



# Penner Manufacturing Inc.

## Aqua-Aire® Spas

Plumbing Specifications

Electrical Specifications

Room Recommendations

Plumbing Codes

CASCADE™ END-OPENING SERIES

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## Aqua-Aire® Spas

### Regulatory Requirements

- Penner Manufacturing meets or exceeds requirements of most State and Municipal Plumbing and Electrical Codes. Always seek the recommendations of applicable agencies prior to installation of a bathing system. It is advisable to ask if RPZ's or Reduced Pressure Zone Backflow Prevention Valves are required
- Penner Spas Compliant to the following Regulations:
  - (UL) Under Writers Laboratories Inc PIDF.E213698  
Medical Equipment
  - (FDA) Food and Drug Administration Medical Device  
Establishment 1922538

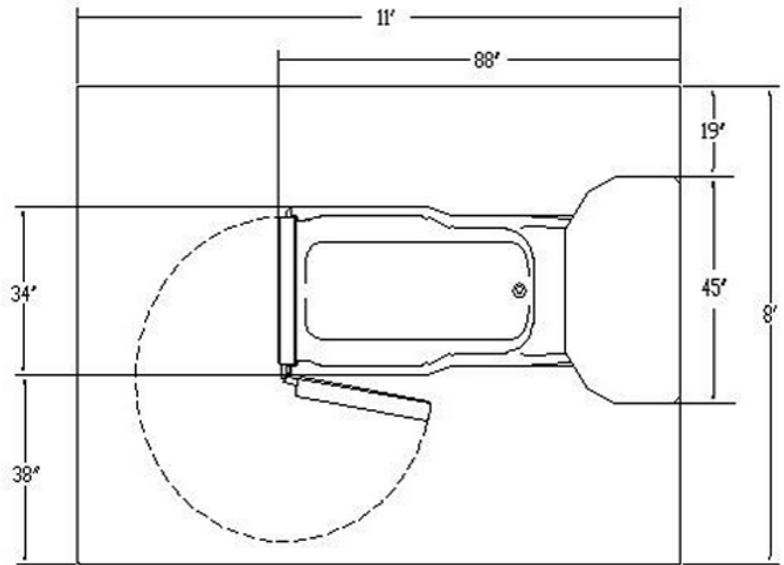


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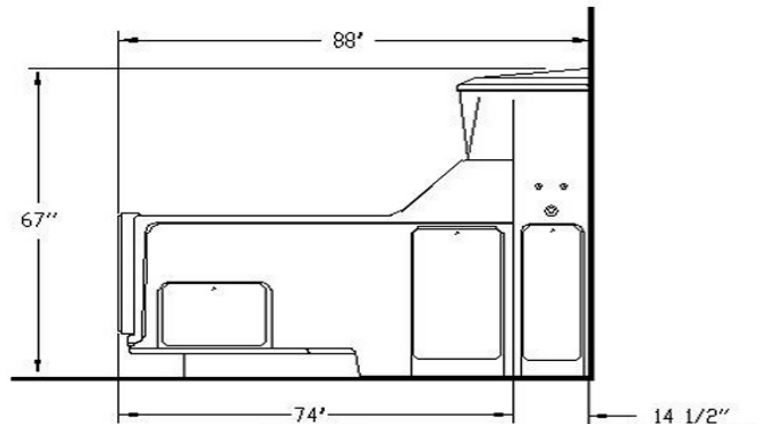
## Aqua-Aire® Spas

