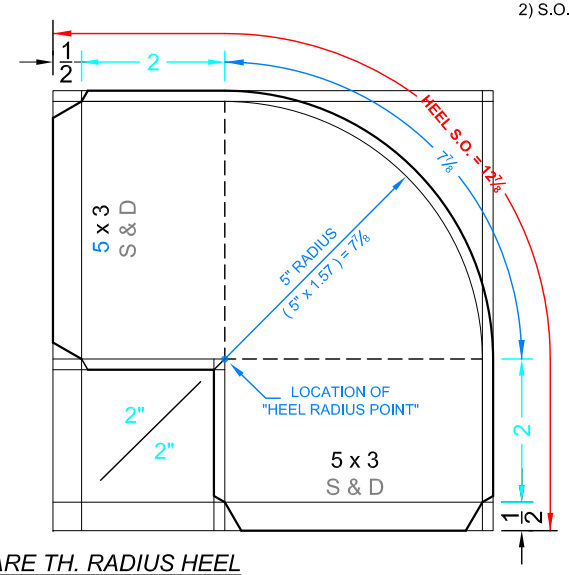
KEY NOTES:
1) RADIUS POINT (CHEEK OPENING)
2) S.O. (STRETCH OUT)

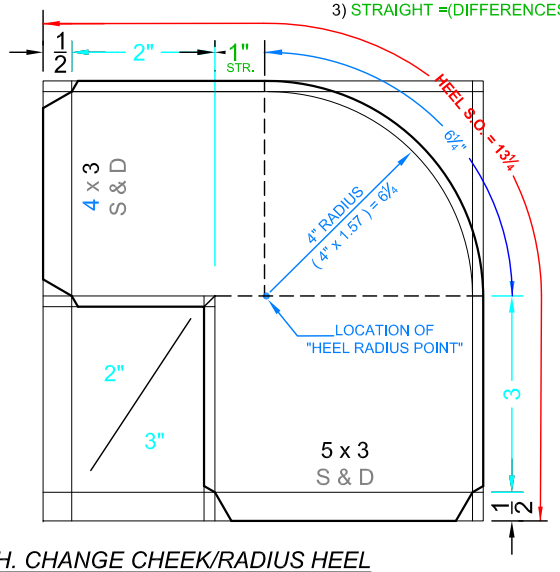


90°SQUARE TH. RADIUS HEEL

HEEL S.O. = (RADIUS x 1.57) + (THROATS) + CONNECTIONS (S & D)

HEEL S.O. = (5"x 1.57) + (4") + (1") = **12 ⅞" ANS.**

KEY NOTES:
1) RADIUS POINT= (SMALL CHEEK OPENING SIZE)
2) S.O. = (STRETCH OUT)
3) STRAIGHT =(DIFFERENCES BTWN. THE TWO OPENING'S.)

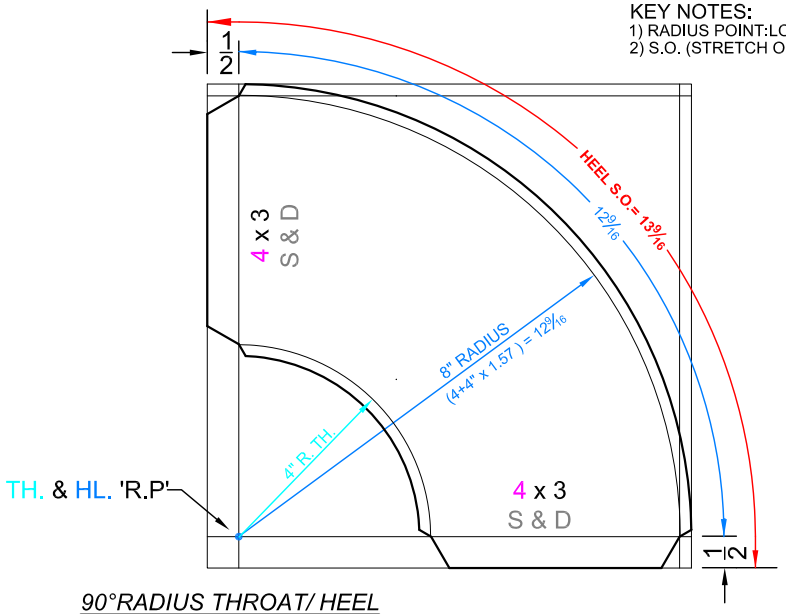


90°SQUARE TH. CHANGE CHEEK/RADIUS HEEL

HEEL S.O. = (RADIUS x 1.57) + (THROATS) + (STRAIGHT) + CONNECTIONS (S & D)

HEEL S.O. = (4"x 1.57) + (5") + (1") + (1") = **13¼" (ANS.)**

KEY NOTES:
1) RADIUS POINT:LOCATED AT S&D BASE LINE)
2) S.O. (STRETCH OUT)



