

BREW QUALITY

Meet your schedule and budget targets with Coyle Supply's large, in-stock inventory of BQ pipe, fittings and flanges. Coyle stocks approved materials from Core Pipe, formerly Gerlin / Picor, Affiliated Tube (ATI), Bristol / Brismet, Maass and others. Need custom parts or expedited delivery? Coyle Supply is your solution for order accuracy, on-time delivery and high fill rates. Contact Coyle Supply for product information.



ATI – Brewery Quality (BQ) Stainless and duplex stainless pipe and tube

Bristol Metals – Brewery Quality (BQ) Stainless and duplex stainless pipe

Core Pipe (Gerlin) – Brewery Quality Fittings, Flanges and custom products,
Stainless commercial fittings and flanges, large OD

Dixon – Stainless sanitary tube, fittings, clamps, hose fittings

Maass Flange – Stainless flanges

Kerkau - Brew Quality corrosion weight flanges

BREW QUALITY SPECIFICATIONS AND TOLERANCES

| NOMINAL PIPE SIZE | OUTSIDE DIAMETER | O.D. TOLERANCE | WALL THICKNESS | WALL THICKNESS |
|-------------------|------------------|----------------|----------------|----------------|
| 1/2" | 0.840 | +0.005 / -.012 | 0.065 | ±.005 |
| 3/4" | 1.050 | +0.005 / -.012 | 0.065 | ±.005 |
| 1" | 1.320 | +0.005 / -.012 | 0.065 | ±.005 |
| 1 1/4" | 1.660 | +0.005 / -.012 | 0.065 | ±.005 |
| 1 1/2" | 1.900 | +0.008 / -.015 | 0.065 | ±.005 |
| 2" | 2.380 | +0.010 / -.016 | 0.065 | ±.005 |
| 2 1/2" | 2.880 | +0.015 / -.020 | 0.083 | ±.006 |
| 3" | 3.500 | +0.015 / -.020 | 0.083 | ±.006 |
| 4" | 4.500 | +0.015 / -.020 | 0.083 | ±.007 |
| 5" | 5.560 | +0.020 / -.030 | 0.109 | ±.008 |
| 6" | 6.620 | +0.020 / -.030 | 0.109 | ±.008 |
| 8" | 8.620 | ±.035 | 0.109 | ±.009 |
| 10" | 10.750 | ±.042 | 0.134 | ±.010 |
| 12" | 12.750 | ±.052 | 0.156 | ±.011 |

| BREW QUALITY: MATERIAL SPECIFICATIONS | | | | |
|---------------------------------------|---------|---------|---------|---------|
| | 304 | 304L | 316 | 316L |
| C Max. | 0.08 | 0.03 | 0.08 | 0.03 |
| Si Max. | 1 | 1 | 1 | 1 |
| Mn Max. | 2 | 2 | 2 | 2 |
| P Max. | 0.045 | 0.045 | 0.045 | 0.045 |
| S Max. | 0.03 | 0.03 | 0.03 | 0.03 |
| Ni | 8 - 11 | 8 - 13 | 10 - 14 | 10 - 15 |
| Cr | 18 - 20 | 18 - 20 | 16 - 18 | 16 - 18 |
| Mo | - | - | 2 - 3 | 2 - 3 |
| Yield Min. | 30000 | 25000 | 30000 | 25000 |
| Tensile Min. | 75000 | 70000 | 75000 | 70000 |
| % Elong | 30 | 30 | 30 | 30 |

ALTERNATE MATERIALS AVAILABLE ON APPLICATION

Springfield, MO
2017 E. McDaniel
P. 417-862-0483

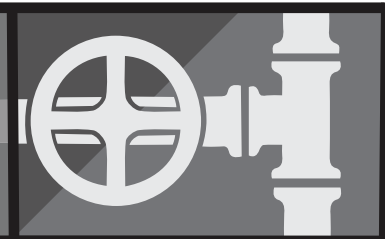
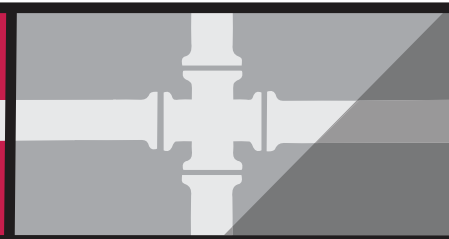
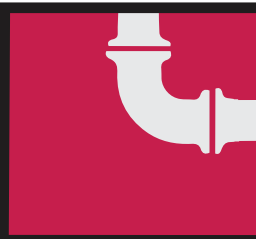
Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710



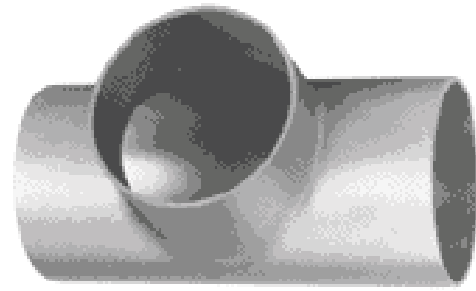
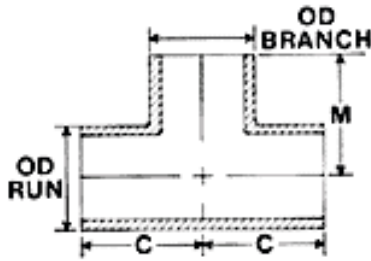


