

AGO20...DS-KT

Weldless Oxygen Sensor Collector Installation Kits

Product Description

This mounting kit is designed for a weldless installation of a collector for a QGO20 O2 sensor into a double-wall stack using common tools.

<u>SCC Part Number</u>	<u>Stack Diameter</u>
AGO20.001SDS-KT	12"-16"
AGO20.002LDS-KT	18"-36"

Components Supplied

Figure 1 shows the components in an AGO20...DS-KT weldless collector mounting kit.

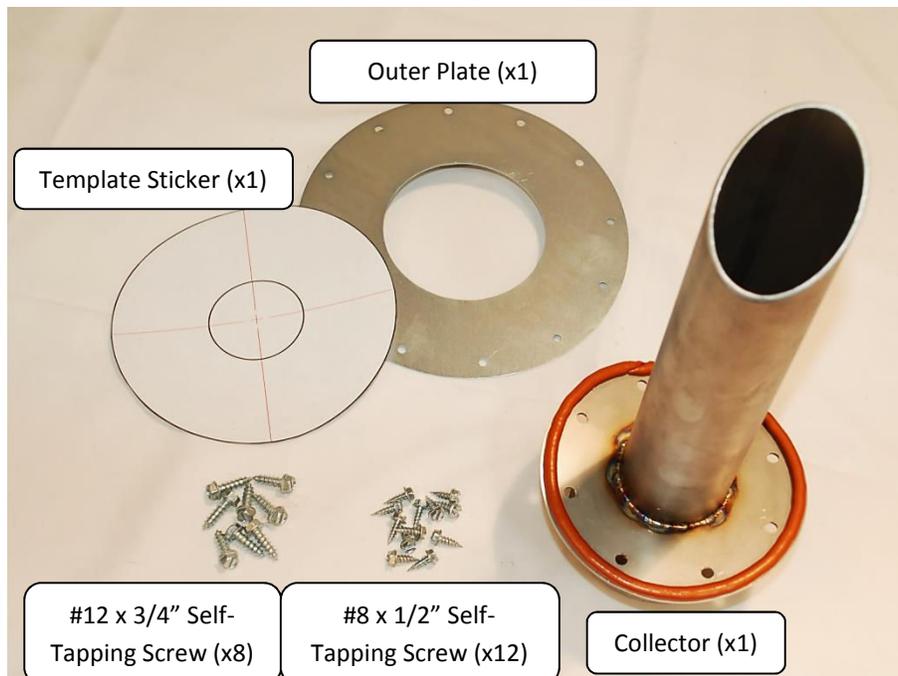


Figure 1: Pieces Supplied in AGO20...DS-KT Kit

Recommended Tools / Supplies

1. Aviation snips
2. 2-1/8" Bimetal hole saw with pilot bit
3. Drill/driver
4. 5/16" Hex head driver with a 2-inch extension
5. Spring-Impact Center Punch
6. 1/4" Hex head driver
7. 1/8" drill bit for metal
8. High temperature Insulation
9. 7/32" drill bit for metal

Safety Equipment

- Safety glasses
- Cut resistant gloves

Mounting and Assembly

1. Determine a suitable mounting location for the AGO collector in the double-wall portion of the exhaust stack. Do not mount the collector where it will be exposed to water.

