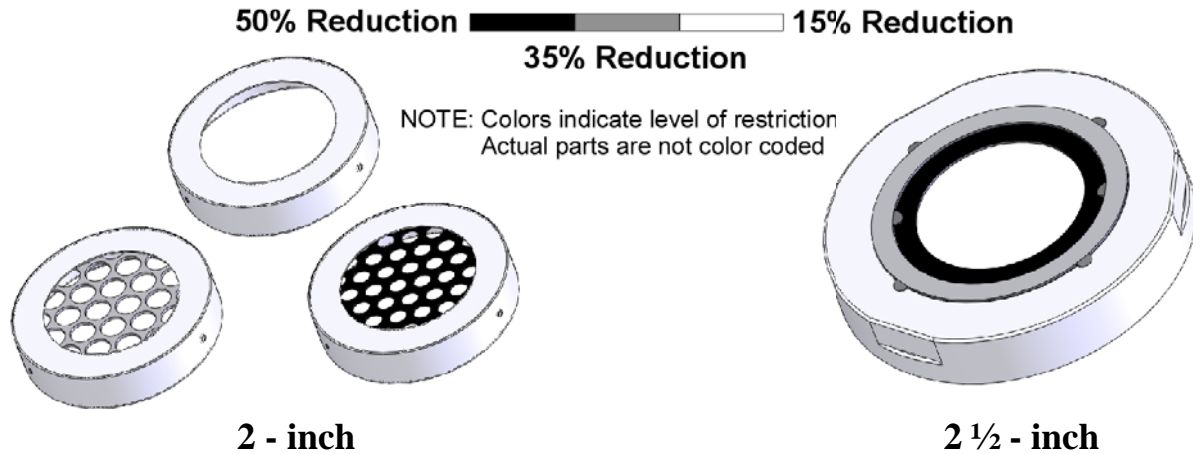


Take-Off Balancing Orifice



Scope

This kit offers the means to balance the system at the take-off. This kit should be used during the initial installation of the system when the take-offs are easily accessible. Placing the balancing orifice at the take-off allows the sound attenuator duct to remove any noise caused by its restriction.

Using a balancing orifice is typical in small rooms or when only a partial outlet is required. Use balancing orifices sparingly to maximize the airflow.

Installation

Simply calculate how much airflow is needed to be reduced at the outlet. Once the calculation is made, the correct orifice can be selected and applied onto the take-off.

2-Inch

If using the 2 inch take off balancing orifice kit there will be two different reduction orifices. They are both the same physical size however the size of the holes stamped in them are different. The reduction orifice with the larger diameter holes are used to reduce the airflow by 35% and the smaller diameter holes will reduce the airflow by 50%. Place the reduction orifice over the take-off and fasten it on with the reduction cap as shown in Figure 1. If needed, secure the cap to the take off using UL-181b duct tape. The supply tubing attaches to the take-off as shown in bulletin 30-55.

2 ½ -Inch

If using the 2 ½ inch take off balancing orifice kit, a single reduction cap is supplied with two layers of knockouts to provide for the 35 and 15% reduction. Depending on the amount of reduction needed, simply remove the appropriate number of rings. Place the reduction cap over the take-off (if needed, secure the cap to the take-off using UL-181b duct tape) and attach the supply tubing as shown in bulletin 30-55.

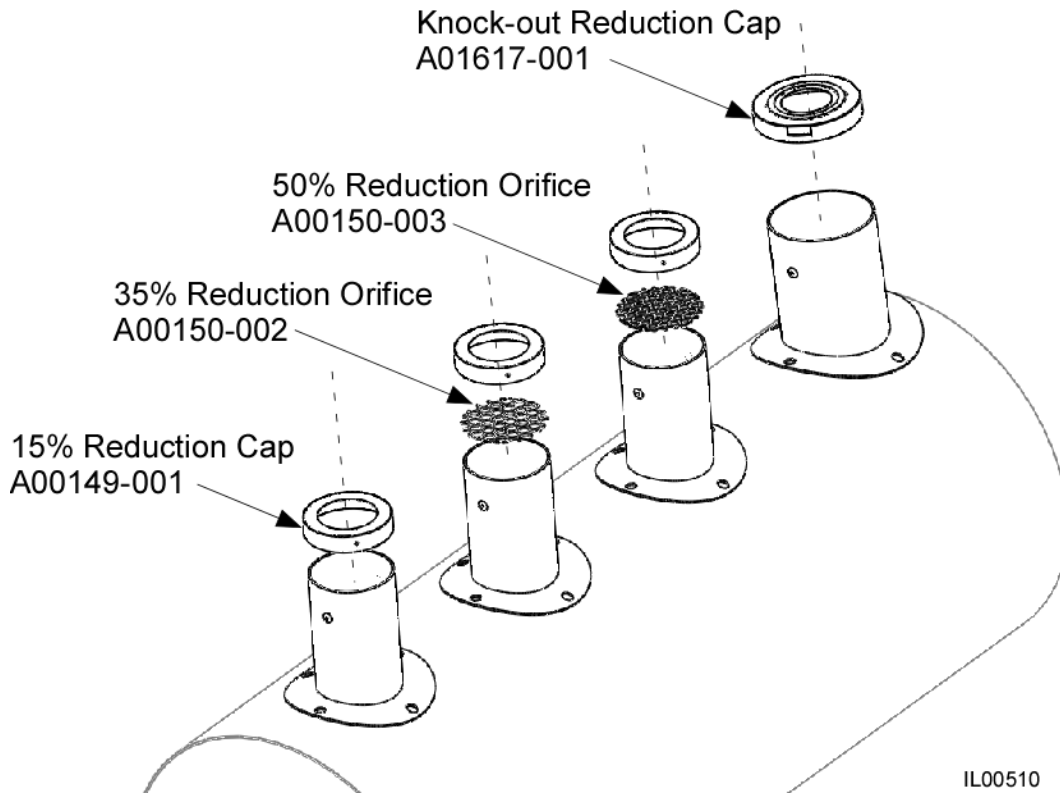


Figure 1. Take-off Balancing Orifice Installation

Table 1. Airflow Reduction

Airflow Reduction			
CFM (L/s)			
0%	15%	35%	50%
10.0 (4.7)	8.5 (4.0)	6.5 (3.1)	5.0 (2.4)
15.0 (7.1)	12.8 (6.0)	9.8 (4.6)	7.5 (3.5)
20.0 (9.4)	17.0 (8.0)	13.0 (6.1)	10.0 (4.7)
25.0 (11.8)	21.2 (10.0)	16.3 (7.7)	12.5 (5.9)
30.0 (14.2)	25.5 (12.0)	19.5 (9.2)	15.0 (7.1)
35.0 (16.5)	29.8 (14.1)	22.8 (10.8)	17.5 (8.3)
40.0 (18.9)	34.0 (16.0)	26.0 (12.3)	20.0 (9.4)
45.0 (21.2)	38.3 (18.1)	29.3 (13.8)	22.5 (10.6)
50.0 (23.6)	42.5 (20.1)	32.5 (15.3)	25.0 (11.8)
55.0 (26.0)	46.8 (22.1)	35.8 (16.9)	27.5 (13.0)

* Table 1 lists approximate airflow values when using the Unico take-off balancing orifice