BREW QUALITY ELBOWS



| NOMINAL PIPE SIZE | OUTSIDE DIAMETER | CENTER-TO-END DIMENSIONS | | |
|-------------------|------------------|--------------------------|----------|-----------------------|
| | | A 90° LONG RADIUS | B 45° | D 90° SHORT RADIUS |
| 1/2" | .84 | 1.50 | .62 | - |
| 3/4" | 1.05 | 1.12 | .44 | - |
| 1" | 1.32 | 1.50 | .88 | 1.00 |
| 1 1/4" | 1.66 | 1.88 | 1.00 | 1.25 |
| 1 1/2" | 1.90 | 2.25 | 1.12 | 1.50 |
| 2" | 2.38 | 3.00 | 1.38 | 2.00 |
| 2 1/2" | 2.88 | 3.75 | 1.75 | 2.50 |
| 3" | 3.50 | 4.50 | 2.00 | 3.00 |
| 4" | 4.50 | 6.00 | 2.50 | 4.00 |
| 5" | 5.56 | 7.50 | 3.12 | 5.00 |
| 6" | 6.62 | 9.00 | 3.75 | 6.00 |
| 8" | 8.62 | 12.00 | 5.00 | 8.00 |
| 10" | 10.75 | 15.00 | 6.25 | 10.00 |
| 12" | 12.75 | 18.00 | 7.50 | 12.00 |

BREW QUALITY TEE



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|------|
| RUN | BRANCH | RUN | BRANCH | C | M |
| 1/2" | 1/2" | 0.84 | 0.84 | 1.00 | 1.00 |
| 3/4" | 3/4" | 1.05 | 1.05 | 1.12 | 1.12 |
| | 1/2" | 1.05 | 0.84 | 1.12 | 1.12 |
| 1" | 1" | 1.32 | 1.32 | 1.50 | 1.50 |
| | 3/4" | 1.32 | 1.05 | 1.50 | 1.50 |
| | 1/2" | 1.32 | 0.84 | 1.50 | 1.50 |
| 1 1/4" | 1 1/4" | 1.66 | 1.66 | 1.88 | 1.88 |
| | 1" | 1.66 | 1.32 | 1.88 | 1.88 |
| | 3/4" | 1.66 | 1.05 | 1.88 | 1.88 |
| | 1/2" | 1.66 | 0.84 | 1.88 | 1.88 |
| 1 1/2" | 1 1/2" | 1.90 | 1.90 | 2.25 | 2.25 |
| | 1 1/4" | 1.90 | 1.66 | 2.25 | 2.25 |
| | 1" | 1.90 | 1.32 | 2.25 | 2.25 |
| | 3/4" | 1.90 | 1.05 | 2.25 | 2.25 |
| | 1/2" | 1.90 | 0.84 | 2.25 | 2.25 |
| 2" | 2" | 2.38 | 2.38 | 2.50 | 2.50 |
| | 1 1/2" | 2.38 | 1.90 | 2.50 | 2.38 |
| | 1 1/4" | 2.38 | 1.66 | 2.50 | 2.25 |
| | 1" | 2.38 | 1.32 | 2.50 | 2.00 |
| | 3/4" | 2.38 | 1.05 | 2.50 | 1.75 |
| 2 1/2" | 2 1/2" | 2.88 | 2.88 | 3.00 | 3.00 |
| | 2" | 2.88 | 2.38 | 3.00 | 2.75 |
| | 1 1/2" | 2.88 | 1.90 | 3.00 | 2.62 |
| | 1 1/4" | 2.88 | 1.66 | 3.00 | 2.50 |
| | 1" | 2.88 | 1.32 | 3.00 | 2.25 |
| 3" | 3" | 3.50 | 3.50 | 3.38 | 3.38 |
| | 2 1/2" | 3.50 | 2.88 | 3.38 | 3.25 |
| | 2" | 3.50 | 2.38 | 3.38 | 3.00 |
| | 1 1/2" | 3.50 | 1.90 | 3.38 | 2.88 |
| | 1 1/4" | 3.50 | 1.66 | 3.38 | 2.75 |

| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|-------|
| RUN | BRANCH | RUN | BRANCH | C | M |
| 4" | 4" | 4.50 | 4.50 | 4.12 | 4.12 |
| | 3" | 4.50 | 3.50 | 4.12 | 3.88 |
| | 2 1/2" | 4.50 | 2.88 | 4.12 | 3.75 |
| | 2" | 4.50 | 2.38 | 4.12 | 3.50 |
| | 1 1/2" | 4.50 | 1.90 | 4.12 | 3.38 |
| 5" | 5" | 5.56 | 5.56 | 4.88 | 4.88 |
| | 4" | 5.56 | 4.50 | 4.88 | 4.62 |
| | 3" | 5.56 | 3.50 | 4.88 | 4.38 |
| | 2 1/2" | 5.56 | 2.88 | 4.88 | 4.25 |
| 6" | 6" | 6.62 | 6.62 | 5.62 | 5.62 |
| | 5" | 6.62 | 5.56 | 5.62 | 5.38 |
| | 4" | 6.62 | 4.50 | 5.62 | 5.12 |
| | 3" | 6.62 | 3.50 | 5.62 | 4.88 |
| | 2 1/2" | 6.62 | 2.88 | 5.62 | 4.75 |
| 8" | 8" | 8.62 | 8.62 | 7.00 | 7.00 |
| | 6" | 8.62 | 6.62 | 7.00 | 6.62 |
| | 5" | 8.62 | 5.56 | 7.00 | 6.38 |
| | 4" | 8.62 | 4.50 | 7.00 | 6.12 |
| | 3" | 8.62 | 3.50 | 7.00 | 5.88 |
| 10" | 10" | 10.75 | 10.75 | 8.50 | 8.50 |
| | 8" | 10.75 | 8.62 | 8.50 | 8.00 |
| | 6" | 10.75 | 6.62 | 8.50 | 7.62 |
| | 5" | 10.75 | 5.56 | 8.50 | 7.50 |
| | 4" | 10.75 | 4.50 | 8.50 | 7.25 |
| 12" | 12" | 12.75 | 12.75 | 10.00 | 10.00 |
| | 10" | 12.75 | 10.75 | 10.00 | 9.50 |
| | 8" | 12.75 | 8.62 | 10.00 | 9.00 |
| | 6" | 12.75 | 6.62 | 10.00 | 8.62 |
| | 5" | 12.75 | 5.56 | 10.00 | 8.50 |