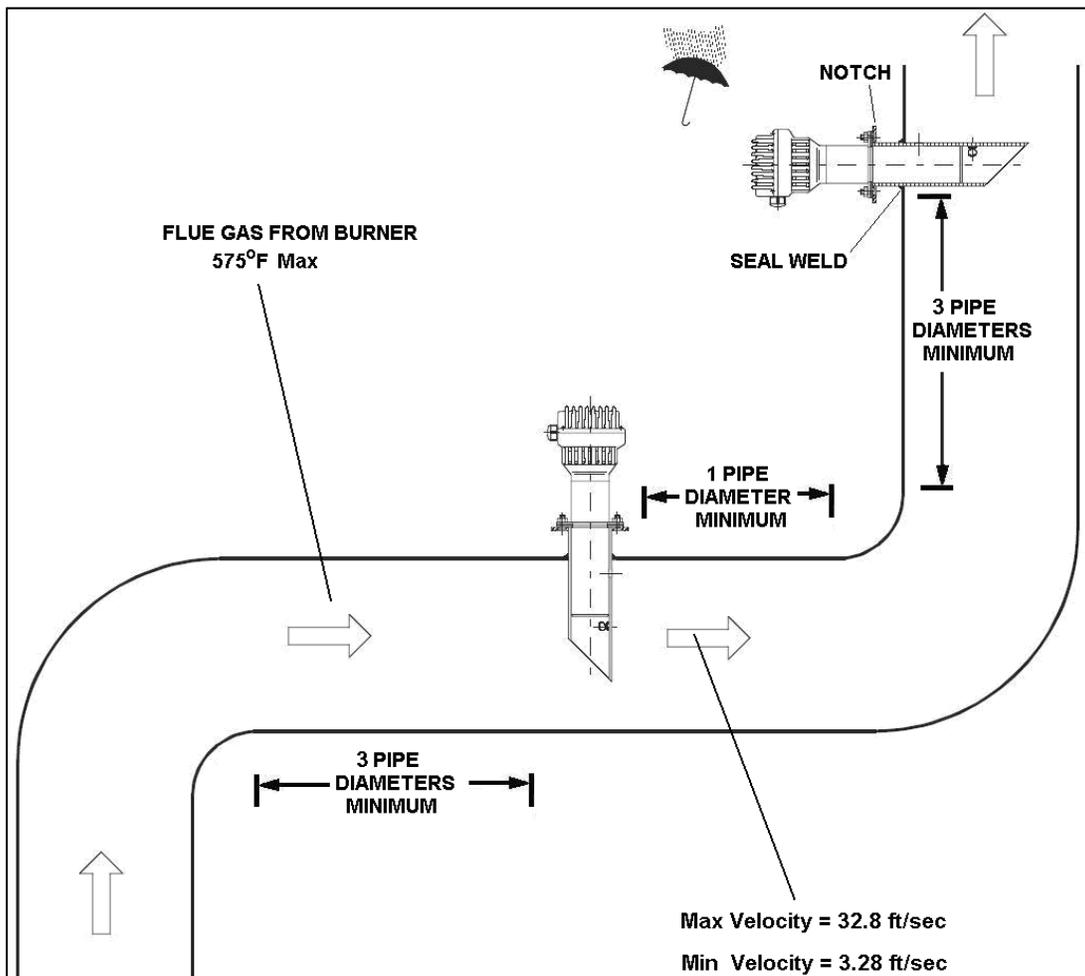


Figure 2: Mounting Location Guide

2. Align the template's centerlines to the center of the stack and apply the template sticker to the outer wall of the double-wall stack.
3. Center punch the center of the template.
4. Drill a 1/8" hole through the center punch created in the previous step. Drill straight into the stack as shown in Figure 3.



Figure 3: Sticker Placement and Pilot Hole Preparation

5. Using the 2-1/8" hole-saw, follow the 1/8" hole with the pilot bit of the hole saw. Cut through the outer wall of the stack with slow speed and moderate pressure. Do not cut through the inner stack at this point. The stack should look like Figure 4 after this step.

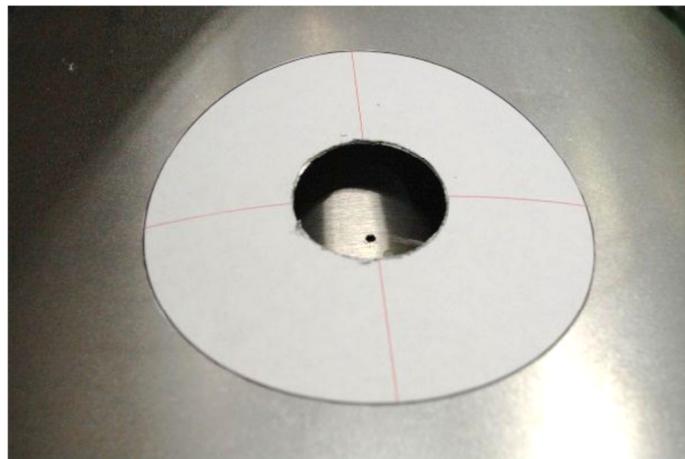


Figure 4: Result after Cutting the 2-1/8" Hole

- Using aviation snips, cut a 6" diameter hole in the outer wall of the stack, start from the middle hole and work toward the outer circle of the template in a spiral pattern. Figure 5 shows the process of shearing the 6" hole.



