hot gas flows from inside top to outside bottom.
cool water flows from outside bottom to inside top
this is a counterflow gravity-stratified heat exchanger to condense moisture from the exhaust

cut out for endplate & exhaust plenum after welding full spiral

cool water intake pipe

| DESCRIPTION - NOTES | | | |
|---|---|---|---|
| <double-click ~ description - notes> | | | |
| SIZE A | DATE 1/4/12 | DWG NAME spiral Heat Exchanger.icd | REV |
| SCALE | drawn by Larry Dobson | | SHEET |

weld together two 12 ft sheets (make shorter)

unfolded outer (blue) sheet

cut-out for exhaust plenum
similar for shorter (green) sheet
* cut only after welding together

weld together 2 12' sheets, don't cut until welded

unfolded inner (green) sheet

| DESCRIPTION - NOTES | | | |
|---|---|---|---|
| both sheets 24ga (.021) #304 = 173 lb = 171 ft2 | | | |
| SIZE A | DATE 1/4/12 | DWG NAME spiral Heat Exchanger.icd | REV |
| SCALE | drawn by Larry Dobson | | SHEET |

Detail A

| DESCRIPTION - NOTES | | | |
|---|---|---|---|
| top & bottom endplates 11ga (.0125") #304 stainless<br>see CNC cutout drawings (dxf) for cutout templates | | | |
| SIZE<br>A | DATE<br>1/4/12 | DWG NAME<br>spiral Heat Exchanger.icd | REV |
| SCALE | drawn by Larry Dobson | | SHEET |

flat spiral = 0.125" 304 stainless
inner condensate lip = 16ga #304

| DESCRIPTION - NOTES | | | |
|---|---|---|---|
| bottom gas spiral with condensate lip | | | |
| SIZE A | DATE 1/5/12 | DWG NAME spiral Heat Exchanger.icd | REV |
| SCALE | drawn by Larry Dobson | | SHEET |

top view

| DESCRIPTION - NOTES | | | |
|---|---|---|---|
| bottom spiral endplates -<br>water & hot gas similar to top, but not exactly same. | | | |
| SIZE<br>A | DATE<br>1/6/12 | DWG NAME<br>spiral Heat Exchanger.icd | REV |
| SCALE | drawn by Larry Dobson | | SHEET |