Springfield, MO
2017 E. McDaniel
P. 417-862-0483

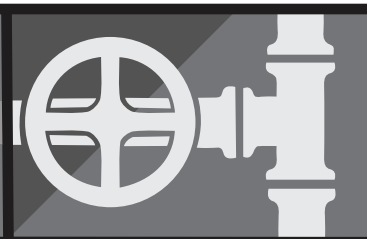
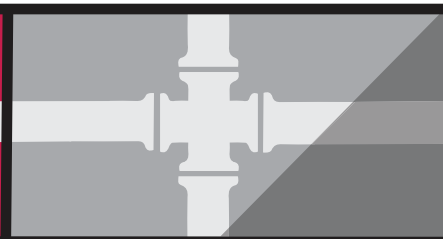
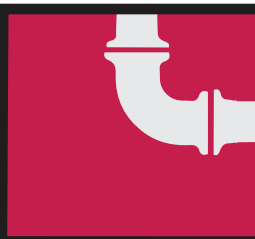
Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



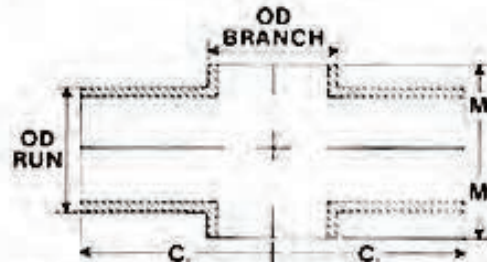
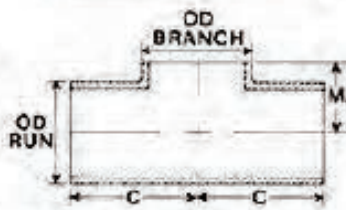
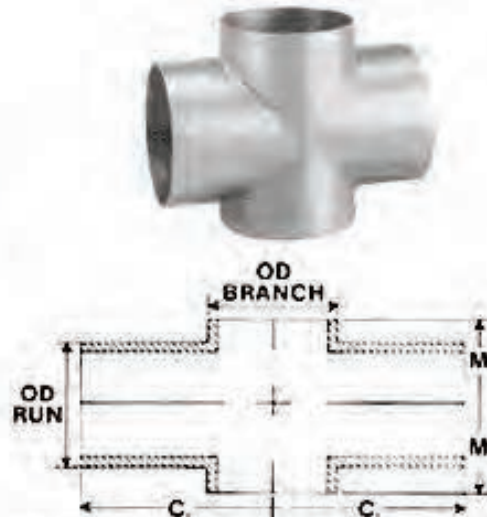
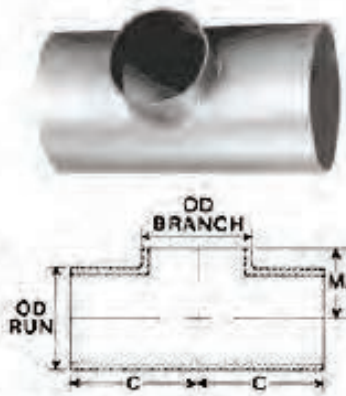
East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710





BREW QUALITY SHORT OUTLET TEE



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | | LONG TANGENT RUN LENGTH CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|---------------------------------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C (1302) | M ₁ | C ₁ (1303) | M ₁ |
| 2" | 2" | 2.38 | 2.38 | 2.50 | 2.12 | 4.00 | 2.12 |
| | 1 1/2" | 2.38 | 1.90 | 2.50 | 2.12 | 4.00 | 2.12 |
| | 1 1/4" | 2.38 | 1.66 | 2.50 | 2.12 | 4.00 | 2.12 |
| | 1" | 2.38 | 1.32 | 2.50 | 2.12 | 4.00 | 2.12 |
| | 3/4" | 2.38 | 1.05 | 2.50 | 2.12 | 4.00 | 2.12 |
| 2 1/2" | 2 1/2" | 2.88 | 2.88 | 3.00 | 2.38 | 4.62 | 2.38 |
| | 2" | 2.88 | 2.38 | 3.00 | 2.38 | 4.62 | 2.38 |
| | 1 1/2" | 2.88 | 1.90 | 3.00 | 2.38 | 4.62 | 2.38 |
| | 1 1/4" | 2.88 | 1.66 | 3.00 | 2.38 | 4.62 | 2.38 |
| | 1" | 2.88 | 1.32 | 3.00 | 2.38 | 4.62 | 2.38 |
| 3" | 3" | 3.50 | 3.50 | 3.38 | 2.62 | 5.00 | 2.62 |
| | 2 1/2" | 3.50 | 2.88 | 3.38 | 2.62 | 5.00 | 2.62 |
| | 2" | 3.50 | 2.38 | 3.38 | 2.62 | 5.00 | 2.62 |
| | 1 1/2" | 3.50 | 1.90 | 3.38 | 2.62 | 5.00 | 2.62 |
| | 1 1/4" | 3.50 | 1.66 | 3.38 | 2.62 | 5.00 | 2.62 |
| 4" | 4" | 4.50 | 4.50 | 4.12 | 3.12 | 5.75 | 3.12 |
| | 3" | 4.50 | 3.50 | 4.12 | 3.12 | 5.75 | 3.12 |
| | 2 1/2" | 4.50 | 2.88 | 4.12 | 3.12 | 5.75 | 3.12 |
| | 2" | 4.50 | 2.38 | 4.12 | 3.12 | 5.75 | 3.12 |
| | 1 1/2" | 4.50 | 1.90 | 4.12 | 3.12 | 5.75 | 3.12 |
| 5" | 5" | 5.56 | 5.56 | 4.88 | 3.59 | 7.12 | 3.59 |
| | 4" | 5.56 | 4.50 | 4.88 | 3.59 | 7.12 | 3.59 |
| | 3" | 5.56 | 3.50 | 4.88 | 3.59 | 7.12 | 3.59 |
| | 2 1/2" | 5.56 | 2.88 | 4.88 | 3.59 | 7.12 | 3.59 |
| | 2" | 5.56 | 2.38 | 4.88 | 3.59 | 7.12 | 3.59 |



