

## FIELD BENDING

Fiberglass conduit may be bent in the field. Bending fiberglass conduit in the field should be done when offsets are required and factory bends are not on site. Field bending of fiberglass conduit is recommended only when absolutely necessary. It is recommended that bends be calculated in the take-off and ordered with the straight sections.

Field bending is governed by Article 355.24 in the 2011 NEC: Bends - How Made. Bends shall be made so that the conduit will not be damaged and the internal diameter of the conduit will not be effectively reduced. Field bends shall be made only with bending equipment identified for that purpose. The radius of the curve to the centerline of such bends shall not be less than shown in 2011 NEC Table 2 Chapter 9.

After reviewing below data, check the Champion Fiberglass catalog page 31 to verify the specific bending radius selected. Generally, it is difficult to field bend a tighter radius than what can be done at the factory.

The process for field bending is relatively simple. The conduit is heated in a standard PVC hot box, and then bent with bending equipment identified for this purpose.

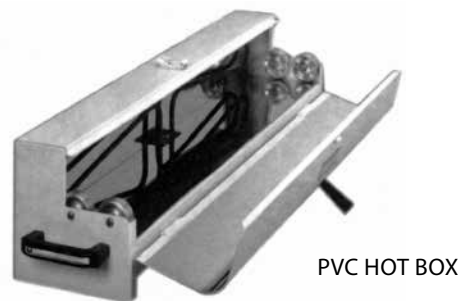
2011 NEC, Table 2, Chapter 9: Radius of Conduit and Tubing Bends

Size of Conduit		Other Bends	
Metric Designator	Trade Size	mm	in.
16	½	101.6	4
21	¾	127	5
27	1	152.4	6
35	1¼	203.2	8
41	1½	254	10
53	2	304.8	12
63	2½	381	15
78	3	457.2	18
91	3½	533.4	21
103	4	609.6	24
129	5	762	30
155	6	914.4	36

For the standard wall sizes listed below, the heating time ranges from approximately 20 seconds to 65 seconds depending on the temperature of the hot box and the size of the conduit. After heating, immediately place conduit in the bending equipment and begin to bend. It is extremely important that the proper bending equipment is used. Allow the bend to cool at the desired angle.

For other sizes and wall thicknesses, please refer to the Installation Instructions under the "Products" tab on-line at [www.championfiberglass.com](http://www.championfiberglass.com).

Conduit Size (in)		Time (sec) In Heater
¾	IPS	25 - 30
1	IPS	30 - 35
1¼	IPS	30 - 35
1½	IPS	35 - 40
2	IPS	40 - 60
2½	IPS	45 - 65



When installing field bent fiberglass conduit, the elbow or offset should immediately be installed and supported by conduit straps on both ends of the elbow and offset.