

# Fittings and Pipe

est. 1947

# DUFF<sup>CO.</sup>

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## 150 LB. MALLEABLE IRON PIPE FITTINGS



90° ELBOW



90° STREET ELBOW



45° ELBOW



45° STREET ELBOW

Black Galvanized Black Galvanized Black Galvanized Black Galvanized

| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| 1/8   | 458      |       | 713      |       | 493      |       | 756      |       | 505      |       | 744      |       | 517      |       | 768      |       |
| 1/4   | 459      |       | 714      |       | 494      |       | 757      |       | 506      |       | 745      |       | 518      |       | 769      |       |
| 3/8   | 460      |       | 715      |       | 495      |       | 758      |       | 507      |       | 746      |       | 519      |       | 770      |       |
| 1/2   | 461      |       | 716      |       | 496      |       | 759      |       | 508      |       | 747      |       | 520      |       | 771      |       |
| 3/4   | 462      |       | 717      |       | 497      |       | 760      |       | 509      |       | 748      |       | 521      |       | 772      |       |
| 1     | 463      |       | 718      |       | 498      |       | 761      |       | 510      |       | 749      |       | 522      |       | 773      |       |
| 1 1/4 | 464      |       | 719      |       | 499      |       | 762      |       | 511      |       | 750      |       | 523      |       | 774      |       |
| 1 1/2 | 465      |       | 720      |       | 500      |       | 763      |       | 512      |       | 751      |       | 524      |       | 775      |       |
| 2     | 466      |       | 721      |       | 501      |       | 764      |       | 513      |       | 752      |       | 525      |       | 776      |       |
| 2 1/2 | 467      |       | 722      |       | 502      |       | 765      |       | 514      |       | 244659   |       | -        |       | -        |       |
| 3     | 468      |       | 723      |       | 503      |       | 766      |       | 515      |       | 754      |       | -        |       | -        |       |
| 3 1/2 | -        |       | 32458    |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |
| 4     | 469      |       | 724      |       | 504      |       | 767      |       | 516      |       | 755      |       | -        |       | -        |       |
| 5     | 5530     |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |
| 6     | 5531     |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |



TEE



STREET TEE



CROSS



LATERAL

Black Galvanized Black Galvanized Black Galvanized Black Galvanized

| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| 1/8   | 538      |       | 777      |       | -        |       | -        |       | 603      |       | 11898    |       | -        |       | -        |       |
| 1/4   | 539      |       | 778      |       | 13804    |       | 32554    |       | 604      |       | 11899    |       | -        |       | -        |       |
| 3/8   | 540      |       | 779      |       | 13805    |       | 32555    |       | 605      |       | 11901    |       | 11594    |       | 20026    |       |
| 1/2   | 541      |       | 780      |       | 13806    |       | 26506    |       | 606      |       | 816      |       | 11595    |       | 20027    |       |
| 3/4   | 542      |       | 781      |       | 13807    |       | 26507    |       | 607      |       | 817      |       | 11597    |       | 20028    |       |
| 1     | 543      |       | 782      |       | 13808    |       | 26509    |       | 608      |       | 818      |       | 11598    |       | 20029    |       |
| 1 1/4 | 544      |       | 783      |       | 13809    |       | 26510    |       | 609      |       | 819      |       | 11599    |       | 20030    |       |
| 1 1/2 | 545      |       | 784      |       | 13810    |       | 26511    |       | 610      |       | 820      |       | 11600    |       | 20031    |       |
| 2     | 546      |       | 785      |       | -        |       | 26512    |       | 611      |       | 11883    |       | 11602    |       | 20032    |       |
| 2 1/2 | 547      |       | 786      |       | -        |       | -        |       | 11589    |       | 11884    |       | 11604    |       | 20033    |       |
| 3     | 548      |       | 787      |       | -        |       | -        |       | 11591    |       | 11887    |       | 11605    |       | 20034    |       |
| 3 1/2 | 22521    |       | 32478    |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |
| 4     | 549      |       | 788      |       | -        |       | -        |       | 11592    |       | 11890    |       | 13796    |       | 20036    |       |
| 5     | 5541     |       | 32479    |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |
| 6     | 5542     |       | 11880    |       | -        |       | -        |       | 11593    |       | 11893    |       | -        |       | -        |       |

