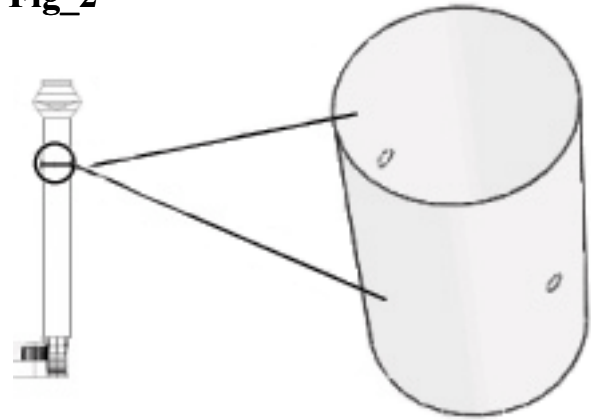
## INSTALLATION INSTRUCTIONS

### 2 INSTALLATION - In a circular Duct

Find the ideal position for the probe.  
Then drill two holes 50 mm in diameter at the ends of the same diameter.

Fig 2 shows the place of the duct chosen and position where the holes have been made.

Fig\_2



Insert the hub of the two rings into the holes  $\varnothing$  50 mm.

**Important:** holes 3, 1 and 5 (Fig.4) must be in the direction of the air flow. (Air comes from 3 and goes to 5).

Mark the position of the screws 1, 2, 3, 4 of Fig.4.

Drill with a drill  $\varnothing$  3 mm.

Fix the two rings with  $\varnothing$  3,5 mm screws.

Seal disk to duct.

Fig\_3



#### 1, 2, 3, 4

Holes for self-threading screws  $\varnothing$  3,5 x 25.

#### 5, 6, 7

Holes for Allen screws  $\varnothing$  5 x 10 to fix the probe-holding disk.

#### NOTE

**Fig\_2 shows the mounting position of the ring with vertical flow.**

**Holes 3, 1, 5 must be oriented in the air flow direction**

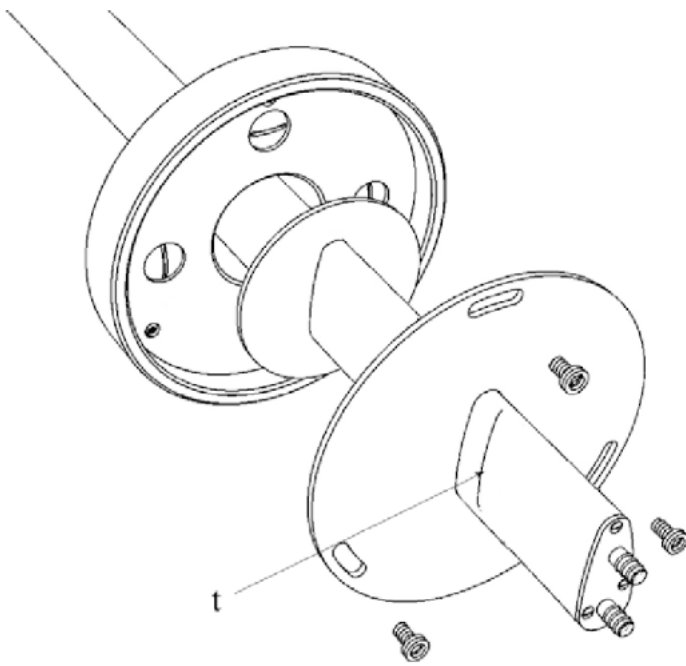
**Air arrives from 3 and goes toward 5**

Fig\_4



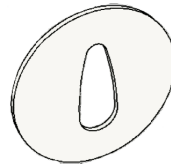
## INSTALLATION INSTRUCTIONS

**Fig\_5**



Insert the probe as in fig. 5 until rings fit with the notch [t] in the probe.  
Screw the Allen screws in the center of the slots.

**Fig\_6 Gasket**



**Fig\_7 Disk**

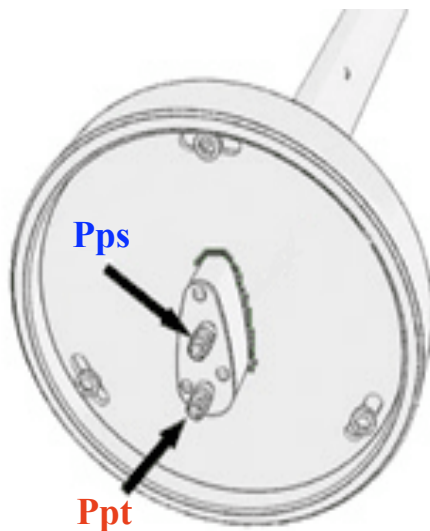
**8, 9, 10**  
Slots allows probe's direction regulation.



**NoTE.**

**Slot 8 must fit hole 5 of FIG\_4**

**Fig\_8**

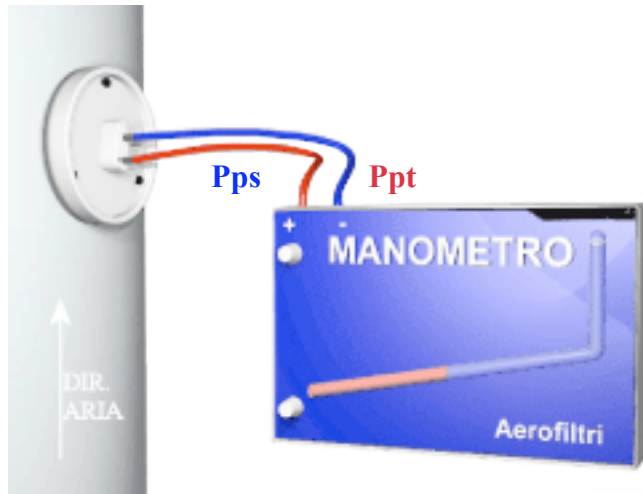


Hose **Pps** must be connected by mean of a rubber tube 6 mm inside  $\varnothing$  to the minus [-] connector of a manometer or of a pressure trasducer.

Hose **Ppt** to the connector [+].

## INSTALLATION INSTRUCTIONS

Fig\_9



If the readings are unstable it is possible to minimize the fluctuations loosening the Allen screws 5, 6, 7 (Fig.4) of both disks and rotate the probe until a lower fluctuation is achieved.

Tighten then again the three Allen screws. Value read by the instrument must be compared with the velocity values read in an easy to access position. (e.g. filter bank of a painting booth).

### 3\_MAINTENANCE

In case of dust ( $3 \text{ mg/Nm}^3$  should be an upper limit), after 40 hours of functioning take out the tube [+] from manometer and blow compressed air into it; then fix the tube again into the manometer plug.

After 1.000 hours, or when the signal lowers, take the probe away and clean total pressure holes, static pressure holes and hoses.

### 4\_POSSIBLE CONBINATIONS

1. **Manometer.**  
Just for air flow reading
2. **Pressure Transducer**  
For air flow reading (if the instrument has a display) and get a signal ( $0 \div 10 \text{ V}$ ,  $4 \div 20 \text{ mA}$ ) proportional to the velocity pressure.  
Signal can be used as a feedback for an inverter with P.I.D. function.