### CASCADE™ END-OPENING SERIES

- Specification
- Tub Length 76 3/4" With Trim and Handle
- Tub Length with Reservoir 88 1/2" Includes Handle
- Tub Longest Length With Door Open 107 1/4" Without Reservoir
- Tub Longest Length With Door Open w/Reservoir 122 With Reservoir
- Tub Width 35 1/2" With Trim
- Tub Width Reservoir 47 5/8"
- Tub Width Door Open 69 5/8" Includes Buttons
- Tub Shipping Weight Without Reservoir 484 Lbs. Crated
- Total Weight Filled / Without Resident 1016 Lbs.
- Tub Filled Volume / Without Resident 108 Gallons
- Tub Filling Time 35 PSI Dynamic 9 Min. 48 Sec. 2 1/4" Down from Overflow
- Time For Reservoir to Empty Into Tub 72 Sec.
- Tub Filling Time at 35 PSI Dynamic Pressure and Tub Reservoir 2 Min. 30 Sec. 2 1/4" Down from Overflow
- Tub Emptying Time 3 Min. 5 Sec. 2 1/4" Down from Overflow
- Water Connection 3/4"
- Reservoir Capacity 56 Gallons
- Hoses ( Included) 2 Ea. 3/4"
- Minimum Water Pressure (USA) 20 PSI
- Maximum Water Pressure (USA) 150 PSI
- Recommended Maximum Hot Water Tub Fill Temperature 110 Degree "F"
- Maximum Cold Water Temperature 67 Degree "F"
- Drain Connection 2" Male Nominal
- Minimum Drain Capacity 35 GPM
- Electrical Connection (USA) 120VAC 13.3 Amp. 60 HZ 1 PH
- Inside Length End to End 51 7/8"
- Inside Width Side to Side 29 1/2" Narrowest 20 3/4"



PENNER MFG - CASCADE E.O. TOP VIEW

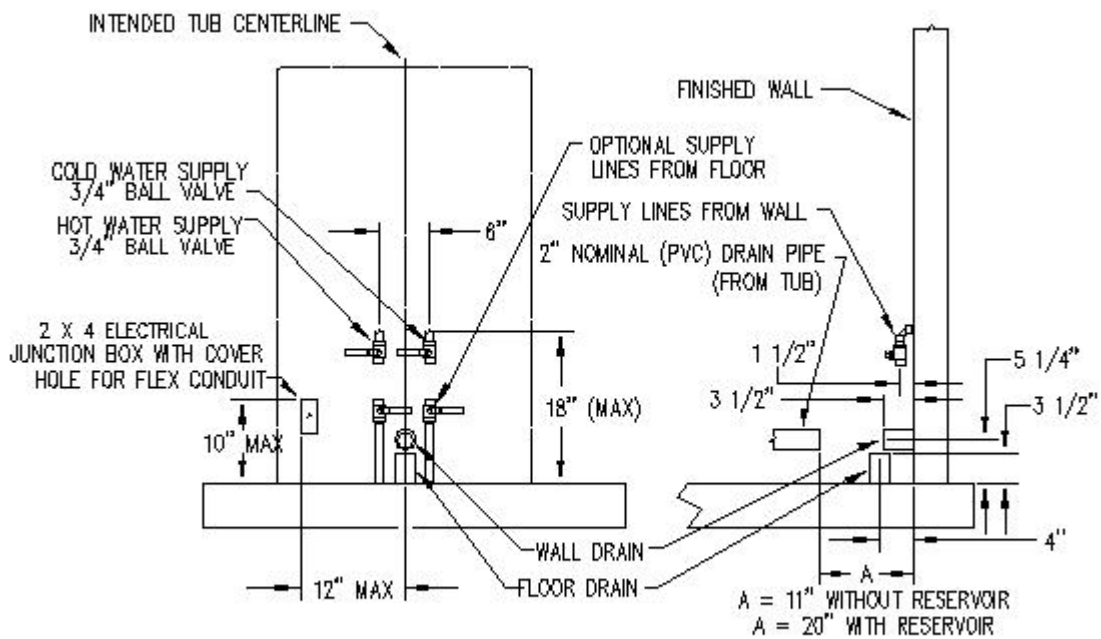


PENNER MFG - CASCADE E.O. SIDE VIEW



# Penner Manufacturing Inc. Aqua-Aire® Spas

## CASCADE™ END-OPENING SERIES



PENNER MFG - CASCADE ROUGH-IN DIMENSIONS