150 LB. REDUCING FITTINGS



| SIZE        | 90° Elbow |       |         |       | Coupling |       |         |       | Bushing |       |         |       | Face Bushing |       |         |       |
|-------------|-----------|-------|---------|-------|----------|-------|---------|-------|---------|-------|---------|-------|--------------|-------|---------|-------|
|             | BLACK     |       | GALV    |       | BLACK    |       | GALV    |       | BLACK   |       | GALV    |       | BLACK        |       | GALV    |       |
|             | FIG NO.   | PRICE | FIG NO. | PRICE | FIG NO.  | PRICE | FIG NO. | PRICE | FIG NO. | PRICE | FIG NO. | PRICE | FIG NO.      | PRICE | FIG NO. | PRICE |
| 1/4x1/8     | 470       | -     | -       | -     | 612      | -     | 829     | -     | 1089    | -     | 903     | -     | 32404        | -     | -       | -     |
| 3/8x1/8     | 471       | -     | -       | -     | 614      | -     | 830     | -     | 1090    | -     | 904     | -     | -            | -     | -       | -     |
| 3/8x1/4     | 472       | -     | 726     | -     | 613      | -     | 831     | -     | 1091    | -     | 905     | -     | -            | -     | -       | -     |
| 1/2x1/8     | -         | -     | -       | -     | 615      | -     | 832     | -     | 1092    | -     | 906     | -     | -            | -     | -       | -     |
| 1/2x1/4     | 474       | -     | 728     | -     | 616      | -     | 833     | -     | 1093    | -     | 907     | -     | -            | -     | -       | -     |
| 1/2x3/8     | 473       | -     | 727     | -     | 617      | -     | 834     | -     | 1094    | -     | 908     | -     | 1151         | -     | -       | -     |
| 3/4x1/8     | -         | -     | -       | -     | 618      | -     | 20714   | -     | 1095    | -     | 909     | -     | -            | -     | -       | -     |
| 3/4x1/4     | 475       | -     | 32459   | -     | 619      | -     | 835     | -     | 1096    | -     | 910     | -     | -            | -     | -       | -     |
| 3/4x3/8     | 476       | -     | 730     | -     | 620      | -     | 836     | -     | 1097    | -     | 911     | -     | -            | -     | -       | -     |
| 3/4x1/2     | 477       | -     | 729     | -     | 621      | -     | 837     | -     | 1098    | -     | 912     | -     | 1152         | -     | -       | -     |
| 1x1/8       | -         | -     | -       | -     | -        | -     | -       | -     | 1099    | -     | 5590    | -     | -            | -     | -       | -     |
| 1x1/4       | -         | -     | -       | -     | 622      | -     | 23273   | -     | 1100    | -     | 913     | -     | -            | -     | -       | -     |
| 1x3/8       | 11588     | -     | 5584    | -     | 623      | -     | 838     | -     | 1101    | -     | 914     | -     | -            | -     | -       | -     |
| 1x1/2       | 479       | -     | 732     | -     | 624      | -     | 839     | -     | 1102    | -     | 915     | -     | -            | -     | -       | -     |
| 1x3/4       | 478       | -     | 731     | -     | 625      | -     | 840     | -     | 1103    | -     | 916     | -     | -            | -     | -       | -     |
| 1 1/4x1/4   | -         | -     | -       | -     | -        | -     | -       | -     | 1104    | -     | 5592    | -     | -            | -     | -       | -     |
| 1 1/4x3/8   | -         | -     | -       | -     | -        | -     | 32564   | -     | 1105    | -     | 5593    | -     | -            | -     | -       | -     |
| 1 1/4x1/2   | 482       | -     | 735     | -     | 626      | -     | 841     | -     | 1106    | -     | 917     | -     | -            | -     | -       | -     |
| 1 1/4x3/4   | 481       | -     | 734     | -     | 627      | -     | 842     | -     | 1107    | -     | 918     | -     | -            | -     | 32598   | -     |
| 1 1/4x1     | 480       | -     | 733     | -     | 628      | -     | 843     | -     | 1108    | -     | 919     | -     | -            | -     | 32597   | -     |
| 1 1/2x1/4   | -         | -     | -       | -     | -        | -     | -       | -     | 1109    | -     | 13773   | -     | -            | -     | -       | -     |
| 1 1/2x3/8   | -         | -     | -       | -     | -        | -     | -       | -     | 1110    | -     | 5594    | -     | -            | -     | -       | -     |
| 1 1/2x1/2   | 486       | -     | 32460   | -     | 629      | -     | 844     | -     | 1111    | -     | 920     | -     | -            | -     | -       | -     |
| 1 1/2x3/4   | 485       | -     | 738     | -     | 630      | -     | 845     | -     | 1112    | -     | 921     | -     | -            | -     | -       | -     |
| 1 1/2x1     | 484       | -     | 737     | -     | 631      | -     | 846     | -     | 1113    | -     | 922     | -     | -            | -     | -       | -     |
| 1 1/2x1 1/4 | 483       | -     | 736     | -     | 632      | -     | 847     | -     | 1114    | -     | 923     | -     | 32419        | -     | -       | -     |
| 2x1/4       | -         | -     | -       | -     | -        | -     | -       | -     | 1115    | -     | 13775   | -     | 1115         | -     | -       | -     |
| 2x3/8       | -         | -     | -       | -     | -        | -     | -       | -     | 5629    | -     | 13774   | -     | -            | -     | -       | -     |
| 2x1/2       | 18747     | -     | -       | -     | 633      | -     | 848     | -     | 1116    | -     | 924     | -     | -            | -     | -       | -     |
| 2x3/4       | 490       | -     | 741     | -     | 634      | -     | 849     | -     | 1117    | -     | 5678    | -     | -            | -     | -       | -     |
| 2x1         | 489       | -     | 740     | -     | 635      | -     | 850     | -     | 1118    | -     | 925     | -     | -            | -     | -       | -     |
| 2x1 1/4     | 488       | -     | -       | -     | 636      | -     | 851     | -     | 1119    | -     | 926     | -     | -            | -     | -       | -     |
| 2x1 1/2     | 487       | -     | 20322   | -     | 637      | -     | 852     | -     | 1120    | -     | 927     | -     | 32423        | -     | -       | -     |
| 2 1/2x1/2   | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | 13776   | -     | -            | -     | -       | -     |
| 2 1/2x3/4   | -         | -     | -       | -     | -        | -     | 18013   | -     | 1122    | -     | 13777   | -     | -            | -     | -       | -     |
| 2 1/2x1     | -         | -     | -       | -     | 638      | -     | 853     | -     | 1123    | -     | 928     | -     | -            | -     | -       | -     |
| 2 1/2x1 1/4 | -         | -     | -       | -     | 639      | -     | 854     | -     | 1124    | -     | 5595    | -     | -            | -     | -       | -     |
| 2 1/2x1 1/2 | 22464     | -     | -       | -     | 640      | -     | 855     | -     | 1125    | -     | 929     | -     | -            | -     | -       | -     |
| 2 1/2x2     | 491       | -     | 742     | -     | 641      | -     | 856     | -     | 1126    | -     | 930     | -     | 32425        | -     | -       | -     |
| 3x1/2       | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | 13778   | -     | -            | -     | -       | -     |
| 3x3/4       | -         | -     | -       | -     | -        | -     | 32565   | -     | -       | -     | 13779   | -     | -            | -     | -       | -     |
| 3x1         | -         | -     | -       | -     | 642      | -     | 857     | -     | 1128    | -     | 5596    | -     | -            | -     | -       | -     |
| 3x1 1/4     | -         | -     | -       | -     | 643      | -     | 5588    | -     | 1129    | -     | 931     | -     | -            | -     | -       | -     |
| 3x1 1/2     | -         | -     | -       | -     | 644      | -     | 858     | -     | 1130    | -     | 932     | -     | -            | -     | -       | -     |
| 3x2         | 5533      | -     | 743     | -     | 645      | -     | 859     | -     | 1131    | -     | 933     | -     | -            | -     | -       | -     |
| 3x2 1/2     | 5532      | -     | 11872   | -     | 646      | -     | 860     | -     | 1132    | -     | 934     | -     | -            | -     | -       | -     |
| 3 1/2x1     | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | -       | -     | -            | -     | -       | -     |
| 3 1/2x1 1/4 | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | -       | -     | -            | -     | -       | -     |
| 3 1/2x1 1/2 | -         | -     | -       | -     | -        | -     | -       | -     | 1134    | -     | -       | -     | -            | -     | -       | -     |
| 3 1/2x2     | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | -       | -     | -            | -     | -       | -     |
| 3 1/2x2 1/2 | -         | -     | -       | -     | -        | -     | -       | -     | -       | -     | -       | -     | -            | -     | -       | -     |
| 3 1/2x3     | -         | -     | -       | -     | -        | -     | -       | -     | 1137    | -     | 26495   | -     | -            | -     | -       | -     |



