

To calculate the closest possible distance between two holes (openings) on the same horizontal centerline, use the following formula:

- A = Distance between holes (in degrees)
- B = Angle between centerline of pipes
- C = Degrees for hole number one from chart below
- D = Degrees for hole number two from chart below

$$A = B - 1/2(C+D)$$

If A < 0, the openings are overlapping
 If A > 0, A = the distance between holes (in degrees)

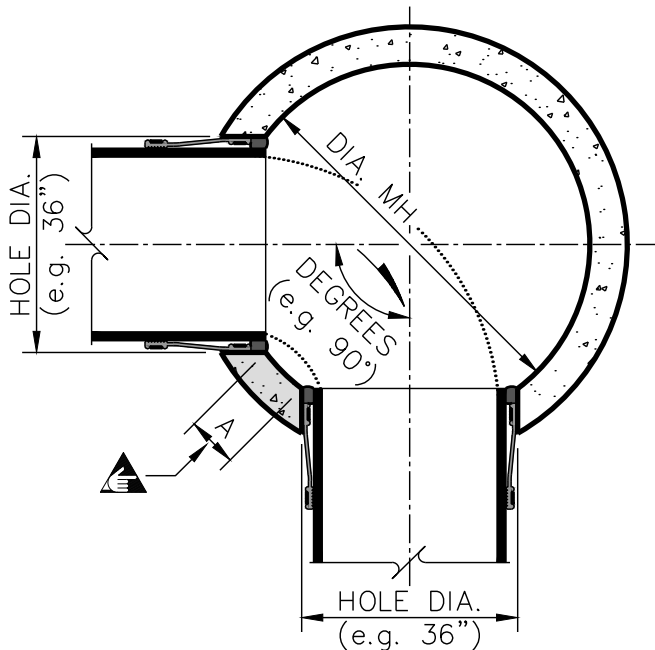
4' DIA:

$$A = 90 - 1/2(95+95) = 90 - 95 = -5, \text{ Holes too close}$$

5' DIA:

$$A = 90 - 1/2(75+75) = 90 - 75 = 15, \text{ O.K. for 5' dia.}$$

There are 15° of angle between holes which is 7 7/8".



4' Dia. MH	
Hole Dia.	Degrees
12"	28°
12"	28°
18"	45°
24"	60°
30"	76°
36"	95°

8' Dia. MH	
Hole Dia.	Degrees
12"	15°
18"	22°
24"	28°
36"	44°
40"	48°
42"	52°
48"	60°
55"	68°
60"	80°
70"	90°
78"	108°

5' Dia. MH	
Hole Dia.	Degrees
12"	22°
18"	35°
24"	48°
30"	62.6°
36"	75°
40"	82°
48"	108°

10' Dia. MH	
Hole Dia.	Degrees
12"	12°
18"	18°
24"	24°
36"	36°
40"	38°
48"	46°
55"	55°
62"	62°
70"	70°
78"	80°

6' Dia. MH	
Hole Dia.	Degrees
12"	20°
16"	25°
20"	32°
24"	38°
36"	60°
40"	65°
43"	70°
48"	84°
55"	98°
63"	125°

Details Provided by APPIAN Consulting Engineers - www.applanengineers.com



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DISTANCE BETWEEN TWO HOLES (OPENINGS) FORMULA

SCALE:
 Not to Scale

DETAIL#
 639.02

REVISION DATE:
 06/2017

SHEET#
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