Figure 5: Shearing 6" Hole with Aviation Snips

- Using the 2-1/8" hole-saw, cut a hole through the inner stack. Follow the existing 1/8" hole with the pilot bit on the hole-saw. (See Figure 7) **NOTE: The inner stack can be difficult to cut with a hole-saw. Use a sharp hole-saw, apply moderate pressure, and very slow speed. If necessary, take periodic breaks to let the hole-saw cool in order to avoid dulling the saw teeth.**

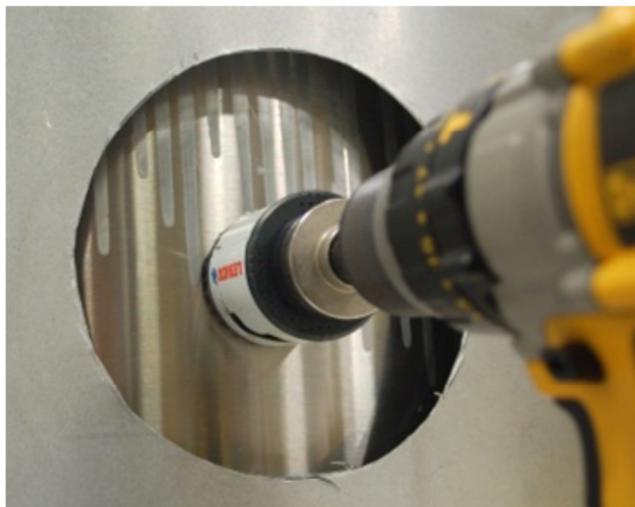


Figure 6: Cutting the Second 2-1/8" Hole

8. After the 2-1/8" hole is cut through the inner stack, insert the collector into the hole. The flanges' v-groove notches must be pointing in the direction of flow in order for the collector to scoop the exhaust. (See Figures 7 & 8)
9. Hold the collector in place and use the 7/32" drill bit to mark the center of the top hole onto the inner stack. (See Figure 7) **NOTE: Do not drill through the inner stack with this bit. This step is only meant to put a mark on the inner stack.**

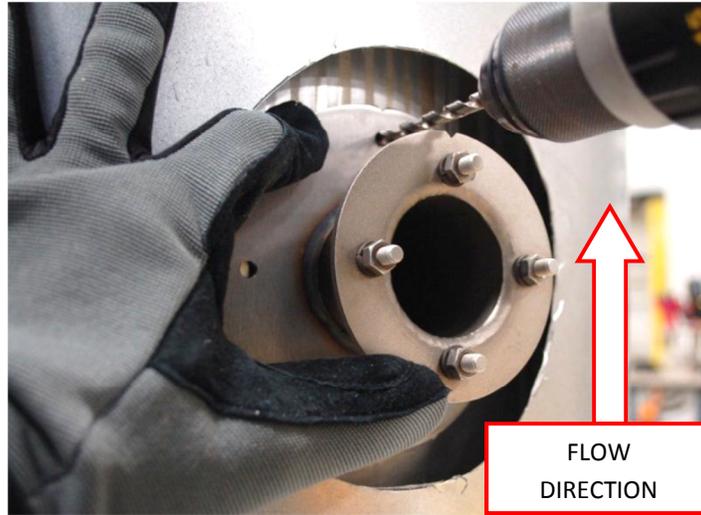


Figure 7: Collector Orientation & Marking the Top Hole

10. Remove the collector. Using the 1/8" drill bit, drill through the mark made in the previous step and into the stack. Keep the bit as perpendicular as possible to prevent the bit from "walking" out of the marking.
11. Insert the collector and put it in the correct orientation. Use the 5/16" hex driver with an extension and a #12 sheet metal screw to fasten the collector to the inner stack using the hole drilled in the previous step. **NOTE: Do not use excessive torque on the screw! The inner stack is typically not very thick and the screws can strip out if excessive torque is applied. Set the torque clutch on the drill/driver to a lower setting if possible.**