## 150 LB. REDUCING FITTINGS

|         | 90° ELBOW |       | COUPLING |       |       |       | BUSHING |       |       |       | FACE BUSHING |       |       |       |      |       |
|---------|-----------|-------|----------|-------|-------|-------|---------|-------|-------|-------|--------------|-------|-------|-------|------|-------|
|         | BLACK     |       | GALV     |       | BLACK |       | GALV    |       | BLACK |       | GALV         |       | BLACK |       | GALV |       |
|         | FIG       | PRICE | FIG      | PRICE | FIG   | PRICE | FIG     | PRICE | FIG   | PRICE | FIG          | PRICE | FIG   | PRICE | FIG  | PRICE |
| 4X1     | -         | -     | -        | -     | -     | -     | -       | 1138  | -     | 13780 | -            | -     | -     | -     | -    | -     |
| 4X1 1/4 | -         | -     | -        | -     | -     | -     | -       | 1139  | -     | 13781 | -            | -     | -     | -     | -    | -     |
| 4X1 1/2 | -         | -     | -        | -     | 647   | -     | 11926   | -     | -     | 1140  | -            | 13782 | -     | -     | -    | -     |
| 4X2     | 5535      | -     | -        | -     | 648   | -     | 11923   | -     | -     | 1141  | -            | 935   | -     | -     | -    | -     |
| 4X2 1/2 | 5534      | -     | -        | -     | 649   | -     | 11917   | -     | -     | 1142  | -            | 936   | -     | -     | -    | -     |
| 4X3     | 492       | 11876 | -        | -     | 650   | -     | 861     | -     | -     | 1143  | -            | 937   | -     | -     | -    | -     |
| 4X3 1/2 | -         | -     | -        | -     | -     | -     | -       | -     | 1144  | -     | -            | -     | -     | -     | -    | -     |
| 5X2     | -         | -     | -        | -     | -     | -     | -       | -     | -     | -     | -            | -     | -     | -     | -    | -     |
| 5X2 1/2 | -         | -     | -        | -     | -     | -     | -       | -     | -     | -     | -            | -     | -     | -     | -    | -     |
| 5X3     | -         | -     | -        | -     | -     | -     | -       | -     | -     | -     | -            | 26499 | -     | -     | -    | -     |
| 5X4     | -         | -     | -        | -     | 23497 | -     | 32568   | -     | -     | -     | -            | 26500 | -     | -     | -    | -     |
| 6X2     | -         | -     | -        | -     | -     | -     | -       | -     | -     | -     | -            | -     | -     | -     | -    | -     |
| 6X2 1/2 | -         | -     | -        | -     | -     | -     | -       | -     | -     | -     | -            | 26502 | -     | -     | -    | -     |
| 6X3     | -         | -     | -        | -     | -     | -     | -       | -     | 1148  | -     | -            | 23119 | -     | -     | -    | -     |
| 6X4     | -         | -     | -        | -     | 22966 | -     | 11930   | -     | 1149  | -     | -            | 26504 | -     | -     | -    | -     |
| 6X5     | -         | -     | -        | -     | 23689 | -     | -       | -     | 1150  | -     | -            | -     | -     | -     | -    | -     |



For black pipe  
Mega Press Fitting,  
see page 98C

## 150 LB. MALLEABLE IRON PIPE FITTINGS



REDUCING STREET  
TEE

| Size    | Fig No | Price |
|---------|--------|-------|
| 3/4X1/2 | 23488  |       |
| 1X3/4   | 23489  |       |



ALL IRON  
UNION

1/4" - 2"  
AVAILABLE!



SIDE OUTLET TEE



WASTENUT



SIDE OUTLET  
90° ELBOW

**A L L S I Z E S A V A I L A B L E !**



150 LB. MALLEABLE IRON PIPE FITTINGS  
REDUCING TEE

| SIZE  |       |       | BLACK |       | GALV  |       |
|-------|-------|-------|-------|-------|-------|-------|
| A     | B     | C     | FIG   | PRICE | FIG   | PRICE |
| 1/4   | 1/4   | 1/8   | 5543  | -     | 789   | -     |
| 1/8   | 1/8   | 1/4   | -     | -     | -     | -     |
| 3/8   | 3/8   | 1/4   | 5544  | -     | 5852  | -     |
| 3/8   | 1/4   | 3/8   | 32353 | -     | 32493 | -     |
| 3/8   | 1/4   | 1/4   | 32352 | -     | -     | -     |
| 1/4   | 1/4   | 3/8   | -     | -     | 32491 | -     |
| 1/2   | 1/2   | 3/8   | 5547  | -     | 790   | -     |
| 1/2   | 1/2   | 1/4   | 5548  | -     | 18029 | -     |
| 1/2   | 3/8   | 1/2   | 32355 | -     | 32498 | -     |
| 1/2   | 3/8   | 3/8   | 20583 | -     | 32497 | -     |
| 3/8   | 3/8   | 1/2   | 32354 | -     | 32495 | -     |
| 3/4   | 3/4   | 1/2   | 5551  | -     | 791   | -     |
| 3/4   | 3/4   | 3/8   | 5552  | -     | 23011 | -     |
| 3/4   | 3/4   | 1/4   | 19011 | -     | 32499 | -     |
| 3/4   | 1/2   | 3/4   | 5554  | -     | 792   | -     |
| 3/4   | 1/2   | 1/2   | 5553  | -     | 793   | -     |
| 3/4   | 3/8   | 3/4   | 20009 | -     | -     | -     |
| 3/4   | 3/8   | 3/8   | -     | -     | -     | -     |
| 3/4   | 1/4   | 3/4   | -     | -     | -     | -     |
| 1/2   | 1/2   | 3/4   | 5546  | -     | 20553 | -     |
| 1     | 1     | 3/4   | 557   | -     | 794   | -     |
| 1     | 1     | 1/2   | 556   | -     | 795   | -     |
| 1     | 1     | 3/8   | 19088 | -     | 23795 | -     |
| 1     | 1     | 1/4   | 20006 | -     | 22027 | -     |
| 1     | 3/4   | 1     | 555   | -     | 796   | -     |
| 1     | 3/4   | 3/4   | 554   | -     | 797   | -     |
| 1     | 3/4   | 1/2   | 553   | -     | 21855 | -     |
| 1     | 1/2   | 1     | 552   | -     | 798   | -     |
| 1     | 1/2   | 3/4   | 551   | -     | 18028 | -     |
| 1     | 1/2   | 1/2   | 550   | -     | 799   | -     |
| 1     | 1/4   | 1     | -     | -     | 18237 | -     |
| 3/4   | 3/4   | 1     | 5550  | -     | 18988 | -     |
| 1/2   | 1/2   | 1     | 32356 | -     | -     | -     |
| 1 1/4 | 1 1/4 | 1     | 566   | -     | 13797 | -     |
| 1 1/4 | 1 1/4 | 3/4   | 565   | -     | 13798 | -     |
| 1 1/4 | 1 1/4 | 1/2   | 564   | -     | 13799 | -     |
| 1 1/4 | 1 1/4 | 3/8   | 32361 | -     | 13800 | -     |
| 1 1/4 | 1     | 1 1/4 | 563   | -     | -     | -     |
| 1 1/4 | 1     | 1     | 562   | -     | 13802 | -     |
| 1 1/4 | 1     | 3/4   | 5559  | -     | 13803 | -     |
| 1 1/4 | 1     | 1/2   | 5558  | -     | 32506 | -     |
| 1 1/4 | 3/4   | 1 1/4 | 561   | -     | 18010 | -     |
| 1 1/4 | 3/4   | 1     | 560   | -     | 32505 | -     |
| 1 1/4 | 3/4   | 3/4   | 559   | -     | 32504 | -     |
| 1 1/4 | 1/2   | 1 1/4 | 558   | -     | -     | -     |
| 1 1/4 | 1/2   | 1     | 5555  | -     | 20644 | -     |
| 1     | 1     | 1     | 20582 | -     | 20502 | -     |
| 3/4   | 3/4   | 1 1/4 | -     | -     | -     | -     |
| 1 1/2 | 1 1/2 | 1 1/4 | 576   | -     | 18335 | -     |
| 1 1/2 | 1 1/2 | 1     | 575   | -     | 18336 | -     |
| 1 1/2 | 1 1/2 | 3/4   | 574   | -     | 18337 | -     |
| 1 1/2 | 1 1/2 | 1/2   | 573   | -     | 18338 | -     |
| 1 1/2 | 1 1/4 | 1 1/2 | 572   | -     | 800   | -     |
| 1 1/2 | 1 1/4 | 1 1/4 | 571   | -     | 801   | -     |
| 1 1/2 | 1 1/4 | 1     | 21142 | -     | 21372 | -     |
| 1 1/2 | 1 1/4 | 3/4   | 32364 | -     | 32512 | -     |
| 1 1/2 | 1 1/4 | 1/2   | 32363 | -     | 32511 | -     |
| 1 1/2 | 1     | 1 1/2 | 570   | -     | 32510 | -     |
| 1 1/2 | 1     | 1 1/4 | 5569  | -     | 32509 | -     |
| 1 1/2 | 1     | 1     | 569   | -     | 802   | -     |
| 1 1/2 | 3/4   | 1 1/2 | 568   | -     | 18192 | -     |
| 1 1/2 | 3/4   | 3/4   | 5566  | -     | 32508 | -     |
| 1 1/2 | 1/2   | 1 1/2 | 567   | -     | 32507 | -     |