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | | LONG TANGENT RUN LENGTH CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|---------------------------------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C (1302) | M ₁ | C ₁ (1303) | M ₁ |
| 6" | 6" | 6.62 | 6.62 | 5.62 | 4.12 | 7.88 | 4.12 |
| | 5" | 6.62 | 5.56 | 5.62 | 4.12 | 7.88 | 4.12 |
| | 4" | 6.62 | 4.50 | 5.62 | 4.12 | 7.88 | 4.12 |
| | 3" | 6.62 | 3.50 | 5.62 | 4.12 | 7.88 | 4.12 |
| | 2 1/2" | 6.62 | 2.88 | 5.62 | 4.12 | 7.88 | 4.12 |
| 8" | 8" | 8.62 | 8.62 | 7.00 | 5.12 | 9.25 | 5.12 |
| | 6" | 8.62 | 6.62 | 7.00 | 5.12 | 9.25 | 5.12 |
| | 5" | 8.62 | 5.56 | 7.00 | 5.12 | 9.25 | 5.12 |
| | 4" | 8.62 | 4.50 | 7.00 | 5.12 | 9.25 | 5.12 |
| | 3" | 8.62 | 3.50 | 7.00 | 5.12 | 9.25 | 5.12 |
| 10" | 10" | 10.75 | 10.75 | 8.50 | 6.19 | 10.75 | 6.19 |
| | 8" | 10.75 | 8.62 | 8.50 | 6.19 | 10.75 | 6.19 |
| | 6" | 10.75 | 6.62 | 8.50 | 6.19 | 10.75 | 6.19 |
| | 5" | 10.75 | 5.56 | 8.50 | 6.19 | 10.75 | 6.19 |
| | 4" | 10.75 | 4.50 | 8.50 | 6.19 | 10.75 | 6.19 |
| 12" | 12" | 12.75 | 12.75 | 10.00 | 7.19 | 12.25 | 7.19 |
| | 10" | 12.75 | 10.75 | 10.00 | 7.19 | 12.25 | 7.19 |
| | 8" | 12.75 | 8.62 | 10.00 | 7.19 | 12.25 | 7.19 |
| | 6" | 12.75 | 6.62 | 10.00 | 7.19 | 12.25 | 7.19 |
| | 5" | 12.75 | 5.56 | 10.00 | 7.19 | 12.25 | 7.19 |

OTHER OUTLET SIZES ARE AVAILABLE.

Springfield, MO
2017 E. McDaniel
P. 417-862-0483

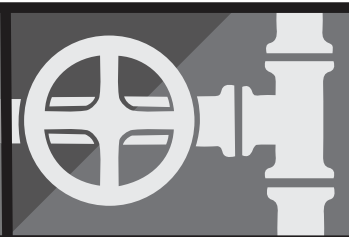
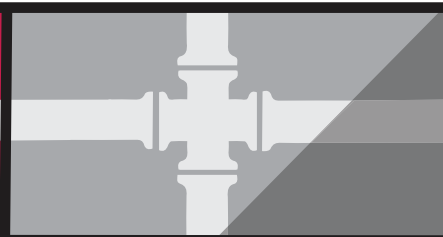
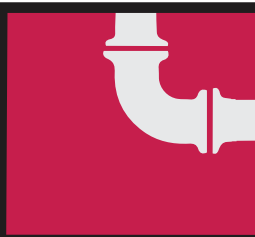
Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



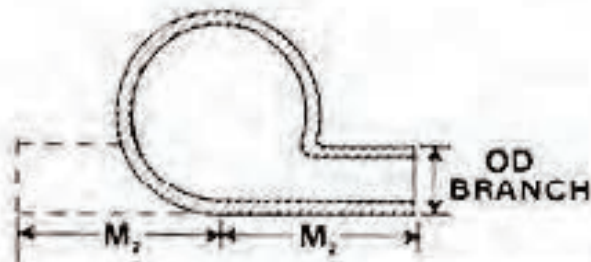
East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710





