

CLAIMS

We claim:

1. A brace bar (500), comprising:
a first brace bar plate (501) comprising a first aperture (503) and a first notch
5 (505);
a second brace bar plate (502) comprising a second aperture (504) and a second notch (506); and
wherein the brace bar further comprises a configuration wherein the first aperture (503) and the second notch (506) are sized and dimensioned to couple to a first flow
10 conduit, and the second aperture (504) and the first notch (505) are sized and dimensioned to couple to a second flow conduit;
wherein the first aperture comprises a radius being equal to a radius comprised by the second notch, and the second aperture comprises a radius being equal to a radius of the first notch.
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2. The brace bar (500) of claim 1, wherein the first brace bar plate (501) and the second brace bar plate (502) have the same size and dimension.
3. The brace bar (500) of claim 1, the first brace bar plate (501) and the second
20 brace bar plate (502) are rectangular in shape.
4. The brace bar (500) of claim 1, wherein the first aperture (503) and the second aperture (504) are circular.
- 25 5. The brace bar (500) of claim 1, wherein the first notch (505) and the second notch (506) are formed as a segment of a circle.
6. The brace bar (500) of claim 1, further comprising braze filler material between the first brace bar plate and the second brace bar plate, wherein the first notch (505) and
30 the second notch (506) are sized to reduce wicking during brazing and to provide alignment of the brace bar (500).

7. A flow conduit assembly, including:
a first flow conduit (106), a second flow conduit (106), and a brace bar (500),
wherein the brace bar (500) comprises:
a first brace bar plate (501) comprising a first aperture (503) and a first notch
5 (505); and
a second brace bar plate (502) comprising a second aperture (504) and a second
notch (506);
wherein the first aperture (503) and the second notch (506) are sized and
dimensioned to couple to the first flow conduit (106), and the second aperture (504) and
10 the first notch (505) are sized and dimensioned to couple to the second flow conduit
(106);
wherein the first aperture comprises a radius being equal to a radius comprised
by the second notch, and the second aperture comprises a radius being equal to a radius
of the first notch.
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8. The flow conduit assembly of claim 7, wherein the first brace bar plate (501) and
the second brace bar plate (502) have the same size and dimension.
9. The flow conduit assembly of claim 7, the first brace bar plate (501) and the
20 second brace bar plate (502) are rectangular in shape.
10. The flow conduit assembly of claim 7, wherein the first aperture (503) and the
second aperture (504) are circular.
- 25 11. The flow conduit assembly of claim 7, wherein the first notch (505) and the
second notch (506) are formed as a segment of a circle.
12. The flow conduit assembly of claim 7, further comprising braze filler material
between the first brace bar plate and the second brace bar plate, wherein the first notch
30 (505) and the second notch (506) are sized to reduce wicking during brazing and to
provide alignment of the brace bar (500).

13. A method for assembling a vibrating flowmeter including a first flow conduit (106), a second flow conduit (106), a brace bar (500) including a first brace bar plate (501) having a first aperture (503) and a first notch (505) and a second brace bar plate (502) having a second aperture (504) and a second notch (506), wherein the first
5 aperture (503) comprises a radius being equal to a radius comprised by the second notch (506), and the second aperture (504) comprises a radius being equal to a radius of the first notch (505),
the method comprises the following steps:
sliding the first aperture (503) of the first brace bar plate (501) onto the first flow
10 conduit (106);
sliding the second aperture (504) of the second brace bar plate (502) onto the second flow conduit (106);
seating the first notch (505) onto the second conduit (106); and
seating the second notch (506) onto the first conduit (106).
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14. The method of claim 13, wherein seating the first notch (505) onto the second flow conduit (106) and seating the second notch (506) onto the first flow conduit (106) includes rotating the first brace bar plate (501) until the first notch (505) is aligned with the second conduit (106) and rotating the second brace bar plate (502) until the second
20 notch (506) is aligned with the first conduit (106).
15. The method of claim 13, wherein positioning the first notch (505) onto the second flow conduit (106) and positioning the second notch (506) onto the first flow conduit (106) includes moving the first flow conduit (106) and the second flow conduit (106) together until the first notch (505) is seated on the second flow conduit (106) and
25 the second notch (506) is seated on the first conduit (106).
16. The method of claim 13, further comprising the steps of:
brazing the first flow conduit (106) to the first aperture (503) and the second
30 notch (506).

17. The method of claim 16, further comprising the step of:
positioning a filler in the first aperture (503) opposite the second notch (506).
18. The method of claim 16, wherein the first notch (505) and the second notch (506)
5 are sized to reduce wicking during brazing and to provide alignment of the brace bar
(500).
19. The method of claim 16, further comprising the steps of:
brazing the first brace bar plate (501) to the second brace bar plate (502).
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20. The method of claim 13, wherein the first notch (505) and the second notch (506)
are formed as a segment of a circle.