| SIZE  |       |       | BLACK |       | GALV  |       |
|-------|-------|-------|-------|-------|-------|-------|
| A     | B     | C     | FIG   | PRICE | FIG   | PRICE |
| 1 1/4 | 1 1/4 | 1 1/2 | 32362 | -     | 20586 | -     |
| 1     | 1     | -     | 32360 | -     | 30163 | -     |
| 2     | 2     | 1 1/2 | 587   | -     | 803   | -     |
| 2     | 2     | 1 1/4 | 586   | -     | 804   | -     |
| 2     | 2     | 1     | 585   | -     | 805   | -     |
| 2     | 2     | 3/4   | 584   | -     | 806   | -     |
| 2     | 2     | 1/2   | 583   | -     | 807   | -     |
| 2     | 1 1/2 | 2     | 582   | -     | 5585  | -     |
| 2     | 1 1/2 | 1 1/2 | 581   | -     | 808   | -     |
| 2     | 1 1/2 | 1 1/4 | 32369 | -     | 32524 | -     |
| 2     | 1 1/2 | 1     | 32368 | -     | 32523 | -     |
| 2     | 1 1/4 | 2     | 580   | -     | 809   | -     |
| 2     | 1 1/4 | 1 1/2 | 23548 | -     | 5586  | -     |
| 2     | 1 1/4 | 1 1/4 | 22428 | -     | 30665 | -     |
| 2     | 1     | 2     | 579   | -     | 810   | -     |
| 2     | 3/4   | 2     | 578   | -     | 32518 | -     |
| 2     | 1/2   | 2     | 577   | -     | 32517 | -     |
| 1 1/2 | 1 1/2 | 2     | -     | -     | 23635 | -     |
| 1 1/4 | 1 1/4 | 2     | 39329 | -     | 40036 | -     |
| 2 1/2 | 2 1/2 | 2     | 591   | -     | 811   | -     |
| 2 1/2 | 2 1/2 | 1 1/2 | -     | -     | 32532 | -     |
| 2 1/2 | 2 1/2 | 1 1/4 | 589   | -     | 32531 | -     |
| 2 1/2 | 2 1/2 | 1     | 588   | -     | 32530 | -     |
| 2 1/2 | 2 1/2 | 3/4   | -     | -     | 32529 | -     |
| 2 1/2 | 2     | 2 1/2 | -     | -     | 18745 | -     |
| 2 1/2 | 2     | 2     | -     | -     | 30137 | -     |
| 2 1/2 | 1 1/2 | 2 1/2 | -     | -     | 32528 | -     |
| 2 1/2 | 1 1/2 | 2     | -     | -     | 32527 | -     |
| 2     | 2     | 2 1/2 | -     | -     | 32525 | -     |
| 3     | 3     | 2 1/2 | 598   | -     | 812   | -     |
| 3     | 3     | 2     | 597   | -     | 813   | -     |
| 3     | 3     | 1 1/2 | 596   | -     | 814   | -     |
| 3     | 3     | 1 1/4 | 595   | -     | 23797 | -     |
| 3     | 3     | 1     | 594   | -     | 21728 | -     |
| 3     | 3     | 3/4   | -     | -     | 32537 | -     |
| 3     | 2 1/2 | 2 1/2 | -     | -     | 30136 | -     |
| 3     | 2 1/2 | 2     | -     | -     | 32536 | -     |
| 3     | 2     | 3     | -     | -     | 29756 | -     |
| 3     | 2     | 2     | -     | -     | 21591 | -     |
| 2 1/2 | 2 1/2 | 3     | -     | -     | 32533 | -     |
| 4     | 4     | 3     | -     | -     | 815   | -     |
| 4     | 4     | 2 1/2 | -     | -     | 19444 | -     |
| 4     | 4     | 2     | -     | -     | 32547 | -     |
| 4     | 4     | 1 1/2 | 599   | -     | 32546 | -     |
| 4     | 3     | 4     | -     | -     | 32542 | -     |
| 3     | 3     | 4     | -     | -     | 32538 | -     |
| 6     | 6     | 4     | -     | -     | 32553 | -     |
| 6     | 6     | 3     | -     | -     | 32552 | -     |
| 6     | 6     | 2 1/2 | -     | -     | 32550 | -     |
| 6     | 6     | 2     | -     | -     | 32549 | -     |