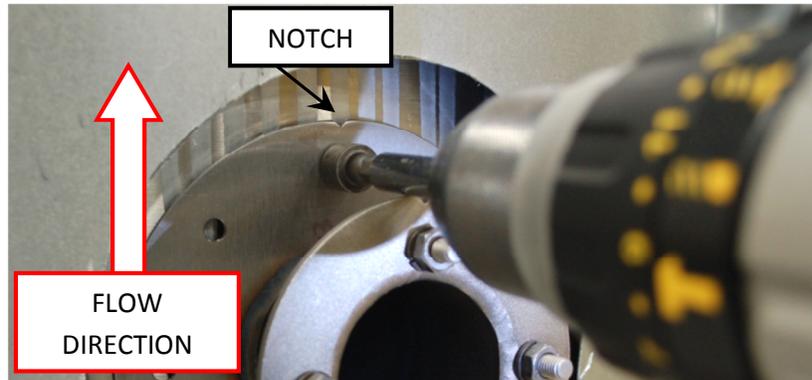


Figure 8: Fastening the First #12 Sheet Metal Screw

12. Using the 7/32" drill bit, mark the center of the (7) remaining holes of the collector onto the inner stack. **NOTE: Do not drill through the inner stack with this bit. This step is only meant to put a mark on the inner stack.**
13. Remove the #12 screw and the collector. Use the 1/8" drill bit to drill the (7) remaining marks (created in the previous step) through the inner stack. Keep the bit as perpendicular as possible.
14. Insert the collector and put it in the correct orientation. Install the (8) #12 sheet metal screws in the order outlined in Figure 9. This is an important part of creating a good seal. **NOTE: Do not use excessive torque on the screw! The inner stack is typically not very thick and the screws can strip out if excessive torque is applied. Set the torque clutch on the cordless drill/driver to a lower setting if possible.**

When finished, the installed collector should look like Figure 9.

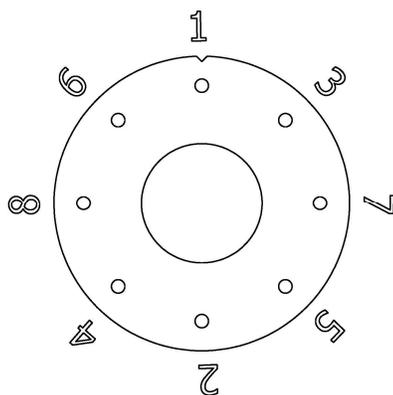


Figure 9: Fastening Order & Collector Installed

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15. Install a piece of high temperature insulation around the collector flange.
 16. Fasten the outer plate to the outer wall of the stack with (12) #8 self-tapping screws. Follow a similar fastening order as Figure 9. Figure 10 shows the outer plate installed.

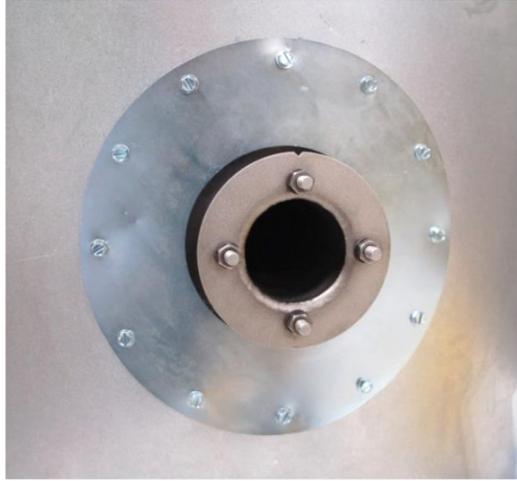


Figure 10: Outer Plate Installed

17. The installation of the collector is now complete. The QGO20 O2 sensor can now be mounted to the collector.

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