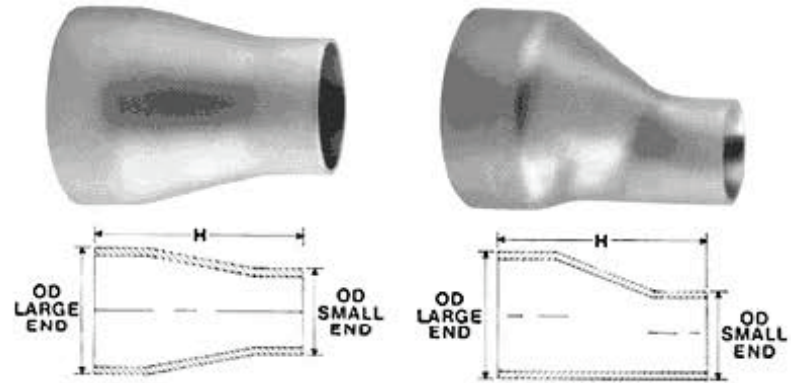
BREW QUALITY TANGENTIAL TEE



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C | M ² |
| 1 1/2" | 3/4" | 1.90 | 1.05 | 2.25 | 2.00 |
| | 1" | 1.90 | 1.32 | 2.25 | 2.00 |
| 2" | 1 1/2" | 2.38 | 1.90 | 2.50 | 2.38 |
| | 1" | 2.38 | 1.32 | 2.50 | 2.00 |
| | 3/4" | 2.38 | 1.05 | 2.50 | 2.00 |
| 3" | 2" | 3.50 | 2.38 | 3.38 | 3.00 |
| | 1 1/2" | 3.50 | 1.90 | 3.38 | 2.88 |
| | 1" | 3.50 | 1.32 | 3.38 | 2.62 |
| | 3/4" | 3.50 | 1.05 | 3.38 | 2.62 |
| 4" | 3" | 4.50 | 3.50 | 4.12 | 3.88 |
| | 2" | 4.50 | 2.38 | 4.12 | 3.50 |
| | 1 1/2" | 4.50 | 1.90 | 4.12 | 3.38 |
| | 1" | 4.50 | 1.32 | 4.12 | 3.38 |
| | 3/4" | 4.50 | 1.05 | 4.12 | 3.38 |
| 6" | 4" | 6.62 | 4.50 | 5.62 | 5.12 |
| | 3" | 6.62 | 3.50 | 5.62 | 4.88 |
| | 2" | 6.62 | 2.38 | 5.62 | 4.88 |
| | 1 1/2" | 6.62 | 1.90 | 5.62 | 4.88 |
| | 1" | 6.62 | 1.32 | 5.62 | 4.88 |
| | 3/4" | 6.62 | 1.05 | 5.62 | 4.88 |

| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C | M ² |
| 8" | 6" | 8.62 | 6.62 | 7.00 | 6.62 |
| | 4" | 8.62 | 4.50 | 7.00 | 6.12 |
| | 3" | 8.62 | 3.50 | 7.00 | 6.00 |
| | 2" | 8.62 | 2.38 | 7.00 | 6.00 |
| | 1 1/2" | 8.62 | 1.90 | 7.00 | 6.00 |
| | 1" | 8.62 | 1.32 | 7.00 | 6.00 |
| | 3/4" | 8.62 | 1.05 | 7.00 | 6.00 |
| 10" | 8" | 10.75 | 8.62 | 8.50 | 8.50 |
| | 6" | 10.75 | 6.62 | 8.50 | 8.50 |
| | 4" | 10.75 | 4.50 | 8.50 | 8.50 |
| | 3" | 10.75 | 3.50 | 8.50 | 8.50 |
| | 2" | 10.75 | 2.38 | 8.50 | 8.50 |
| | 1 1/2" | 10.75 | 1.90 | 8.50 | 8.50 |
| | 1" | 10.75 | 1.32 | 8.50 | 8.50 |
| | 3/4" | 10.75 | 1.05 | 8.50 | 8.50 |
| 12" | 10" | 12.75 | 10.75 | 10.00 | 9.50 |
| | 8" | 12.75 | 8.62 | 10.00 | 9.50 |
| | 6" | 12.75 | 6.62 | 10.00 | 9.50 |
| | 4" | 12.75 | 4.50 | 10.00 | 9.50 |
| | 3" | 12.75 | 3.50 | 10.00 | 9.50 |
| | 2" | 12.75 | 2.38 | 10.00 | 9.50 |
| | 1 1/2" | 12.75 | 1.90 | 10.00 | 9.50 |
| | 1" | 12.75 | 1.32 | 10.00 | 9.50 |
| | 3/4" | 12.75 | 1.05 | 10.00 | 9.50 |

BREW QUALITY REDUCERS



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | LENGTH |
|-------------------|-----------|------------------|-----------|--------|
| LARGE END | SMALL END | LARGE END | SMALL END | H |
| 3/4" | 1/2" | 1.05 | 0.84 | 1.50 |
| 1" | 1/2" | 1.32 | 0.84 | 2.00 |
| | 3/4" | 1.32 | 1.05 | 2.00 |
| 1 1/4" | 3/4" | 1.66 | 1.05 | 2.00 |
| | 1" | 1.66 | 1.32 | 2.00 |
| 1 1/2" | 1/2" (2) | 1.90 | 0.84 | 2.50 |
| | 3/4" | 1.90 | 1.05 | 2.50 |
| | 1" | 1.90 | 1.32 | 2.50 |
| | 1 1/4" | 1.90 | 1.66 | 2.50 |
| 2" | 1/2" (2) | 2.38 | 0.84 | 3.00 |
| | 3/4" | 2.38 | 1.05 | 3.00 |
| | 1" | 2.38 | 1.32 | 3.00 |
| | 1 1/4" | 2.38 | 1.66 | 3.00 |
| | 1 1/2" | 2.38 | 1.90 | 3.00 |
| 2 1/2" | 1" (2) | 2.88 | 1.32 | 3.50 |
| | 1 1/4" | 2.88 | 1.66 | 3.50 |
| | 1 1/2" | 2.88 | 1.90 | 3.50 |
| | 2" | 2.88 | 2.38 | 3.50 |
| 3" | 1" (2) | 3.50 | 1.32 | 3.50 |
| | 1 1/4" | 3.50 | 1.66 | 3.50 |
| | 1 1/2" | 3.50 | 1.90 | 3.50 |
| | 2" | 3.50 | 2.38 | 3.50 |
| | 2 1/2" | 3.50 | 2.88 | 3.50 |

| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | LENGTH |
|-------------------|------------|------------------|-----------|--------|
| LARGE END | SMALL END | LARGE END | SMALL END | H |
| 4" | 1 1/2" (2) | 4.50 | 1.90 | 4.00 |
| | 2" | 4.50 | 2.38 | 4.00 |
| | 2 1/2" | 4.50 | 2.88 | 4.00 |
| | 3" | 4.50 | 3.50 | 4.00 |
| 5" | 3" (2) | 5.56 | 3.50 | 5.00 |
| | 4" (2) | 5.56 | 4.50 | 5.00 |
| 6" | 2" (1) (2) | 6.62 | 2.38 | 5.50 |
| | 2 1/2" (2) | 6.62 | 2.88 | 5.50 |
| | 3" | 6.62 | 3.50 | 5.50 |
| | 4" | 6.62 | 4.50 | 5.50 |
| | 5" (2) | 6.62 | 5.56 | 5.50 |
| 8" | 4" (3) | 8.62 | 4.50 | 6.00 |
| | 5" (3) | 8.62 | 5.56 | 6.00 |
| | 6" | 8.62 | 6.62 | 6.00 |
| 10" | 4" (1) | 10.75 | 4.50 | 7.00 |
| | 6" | 10.75 | 6.62 | 7.00 |
| | 8" (3) | 10.75 | 8.62 | 7.00 |
| 12" | 6" (1) (2) | 12.75 | 6.62 | 8.00 |
| | 8" (1) | 12.75 | 8.62 | 8.00 |
| | 10" (3) | 12.75 | 10.75 | 8.00 |

Springfield, MO
2017 E. McDaniel
P. 417-862-0483

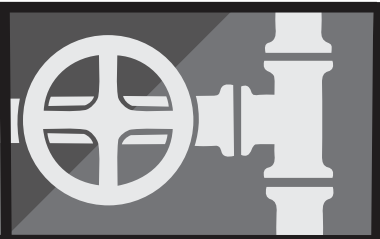
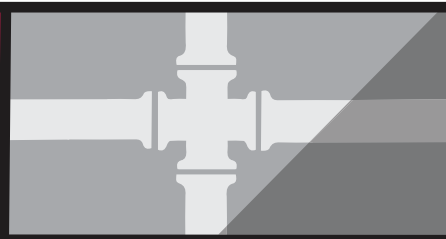
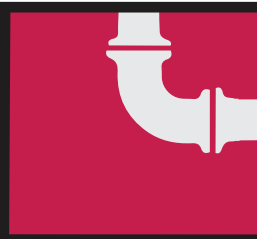
Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



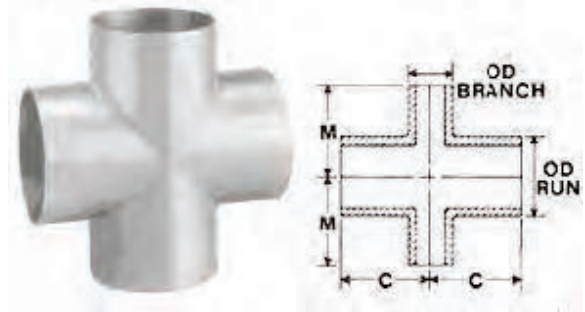
East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710



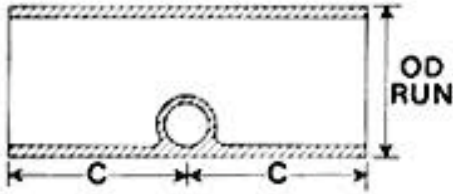


BREW QUALITY CROSS



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|------|
| RUN | BRANCH | RUN | BRANCH | C | M |
| 1/2" | 1/2" | 0.84 | 0.84 | 1.00 | 1.00 |
| 3/4" | 3/4" | 1.05 | 1.05 | 1.12 | 1.12 |
| | 1/2" | 1.05 | 0.84 | 1.12 | 1.12 |
| 1" | 1" | 1.32 | 1.32 | 1.50 | 1.50 |
| | 3/4" | 1.32 | 1.05 | 1.50 | 1.50 |
| | 1/2" | 1.32 | 0.84 | 1.50 | 1.50 |
| 1 1/4" | 1 1/4" | 1.66 | 1.66 | 1.88 | 1.88 |
| | 1" | 1.66 | 1.32 | 1.88 | 1.88 |
| | 3/4" | 1.66 | 1.05 | 1.88 | 1.88 |
| | 1/2" | 1.66 | 0.84 | 1.88 | 1.88 |
| 1 1/2" | 1 1/2" | 1.90 | 1.90 | 2.25 | 2.25 |
| | 1 1/4" | 1.90 | 1.66 | 2.25 | 2.25 |
| | 1" | 1.90 | 1.32 | 2.25 | 2.25 |
| | 3/4" | 1.90 | 1.05 | 2.25 | 2.25 |
| | 1/2" | 1.90 | 0.84 | 2.25 | 2.25 |
| 2" | 2" | 2.38 | 2.38 | 2.50 | 2.50 |
| | 1 1/2" | 2.38 | 1.90 | 2.50 | 2.38 |
| | 1 1/4" | 2.38 | 1.66 | 2.50 | 2.25 |
| | 1" | 2.38 | 1.32 | 2.50 | 2.00 |
| | 3/4" | 2.38 | 1.05 | 2.50 | 1.75 |
| 2 1/2" | 2 1/2" | 2.88 | 2.88 | 3.00 | 3.00 |
| | 2" | 2.88 | 2.38 | 3.00 | 2.75 |
| | 1 1/2" | 2.88 | 1.90 | 3.00 | 2.62 |
| | 1 1/4" | 2.88 | 1.66 | 3.00 | 2.50 |
| | 1" | 2.88 | 1.32 | 3.00 | 2.25 |
| 3" | 3" | 3.50 | 3.50 | 3.38 | 3.38 |
| | 2 1/2" | 3.50 | 2.88 | 3.38 | 3.25 |
| | 2" | 3.50 | 2.38 | 3.38 | 3.00 |
| | 1 1/2" | 3.50 | 1.90 | 3.38 | 2.88 |
| | 1 1/4" | 3.50 | 1.66 | 3.38 | 2.75 |

| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|-------|
| RUN | BRANCH | RUN | BRANCH | C | M |
| 4" | 4" | 4.50 | 4.50 | 4.12 | 4.12 |
| | 3" | 4.50 | 3.50 | 4.12 | 3.88 |
| | 2 1/2" | 4.50 | 2.88 | 4.12 | 3.75 |
| | 2" | 4.50 | 2.38 | 4.12 | 3.50 |
| | 1 1/2" | 4.50 | 1.90 | 4.12 | 3.38 |
| 5" | 5" | 5.56 | 5.56 | 4.88 | 4.88 |
| | 4" | 5.56 | 4.50 | 4.88 | 4.62 |
| | 3" | 5.56 | 3.50 | 4.88 | 4.38 |
| | 2 1/2" | 5.56 | 2.88 | 4.88 | 4.25 |
| | 2" | 5.56 | 2.38 | 4.88 | 4.12 |
| 6" | 6" | 6.62 | 6.62 | 5.62 | 5.62 |
| | 5" | 6.62 | 5.56 | 5.62 | 5.38 |
| | 4" | 6.62 | 4.50 | 5.62 | 5.12 |
| | 3" | 6.62 | 3.50 | 5.62 | 4.88 |
| | 2 1/2" | 6.62 | 2.88 | 5.62 | 4.75 |
| 8" | 8" | 8.62 | 8.62 | 7.00 | 7.00 |
| | 6" | 8.62 | 6.62 | 7.00 | 6.62 |
| | 5" | 8.62 | 5.56 | 7.00 | 6.38 |
| | 4" | 8.62 | 4.50 | 7.00 | 6.12 |
| | 3" | 8.62 | 3.50 | 7.00 | 5.88 |
| 10" | 10" | 10.75 | 10.75 | 8.50 | 8.50 |
| | 8" | 10.75 | 8.62 | 8.50 | 8.00 |
| | 6" | 10.75 | 6.62 | 8.50 | 7.62 |
| | 5" | 10.75 | 5.56 | 8.50 | 7.50 |
| | 4" | 10.75 | 4.50 | 8.50 | 7.25 |
| 12" | 12" | 12.75 | 12.75 | 10.00 | 10.00 |
| | 10" | 12.75 | 10.75 | 10.00 | 9.50 |
| | 8" | 12.75 | 8.62 | 10.00 | 9.00 |
| | 6" | 12.75 | 6.62 | 10.00 | 8.62 |
| | 5" | 12.75 | 5.56 | 10.00 | 8.50 |



| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C | M ² |
| 1 1/2" | 3/4" | 1.90 | 1.05 | 2.25 | 2.00 |
| | 1" | 1.00 | 1.32 | 2.26 | 2.00 |
| 2" | 1 1/2" | 2.38 | 1.90 | 2.50 | 2.38 |
| | 1" | 2.38 | 1.32 | 2.50 | 2.00 |
| | 3/4" | 2.38 | 1.05 | 2.50 | 2.00 |
| 3" | 2" | 3.50 | 2.38 | 3.38 | 3.00 |
| | 1 1/2" | 3.50 | 1.90 | 3.38 | 2.88 |
| | 1" | 3.50 | 1.32 | 3.38 | 2.62 |
| | 3/4" | 3.50 | 1.05 | 3.38 | 2.62 |
| 4" | 3" | 4.50 | 3.50 | 4.12 | 3.88 |
| | 2" | 4.50 | 2.38 | 4.12 | 3.50 |
| | 1 1/2" | 4.50 | 1.90 | 4.12 | 3.38 |
| | 1" | 4.50 | 1.32 | 4.12 | 3.38 |
| | 3/4" | 4.50 | 1.05 | 4.12 | 3.38 |
| 6" | 4" | 6.62 | 4.50 | 5.62 | 5.12 |
| | 3" | 6.62 | 3.50 | 5.62 | 4.88 |
| | 2" | 6.62 | 2.38 | 5.62 | 4.88 |
| | 1 1/2" | 6.62 | 1.90 | 5.62 | 4.88 |
| | 1" | 6.62 | 1.32 | 5.62 | 4.88 |
| | 3/4" | 6.62 | 1.05 | 5.62 | 4.88 |

| NOMINAL PIPE SIZE | | OUTSIDE DIAMETER | | CENTER TO END | |
|-------------------|--------|------------------|--------|---------------|----------------|
| RUN | BRANCH | RUN | BRANCH | C | M ² |
| 8" | 6" | 8.62 | 6.62 | 7.00 | 6.62 |
| | 4" | 8.62 | 4.50 | 7.00 | 6.12 |
| | 3" | 8.62 | 3.50 | 7.00 | 6.00 |
| | 2" | 8.62 | 2.38 | 7.00 | 6.00 |
| | 1 1/2" | 8.62 | 1.90 | 7.00 | 6.00 |
| | 1" | 8.62 | 1.32 | 7.00 | 6.00 |
| | 3/4" | 8.62 | 1.05 | 7.00 | 6.00 |
| 10" | 8" | 10.75 | 8.62 | 8.50 | 8.50 |
| | 6" | 10.75 | 6.62 | 8.50 | 8.50 |
| | 4" | 10.75 | 4.50 | 8.50 | 8.50 |
| | 3" | 10.75 | 3.50 | 8.50 | 8.50 |
| | 2" | 10.75 | 2.38 | 8.50 | 8.50 |
| | 1 1/2" | 10.75 | 1.90 | 8.50 | 8.50 |
| | 1" | 10.75 | 1.32 | 8.50 | 8.50 |
| 12" | 10" | 12.75 | 10.75 | 10.00 | 9.50 |
| | 8" | 12.75 | 8.62 | 10.00 | 9.50 |
| | 6" | 12.75 | 6.62 | 10.00 | 9.50 |
| | 4" | 12.75 | 4.50 | 10.00 | 9.50 |
| | 3" | 12.75 | 3.50 | 10.00 | 9.50 |
| | 2" | 12.75 | 2.38 | 10.00 | 9.50 |
| | 1 1/2" | 12.75 | 1.90 | 10.00 | 9.50 |
| 12" | 1" | 12.75 | 1.32 | 10.00 | 9.50 |
| | 3/4" | 12.75 | 1.05 | 10.00 | 9.50 |