## 150 LB. MALLEABLE IRON PIPE FITTINGS



Coupling



Cap



Plug



Countersunk Plug

| SIZE  | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| 1/8   | 39936  |       | 43116  |       | 674    |       | 862    |       | 1154   |       | 880    |       | 23503  |       | -      |       |
| 1/4   | 39912  |       | 43117  |       | 675    |       | 863    |       | 1155   |       | 881    |       | 1168   |       | 32612  |       |
| 3/8   | 39913  |       | 43118  |       | 676    |       | 864    |       | 1156   |       | 882    |       | 1169   |       | 32613  |       |
| 1/2   | 39914  |       | 43119  |       | 677    |       | 865    |       | 1157   |       | 883    |       | 1170   |       | 32614  |       |
| 3/4   | 39915  |       | 43120  |       | 678    |       | 866    |       | 1158   |       | 884    |       | 1171   |       | 32615  |       |
| 1     | 39916  |       | 43121  |       | 679    |       | 867    |       | 1159   |       | 885    |       | 1172   |       | 32616  |       |
| 1 1/4 | 39917  |       | 43122  |       | 680    |       | 868    |       | 1160   |       | 886    |       | 1173   |       | 32617  |       |
| 1 1/2 | 39918  |       | 43123  |       | 681    |       | 869    |       | 1161   |       | 887    |       | 1174   |       | 32618  |       |
| 2     | 39919  |       | 43124  |       | 682    |       | 870    |       | 1162   |       | 888    |       | 1175   |       | 32619  |       |
| 2 1/2 | 39920  |       | 43125  |       | 683    |       | 871    |       | 1163   |       | 889    |       | -      |       | -      |       |
| 3     | 39921  |       | 43126  |       | 684    |       | 872    |       | 1164   |       | 890    |       | -      |       | -      |       |
| 3 1/2 | 43110  |       | 43127  |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 4     | 39922  |       | 43128  |       | 685    |       | 873    |       | 1166   |       | 891    |       | -      |       | -      |       |
| 5     | 4311   |       | 43129  |       | 5581   |       | 32570  |       | 5854   |       | -      |       | -      |       | -      |       |
| 6     | 43112  |       | 43130  |       | 686    |       | 11951  |       | 1167   |       | 32611  |       | -      |       | -      |       |
| 8     | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |

STEEL COUPLING MAY BE SHIPPED UNLESS YOU SPECIFICALLY REQUEST MALLEABLE.



Union



Floor Flange



Half Coupling



Extension Piece



Hex Locknut

| SIZE  | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       | BLACK  |       | GALV   |       |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |       |
| 1/8   | 660    |       | 892    |       | -      |       | -      |       | 13784  |       | -      |       | -      |       | -      |       | -      |       | -      |       | 11960 |
| 1/4   | 661    |       | 893    |       | 11608  |       | -      |       | 13785  |       | -      |       | -      |       | -      |       | -      |       | -      |       | 11962 |
| 3/8   | 662    |       | 894    |       | 11610  |       | -      |       | 13786  |       | -      |       | 11606  |       | 13812  |       | -      |       | -      |       | 11966 |
| 1/2   | 663    |       | 895    |       | 654    |       | 874    |       | 13787  |       | -      |       | 11519  |       | 11988  |       | 11846  |       | -      |       | 11969 |
| 3/4   | 664    |       | 896    |       | 655    |       | 875    |       | 13788  |       | -      |       | 11521  |       | 11993  |       | 11850  |       | -      |       | 11973 |
| 1     | 665    |       | 897    |       | 656    |       | 876    |       | 13789  |       | -      |       | 11523  |       | 11996  |       | 11851  |       | -      |       | 11975 |
| 1 1/4 | 666    |       | 898    |       | 657    |       | 877    |       | 13790  |       | -      |       | 11525  |       | 11999  |       | -      |       | -      |       | 11979 |
| 1 1/2 | 667    |       | 899    |       | 658    |       | 878    |       | 13791  |       | -      |       | 11526  |       | 12001  |       | -      |       | -      |       | 11983 |
| 2     | 668    |       | 900    |       | 659    |       | 879    |       | 13792  |       | -      |       | 11527  |       | 12009  |       | 11863  |       | -      |       | 11986 |
| 2 1/2 | 669    |       | 901    |       | -      |       | -      |       | 13793  |       | -      |       | -      |       | -      |       | -      |       | -      |       | 32577 |
| 3     | 670    |       | 902    |       | -      |       | -      |       | 13794  |       | -      |       | -      |       | -      |       | -      |       | -      |       | -     |
| 3 1/2 | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -     |
| 4     | 5577   |       | 5589   |       | -      |       | -      |       | 13795  |       | -      |       | -      |       | -      |       | -      |       | -      |       | -     |



**300 LB (XH) BLACK MALLEABLE PIPE FITTINGS**



90° Elbow



90° Street Elbow



45° Elbow



45° Street Elbow



Tee

| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1/4   | 11684  |       | 11650  |       | 11692  |       | -      |       | 11702  |       |
| 3/8   | 11686  |       | 11653  |       | 11694  |       | -      |       | 11704  |       |
| 1/2   | 687    |       | 11655  |       | 693    |       | 11625  |       | 699    |       |
| 3/4   | 688    |       | 11657  |       | 694    |       | 11627  |       | 700    |       |
| 1     | 689    |       | 11659  |       | 695    |       | 11628  |       | 701    |       |
| 1 1/4 | 690    |       | 11661  |       | 696    |       | 11637  |       | 702    |       |
| 1 1/2 | 691    |       | 11663  |       | 697    |       | 11639  |       | 703    |       |
| 2     | 692    |       | 11665  |       | 698    |       | 11642  |       | 704    |       |
| 2 1/2 | 18103  |       | -      |       | 11696  |       | -      |       | 705    |       |
| 3     | 11689  |       | 11668  |       | 11697  |       | -      |       | 706    |       |
| 4     | 11691  |       | -      |       | -      |       | -      |       | 707    |       |
| 6     | 32633  |       | -      |       | -      |       | -      |       | -      |       |



Cross



Coupling



Half Coupling



Cap



Union

| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1/8   | -      |       | -      |       | -      |       | -      |       | -      |       |
| 1/4   | -      |       | 39924  |       | -      |       | -      |       | 11613  |       |
| 3/8   | -      |       | 39925  |       | -      |       | 11807  |       | 11615  |       |
| 1/2   | 18319  |       | 39926  |       | -      |       | 11811  |       | 11672  |       |
| 3/4   | 18320  |       | 39927  |       | -      |       | 11813  |       | 11673  |       |
| 1     | 18321  |       | 39928  |       | -      |       | 11817  |       | 11675  |       |
| 1 1/4 | 18322  |       | 39929  |       | -      |       | 11820  |       | 11677  |       |
| 1 1/2 | 18323  |       | 39930  |       | -      |       | 11821  |       | 11678  |       |
| 2     | 18324  |       | 39931  |       | -      |       | 11824  |       | 11680  |       |
| 2 1/2 | -      |       | 39932  |       | -      |       | 11828  |       | 18102  |       |
| 3     | -      |       | -      |       | -      |       | 11835  |       | 11681  |       |