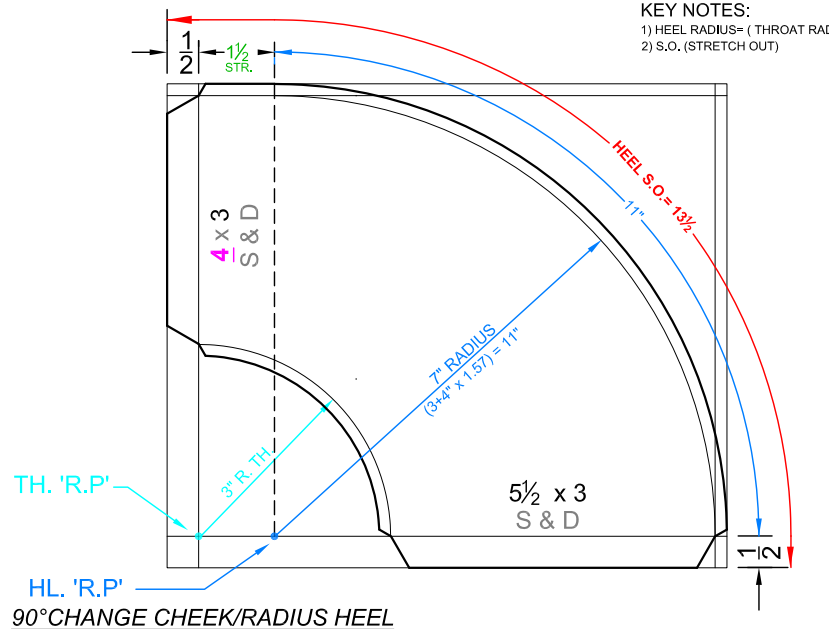
90°RADIUS THROAT/ HEEL

THROAT S.O. = (THROAT "R" x 1.57) + CONNECTIONS (S & D)

HEEL S.O. = (THROAT "R" + CHEEK OPEN'G. x 1.57) + CONNECTIONS (S & D)

HEEL S.O. = (8"x 1.57) + (1") = **13 9/16" ANS.**

KEY NOTES:
1) HEEL RADIUS= (THROAT RAD.+ SMALL OPENING)
2) S.O. (STRETCH OUT)



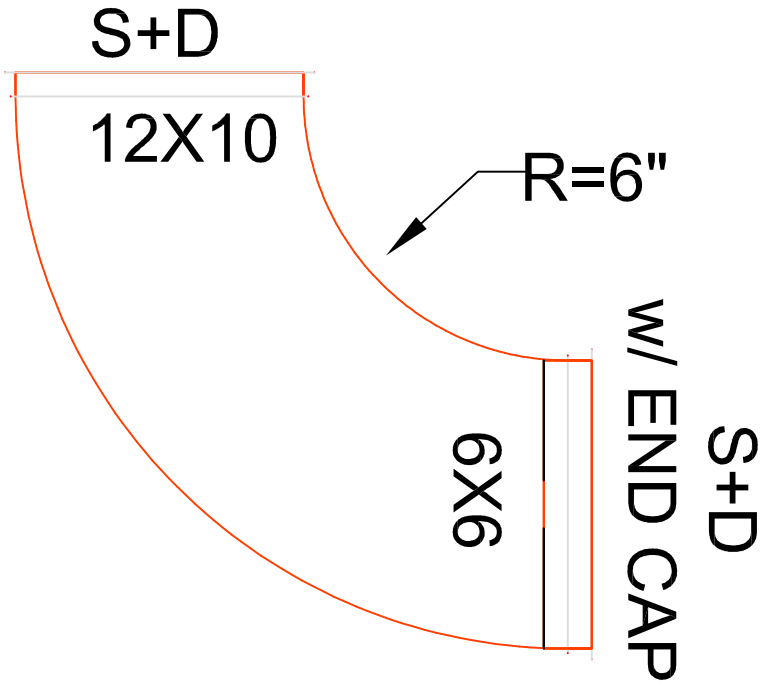
90°CHANGE CHEEK/RADIUS HEEL

THROAT S.O. = (THROAT "R" x 1.57) + CONNECTIONS (S & D)

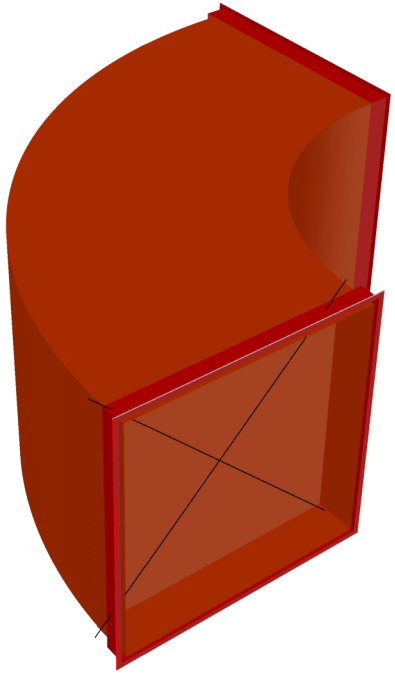
HEEL S.O. = (TH. "R" + SMALL OPEN'G.) x (1.57) + STRAIGHT+CONNECTIONS (S & D)

HEEL S.O. = (7" x 1.57) + (1½") + (1") = **13 ½" ANS.**

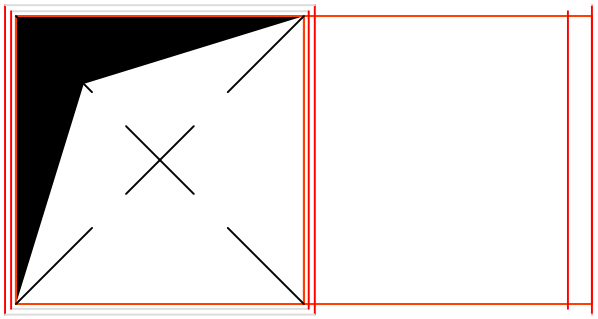
TOP VIEW



SE ISOMETRIC VIEW



RIGHT ELEVATION VIEW



Instruction: Fabricate the fitting in the views above. All seams to be Pittsburgh. All connections to be Slip & Drive with the Drives being on the side of the fitting. Please ask the Proctors any questions you may have.

Drawing is 3" = 1' Scale