Springfield, MO
2017 E. McDaniel
P. 417-862-0483

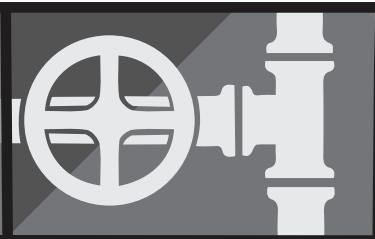
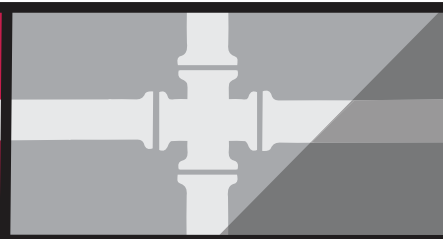
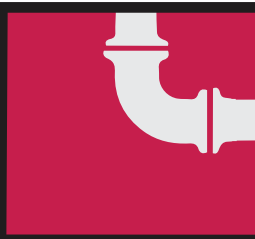
Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



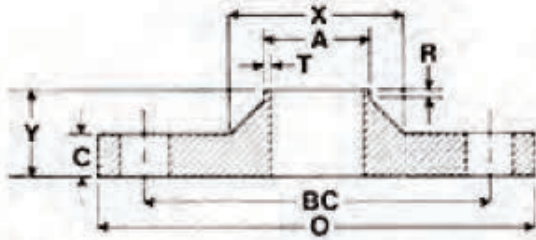
East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710





BREW QUALITY FLANGES / CAPS



| NOMINAL PIPE SIZE | O | C | Y | A | X | T | R | BC | DIA HOLES | QTY HOLES |
|-------------------|-------|-----|------|-------|-------|------|-----|-------|-----------|-----------|
| 1/2" | 3.50 | .38 | .88 | .84 | 1.19 | .065 | .25 | 2.38 | .62 | 4 |
| 3/4" | 3.88 | .38 | .88 | 1.05 | 1.50 | .065 | .25 | 2.75 | .62 | 4 |
| 1" | 4.25 | .38 | .88 | 1.32 | 1.94 | .065 | .25 | 3.12 | .62 | 4 |
| 1 1/4" | 4.62 | .38 | .88 | 1.66 | 2.31 | .065 | .25 | 3.50 | .62 | 4 |
| 1 1/2" | 5.00 | .38 | .88 | 1.90 | 2.56 | .065 | .25 | 3.88 | .62 | 4 |
| 2" | 6.00 | .44 | 1.00 | 2.38 | 3.06 | .065 | .25 | 4.75 | .75 | 4 |
| 2 1/2" | 7.00 | .44 | 1.00 | 2.88 | 3.56 | .083 | .31 | 5.50 | .75 | 4 |
| 3" | 7.50 | .50 | 1.12 | 3.50 | 4.25 | .083 | .31 | 6.00 | .75 | 4 |
| 4" | 9.00 | .50 | 1.12 | 4.50 | 5.31 | .083 | .31 | 7.50 | .75 | 8 |
| 5" | 10.00 | .50 | 1.12 | 5.56 | 6.44 | .109 | .31 | 8.50 | .88 | 8 |
| 6" | 11.00 | .56 | 1.25 | 6.62 | 7.56 | .109 | .31 | 9.50 | .88 | 8 |
| 8" | 13.50 | .56 | 1.25 | 8.62 | 9.69 | .109 | .31 | 11.75 | .88 | 8 |
| 10" | 16.00 | .69 | 1.38 | 10.75 | 12.00 | .134 | .38 | 14.25 | 1.00 | 12 |
| 12" | 19.00 | .69 | 1.38 | 12.75 | 14.38 | .156 | .38 | 17.00 | 1.00 | 12 |



| NOM. PIPE SIZE | OUTSIDE DIA. O.D | E |
|----------------|------------------|------|
| 1/2" | .840 | 1.00 |
| 3/4" | 1.050 | 1.00 |
| 1" | 1.320 | 1.50 |
| 1 1/4" | 1.660 | 1.50 |
| 1 1/2" | 1.900 | 1.50 |
| 2" | 2.380 | 1.50 |
| 2 1/2" | 2.880 | 1.50 |
| 3" | 3.500 | 2.00 |
| 3 1/2" | 4.000 | 2.50 |
| 4" | 4.500 | 2.50 |
| 5" | 5.560 | 3.00 |
| 6" | 6.620 | 3.50 |
| 8" | 8.620 | 4.00 |
| 10" | 10.750 | 5.00 |
| 12" | 12.750 | 6.00 |



Springfield, MO
2017 E. McDaniel
P. 417-862-0483

Granite City, IL
3721 IL 162 (HQ)
P. 618-797-1760



East Alton, IL
508 Niagara St.
P. 618-259-7138

Kansas City, KS
14 S. Ewing St
P. 913-228-1710