## 300 LB. (XH) BLACK MALLEABLE PIPE FITTINGS (GALVANIZED AVAILABLE)



| SIZE        | REDUCING TEE |       | REDUCING 90° ELBOW |       | REDUCING COUPLING |       |
|-------------|--------------|-------|--------------------|-------|-------------------|-------|
|             | FIG. NO.     | PRICE | FIG. NO.           | PRICE | FIG. NO.          | PRICE |
| 3/8X1/4     | 11735        | -     | -                  | -     | 11761             | -     |
| 1/2X1/4     | 32647        | -     | -                  | -     | 32681             | -     |
| 1/2X3/8     | 11738        | -     | 32635              | -     | 11766             | -     |
| 3/4X1/4     | 32651        | -     | -                  | -     | 32682             | -     |
| 3/4X3/8     | 32652        | -     | -                  | -     | 32683             | -     |
| 3/4X1/2     | 11741        | -     | 32636              | -     | 11770             | -     |
| 1X1/4       | -            | -     | -                  | -     | -                 | -     |
| 1X3/8       | -            | -     | -                  | -     | 32684             | -     |
| 1X1/2       | 32659        | -     | 32637              | -     | 31396             | -     |
| 1X3/4       | 11742        | -     | 32638              | -     | 11774             | -     |
| 1 1/4X1/2   | 32662        | -     | -                  | -     | 32685             | -     |
| 1 1/4X3/4   | 32663        | -     | 32639              | -     | -                 | -     |
| 1 1/4X1     | 11745        | -     | 32640              | -     | 11779             | -     |
| 1 1/2X1/2   | 32665        | -     | -                  | -     | 32687             | -     |
| 1 1/2X3/4   | 32666        | -     | -                  | -     | -                 | -     |
| 1 1/2X1     | 32667        | -     | 32641              | -     | 19421             | -     |
| 1 1/2X1 1/4 | 11747        | -     | 32642              | -     | 11782             | -     |
| 2 X 1/2     | 32669        | -     | -                  | -     | 32688             | -     |
| 2X3/4       | 32670        | -     | -                  | -     | -                 | -     |
| 2X1         | 32671        | -     | -                  | -     | 32689             | -     |
| 2X1 1/4     | 32672        | -     | -                  | -     | 18235             | -     |
| 2X1 1/2     | 11750        | -     | 32643              | -     | 11785             | -     |
| 2 1/2X1 1/2 | 32673        | -     | -                  | -     | -                 | -     |
| 2 1/2X2     | -            | -     | -                  | -     | 11792             | -     |
| 3X1 1/2     | -            | -     | -                  | -     | -                 | -     |
| 3X2         | -            | -     | -                  | -     | -                 | -     |
| 3X2 1/2     | -            | -     | -                  | -     | 11795             | -     |
| 4X2 1/2     | -            | -     | -                  | -     | -                 | -     |
| 4X3         | -            | -     | -                  | -     | -                 | -     |



**Male X Female Union  
AVAILABLE FOR QUICK  
DELIVERY!**



**FEMALE UNION  
EXTRA HEAVY  
90° ELBOW**

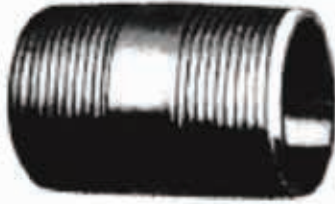
| Size  | Fig No | Price |
|-------|--------|-------|
| 1/2   | 23490  | -     |
| 3/4   | 22023  | -     |
| 1     | 23491  | -     |
| 1 1/4 | 23492  | -     |
| 1 1/2 | -      | -     |
| 2     | -      | -     |



**MALE UNION  
EXTRA HEAVY  
90° ELBOW**

| Size  | Fig No | Price |
|-------|--------|-------|
| 1/2   | -      | -     |
| 3/4   | -      | -     |
| 1     | -      | -     |
| 1 1/4 | -      | -     |
| 1 1/2 | 32446  | -     |
| 2     | -      | -     |

STANDARD BLACK STEEL NIPPLES



|       | 1/8    |       | 1/4    |       | 3/8    |       | 1/2    |       | 3/4    |       | 1      |       | 1 1/4  |       | 1 1/2  |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 198    |       | 210    |       | 222    |       | 234    |       | 252    |       | 270    |       | 287    |       | 304    |       |
| Sh.   | 199    |       | 211    |       | 223    |       | 235    |       | 253    |       | 271    |       | 288    |       | 305    |       |
| 2     | 200    |       | 212    |       | 224    |       | 236    |       | 254    |       | -      |       | -      |       | -      |       |
| 2 1/2 | 201    |       | 213    |       | 225    |       | 237    |       | 255    |       | 272    |       | 289    |       | 306    |       |
| 3     | 202    |       | 214    |       | 226    |       | 238    |       | 256    |       | 273    |       | 290    |       | 307    |       |
| 3 1/2 | 203    |       | 215    |       | 227    |       | 239    |       | 257    |       | 274    |       | 291    |       | 308    |       |
| 4     | 204    |       | 216    |       | 228    |       | 240    |       | 258    |       | 275    |       | 292    |       | 309    |       |
| 4 1/2 | 205    |       | 217    |       | 229    |       | 241    |       | 259    |       | 276    |       | 293    |       | 310    |       |
| 5     | 206    |       | 218    |       | 230    |       | 242    |       | 260    |       | 277    |       | 294    |       | 311    |       |
| 5 1/2 | 207    |       | 219    |       | 231    |       | 243    |       | 261    |       | 278    |       | 295    |       | 312    |       |
| 6     | 208    |       | 220    |       | 232    |       | 244    |       | 262    |       | 279    |       | 296    |       | 313    |       |
| 7     | 26257  |       | -      |       | 26294  |       | 246    |       | 264    |       | 281    |       | 298    |       | 315    |       |
| 8     | 26260  |       | 26275  |       | 26296  |       | 247    |       | 265    |       | 282    |       | 299    |       | 316    |       |
| 9     | 26262  |       | 26278  |       | 26298  |       | 248    |       | 266    |       | 283    |       | 300    |       | 317    |       |
| 10    | 26264  |       | -      |       | 26300  |       | 249    |       | 267    |       | 284    |       | 301    |       | 318    |       |
| 11    | 26266  |       | 26285  |       | 26302  |       | 250    |       | 268    |       | 285    |       | 302    |       | 319    |       |
| 12    | 26267  |       | 26289  |       | 26304  |       | 251    |       | 269    |       | 286    |       | 303    |       | 320    |       |

