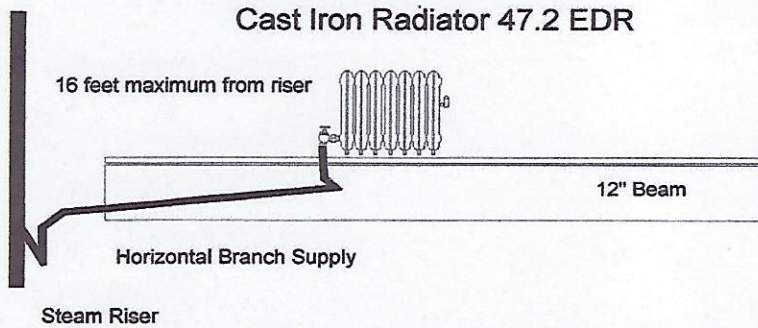


Drawing # 1 shows a cast-iron radiator installation with 1¼-inch pipe

**Cast Iron Radiator with total length of run of pipe including frictional losses.**

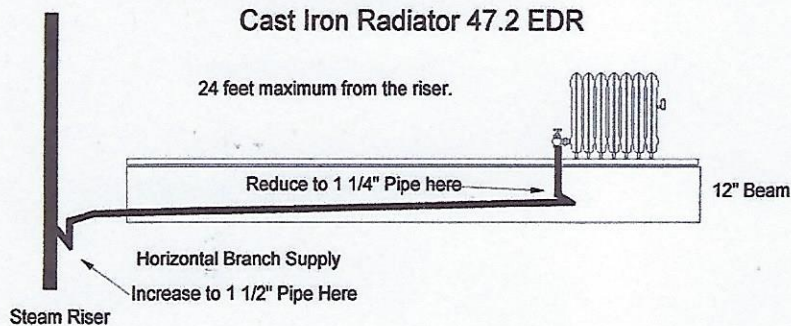


Pitch of the horizontal run of pipe is limited by the height of the beam.

1. One 1/4" elbow is equal to 3 feet of pipe. 5 elbows = 15 feet of pipe.
2. 15 feet of pipe at 1/4" pitch need nearly 4" of pitch.
3. The pipe and fittings use up 4" of the vertical space of the beam.
4. 5 elbows = 15 feet of pipe and use 4" of space for pitch. The pipe and fittings use up another 2" available space for pitch. With a 12" beam only 4" is left for pipe pitch. The remaining space is needed for pipe movement.
5. At a 1/4" pitch 4" of additional slope allows 16 feet of pipe to be installed.
6. The maximum length of pipe to be installed is 16 feet.

Drawing # 2 shows a cast-iron radiator installed with 1½-inch pipe

**Cast Iron Radiator with total length of run of pipe including frictional losses.**



Pitch of the horizontal run of pipe is limited by the height of the beam.

1. One 1 1/2" elbow is equal to 3.5 of feet of pipe. 5 elbows = 16.5 feet of pipe.
2. 16.5 feet of pipe at 1/4" pitch needs nearly 4.25" of pitch.
3. The pipe and fittings use up 3.5" of the vertical space of the beam.
4. 5 elbows = 16.5 feet of pipe and use 4.5" of space for pitch. The pipe and fittings use up another 3.5" available space for pitch. With a 12 Beam only 3 1/4" is left for pipe pitch. The Remaining Space is Needed for Pipe Movement. Therefore if 1 1/2" pipe was used to supply 79 EDR, the length of pipe drops to 13 feet.
5. At a 1/4" per foot pitch an 1 1/2 pipe can carry 79 EDR. The 1 1/4" pipe carries 47.2 EDR steam.
6. The 1 1/2" pipe is nearly double the capacity of the 1 1/4" pipe based on the capacity it would be safe to run the 1 1/2" pipe 1 1/2 times the permissible distance.
7. Therefore the maximum distance of the 1 1/2" pipe is 24 feet.