



HOBAS[®]
HOBAS PIPE USA, Inc.

Technical Advice Sheet

FWC Coupling Assembly

General:

The HOBAS PIPE FWC coupling is a structural sleeve that provides a gasket-sealed, leak-free connection. Due to its flexibility, the FWC Coupling allows a few degrees of angular deflection to allow simple grade and line corrections or gradual radius curves. See chart under point 4 for details.

Assembly:

1. Remove any dirt or mud buildup from the pipe spigot and the FWC gasket. Assure no stones, dirt buildup, or debris is under the FWC coupling gasket seal lips. Be careful not to damage the gasket during the cleaning process.
2. Apply lubricant on both the FWC coupling gasket and the spigot. Give special attention to the spigot bevel.
3. Most frequently the pipes are assembled by moving the bell end (coupling) over the previously installed spigot end. Place the pipe so that the coupling/bell end is in contact with the installed pipe spigot. Align the pipe sections carefully and push or pull the pipe until the coupling reaches the reference line on the pipe

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being joined. Be careful not to push the pipe past the center register of the coupling. If pushing directly on the spigot, protect the end with wood timbers.

The approximate joining forces for a properly aligned and lubricated coupling are shown below:

| Nominal Pipe Size (in) | Average FWC Joining Force in "Straight" Alignment (lbs.) | Nominal Pipe Size (in), cont. | Average FWC Joining Force in "Straight" Alignment (lbs.), cont. | Nominal Pipe Size (in), cont. | Average FWC Joining Force in "Straight" Alignment (lbs.), cont. |
|------------------------|--|-------------------------------|---|-------------------------------|---|
| 18 | 3150 | 44 | 7700 | 72 | 12600 |
| 20 | 3500 | 45 | 7875 | 78 | 13650 |
| 24 | 4200 | 48 | 8400 | 84 | 14700 |
| 27 | 4725 | 51 | 8925 | 85 | 14875 |
| 28 | 4900 | 54 | 9450 | 90 | 15750 |
| 30 | 5250 | 57 | 9975 | 96 | 16800 |
| 33 | 5775 | 60 | 10500 | 104 | 18200 |
| 36 | 6300 | 63 | 11025 | 110 | 19250 |
| 41 | 7175 | 66 | 11550 | 120 | 21000 |
| 42 | 7350 | 69 | 12075 | 126 | 22000 |

4. If a small change in line direction is needed, simply move the unjoined end of the pipe to the desired position. Any angular deflection within the permissible limits (see chart below) should only be done after the pipe has been completely "homed" straight. If the deviation is large, make the correction over several joints. Do not allow more than a 1-inch gap between the center register of the coupling and the pipe end.

| Pipe Diameter (in.) | Max. Angle (degrees) | Max. Offset @ 20 ft. | Max. Offset @ 10 ft. |
|---------------------|----------------------|----------------------|----------------------|
| 18-20 | 3 | 12 | 6 |
| 24-33 | 2 | 8 | 4 |
| 36-42 | 1-1/2 | 6 | 3 |
| 44-60 | 1 | 4 | 2 |
| 63-78 | 3/4 | 3 | 1-1/2 |
| 84-126 | 1/2 | 2 | 1 |

**NOTE: Always join pipes in straight alignment and then offset to the desired angle.

Caution: Do not apply joining force by pushing on the FWC coupling.

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