|       | 2      |       | 2 1/2  |       | 3      |       | 3 1/2  |       | 4      |       | 5      |       | 6      |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 321    |       | 337    |       | 352    |       | -      |       | 367    |       | 5505   |       | 5517   |       |
| Sh.   | 322    |       | 19522  |       | 353    |       | -      |       | 368    |       | 5506   |       | 5518   |       |
| 2     | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 2 1/2 | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 3     | 323    |       | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 3 1/2 | 324    |       | 339    |       | 354    |       | -      |       | -      |       | -      |       | -      |       |
| 4     | 325    |       | 340    |       | 355    |       | -      |       | -      |       | -      |       | -      |       |
| 4 1/2 | 326    |       | 341    |       | 356    |       | -      |       | 369    |       | 5507   |       | 5519   |       |
| 5     | 327    |       | 342    |       | 357    |       | -      |       | 370    |       | 5508   |       | 5520   |       |
| 5 1/2 | 328    |       | 343    |       | 358    |       | -      |       | 371    |       | 5509   |       | 5521   |       |
| 6     | 329    |       | 344    |       | 359    |       | -      |       | 372    |       | 5510   |       | 5522   |       |
| 7     | 331    |       | 346    |       | 361    |       | -      |       | 374    |       | 5511   |       | 5523   |       |
| 8     | 332    |       | 347    |       | 362    |       | -      |       | 375    |       | 5512   |       | 5524   |       |
| 9     | 333    |       | 348    |       | 363    |       | -      |       | 376    |       | 5513   |       | 5525   |       |
| 10    | 334    |       | 349    |       | 364    |       | -      |       | 377    |       | 5514   |       | 5526   |       |
| 11    | 335    |       | 350    |       | 365    |       | -      |       | 378    |       | 5515   |       | 5527   |       |
| 12    | 336    |       | 351    |       | 366    |       | -      |       | 379    |       | 5516   |       | 5528   |       |

CALL DUFF FOR ALL YOUR NIPPLES:

Black, Galvanized, Brass, Seamless, Chrome, PVC, CPVC, Monel, Standard, Extra Heavy, Double Extra Heavy.

## STANDARD GALVANIZED STEEL NIPPLES

| SIZE  | 1/8    |       | 1/4    |       | 3/8    |       | 1/2    |       | 3/4    |       | 1      |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 20     |       | 32     |       | 44     |       | 56     |       | 69     |       | 87     |       |
| Sh.   | 21     |       | 33     |       | 45     |       | 57     |       | 70     |       | 88     |       |
| 2     | 22     |       | 34     |       | 46     |       | 58     |       | 71     |       | -      |       |
| 2 1/2 | 23     |       | 35     |       | 47     |       | 59     |       | 72     |       | 89     |       |
| 3     | 24     |       | 36     |       | 48     |       | 60     |       | 73     |       | 90     |       |
| 3 1/2 | 25     |       | 37     |       | 49     |       | 61     |       | 74     |       | 91     |       |
| 4     | 26     |       | 38     |       | 50     |       | 62     |       | 75     |       | 92     |       |
| 4 1/2 | 27     |       | 39     |       | 51     |       | 63     |       | 76     |       | 93     |       |
| 5     | 28     |       | 40     |       | 52     |       | 64     |       | 77     |       | 94     |       |
| 5 1/2 | 29     |       | 41     |       | 53     |       | 65     |       | 78     |       | 95     |       |
| 6     | 30     |       | 42     |       | 54     |       | 66     |       | 79     |       | 96     |       |
| 7     | -      |       | -      |       | -      |       | 12953  |       | 81     |       | 98     |       |
| 8     | -      |       | -      |       | -      |       | 12957  |       | 82     |       | 99     |       |
| 9     | -      |       | -      |       | -      |       | 5350   |       | 83     |       | -      |       |
| 10    | -      |       | -      |       | -      |       | 5352   |       | 84     |       | 101    |       |
| 11    | -      |       | -      |       | -      |       | 5354   |       | 85     |       | 102    |       |
| 12    | -      |       | -      |       | -      |       | 68     |       | 86     |       | 103    |       |

| SIZE  | 1 1/4  |       | 1 1/2  |       | 2      |       | 2 1/2  |       | 3      |       | 4      |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 104    |       | 125    |       | 146    |       | 166    |       | 175    |       | 186    |       |
| Sh.   | 105    |       | 126    |       | 147    |       | 167    |       | 176    |       | 187    |       |
| 2     | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 2 1/2 | 106    |       | 127    |       | -      |       | -      |       | -      |       | -      |       |
| 3     | 107    |       | 128    |       | 148    |       | -      |       | -      |       | -      |       |
| 3 1/2 | 108    |       | 129    |       | 149    |       | 168    |       | 177    |       | -      |       |
| 4     | 109    |       | 130    |       | 150    |       | 169    |       | 178    |       | -      |       |
| 4 1/2 | 110    |       | 131    |       | 151    |       | 170    |       | 179    |       | 188    |       |
| 5     | 111    |       | 132    |       | 152    |       | 171    |       | 180    |       | 189    |       |
| 5 1/2 | 112    |       | 133    |       | 153    |       | 172    |       | 181    |       | 190    |       |
| 6     | 113    |       | 134    |       | 154    |       | 173    |       | 182    |       | 191    |       |
| 7     | 115    |       | 136    |       | 156    |       | 5384   |       | 5395   |       | 192    |       |
| 8     | 116    |       | 137    |       | 157    |       | 5386   |       | 5396   |       | 193    |       |
| 9     | 117    |       | 138    |       | 158    |       | 5388   |       | 5397   |       | 194    |       |
| 10    | 118    |       | 139    |       | 159    |       | 5390   |       | 5398   |       | 195    |       |
| 11    | 119    |       | 140    |       | 160    |       | 5392   |       | 184    |       | 196    |       |
| 12    | 120    |       | 141    |       | 161    |       | 5394   |       | 185    |       | 197    |       |



EXTRA HEAVY BLACK STEEL NIPPLES

| SIZE  | 1/8    |       | 1/4    |       | 3/8    |       | 1/2    |       | 3/4    |       | 1      |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 18171  |       | 18384  |       | 380    |       | 391    |       | 403    |       | 415    |       |
| Sh.   | 18374  |       | 18385  |       | 381    |       | 392    |       | 404    |       | 416    |       |
| 2     | 18375  |       | 18386  |       | 382    |       | 393    |       | 405    |       | -      |       |
| 2 1/2 | 18376  |       | 18387  |       | 383    |       | 394    |       | 406    |       | 417    |       |
| 3     | 18377  |       | 18388  |       | 384    |       | 395    |       | 407    |       | 418    |       |
| 3 1/2 | 18378  |       | 18389  |       | 385    |       | 396    |       | 51611  |       | 419    |       |
| 4     | 18379  |       | 18390  |       | 386    |       | 397    |       | 409    |       | 420    |       |
| 4 1/2 | 18380  |       | 18391  |       | 387    |       | 398    |       | 410    |       | 421    |       |
| 5     | 18381  |       | 18392  |       | 388    |       | 399    |       | 411    |       | 422    |       |
| 5 1/2 | 18382  |       | 18393  |       | 389    |       | 400    |       | 412    |       | 423    |       |
| 6     | 18383  |       | 18394  |       | 390    |       | 401    |       | 413    |       | 424    |       |

| SIZE  | 1 1/4  |       | 1 1/2  |       | 2      |       | 2 1/2  |       | 3      |       | 4      |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 426    |       | 437    |       | 448    |       | 17863  |       | 17871  |       | 17880  |       |
| Sh.   | 427    |       | 438    |       | 449    |       | 17864  |       | 17872  |       | 17881  |       |
| 2     | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 2 1/2 | 428    |       | 439    |       | -      |       | -      |       | -      |       | -      |       |
| 3     | 429    |       | 440    |       | 450    |       | -      |       | -      |       | -      |       |
| 3 1/2 | 430    |       | 441    |       | 451    |       | 17865  |       | 17873  |       | -      |       |
| 4     | 431    |       | 442    |       | 452    |       | 17866  |       | 17874  |       | -      |       |
| 4 1/2 | 432    |       | 443    |       | 453    |       | 17867  |       | 17875  |       | 17882  |       |
| 5     | 433    |       | 444    |       | 454    |       | 17868  |       | 17876  |       | 17883  |       |
| 5 1/2 | 434    |       | 445    |       | 455    |       | 17869  |       | 17877  |       | 17884  |       |
| 6     | 435    |       | 446    |       | 456    |       | 17870  |       | 17878  |       | 17885  |       |



## LONG NIPPLES



| BLACK    |          |       | GALVANIZED |       | BLACK    |          |       | GALVANIZED |       |
|----------|----------|-------|------------|-------|----------|----------|-------|------------|-------|
| SIZE     | FIG. NO. | PRICE | FIG. NO.   | PRICE | SIZE     | FIG. NO. | PRICE | FIG. NO.   | PRICE |
| 1/2 x 18 | 20054    |       | 13180      |       | 1 1/2x18 | 20058    |       | 142        |       |
| 1/2 x 24 | 13248    |       | 13183      |       | 1 1/2x24 | 5440     |       | 143        |       |
| 1/2 x 36 | 13250    |       | 13772      |       | 1 1/2x36 | 5441     |       | 144        |       |
| 1/2 x 48 | 13251    |       | 13191      |       | 1 1/2x48 | 5442     |       | 145        |       |
| 1/2 x 60 | 13252    |       | 13192      |       | 1 1/2x60 | 13270    |       | 13225      |       |
| 1/2 x 72 | 13253    |       | 13193      |       | 1 1/2x72 | 13271    |       | 13227      |       |
| 3/4 x 18 | 20055    |       | 13196      |       | 2x18     | 20059    |       | 162        |       |
| 3/4 x 24 | 13254    |       | 13198      |       | 2 x 24   | 5450     |       | 163        |       |
| 3/4 x 36 | 13255    |       | 13200      |       | 2 x 36   | 5451     |       | 164        |       |
| 3/4 x 48 | 13256    |       | 13202      |       | 2 x 48   | 5452     |       | 165        |       |
| 3/4 x 60 | 13258    |       | 13204      |       | 2 x 60   | 13230    |       | 13295      |       |
| 3/4 x 72 | 13259    |       | 13205      |       | 2 x 72   | 13234    |       | 13296      |       |
| 1 x 18   | 20056    |       | 13207      |       | 3 x 18   | 20061    |       | -          |       |
| 1 x 24   | 13260    |       | 13209      |       | 3 x 24   | 5470     |       | 13235      |       |
| 1 x 36   | 13261    |       | 13211      |       | 3 x 36   | 5471     |       | 13236      |       |
| 1 x 48   | 13262    |       | 13213      |       | 3 x 48   | 5472     |       | 13238      |       |
| 1 x 60   | 13263    |       | 13214      |       | 3 x 60   | 13264    |       | 13239      |       |
| 1 x 72   | 13265    |       | 13215      |       | 3 x 72   | 13267    |       | 13240      |       |
| 1 1/4x18 | 20057    |       | 121        |       | 4 x 18   | 20062    |       | -          |       |
| 1 1/4x24 | 5428     |       | 122        |       | 4 x 24   | 5502     |       | 13241      |       |
| 1 1/4x36 | 5429     |       | 42877      |       | 4 x 36   | 5503     |       | 13242      |       |
| 1 1/4x48 | 5430     |       | 124        |       | 4 x 48   | 5504     |       | 13244      |       |
| 1 1/4x60 | 13266    |       | 13219      |       | 4 x 60   | 13269    |       | 13245      |       |
| 1 1/4x72 | 13268    |       | 13223      |       | 4 x 72   | 13272    |       | 13246      |       |

Call Duff for all pipe fabrication - We can cut, thread, bend, bevel, groove or weld. Manifolds and spool pieces a specialty!

### 66-NIPPLE PAK



Six of each size nipple -- close trough 6", all in an easy to carry tray for truck or shop.

| Size | BLACK  |       | GALVANIZED |       |
|------|--------|-------|------------|-------|
|      | Fig No | Price | Fig No     | Price |
| 1/2  | 13282  |       | 13286      |       |
| 3/4  | 13283  |       | 13287      |       |

### COMBO NIPPLE BOX



Holds both 1/2" and 3/4" nipples.

Great for the job site!

| Fig No | Price |
|--------|-------|
| 51243  |       |

NIPPLE RUNS



ONE OF EACH SIZE FROM CLOSE TO 6"



|       | BLACK  |       | GALVANIZED |       | EXTRA HEAVY BLACK |       | BRASS  |       |
|-------|--------|-------|------------|-------|-------------------|-------|--------|-------|
| SIZE  | FIG NO | PRICE | FIG NO     | PRICE | FIG NO            | PRICE | FIG NO | PRICE |
| 1/8   | 50989  |       | 50977      |       | 51004             |       | 44496  |       |
| 1/4   | 50990  |       | 50978      |       | 51005             |       | 44497  |       |
| 3/8   | 50991  |       | 50979      |       | 51006             |       | 44498  |       |
| 1/2   | 50992  |       | 50980      |       | 51007             |       | 44499  |       |
| 3/4   | 50993  |       | 50981      |       | 51008             |       | 44500  |       |
| 1     | 50994  |       | 50982      |       | 51009             |       | 44501  |       |
| 1 1/4 | 50995  |       | 50983      |       | 51010             |       | 44502  |       |
| 1 1/2 | 50996  |       | 50984      |       | 51011             |       | 44503  |       |
| 2     | 50997  |       | 50985      |       | 51013             |       | 44504  |       |
| 2 1/2 | 50998  |       | 50986      |       | 51014             |       | 44505  |       |
| 3     | 50999  |       | 50987      |       | 51015             |       | 44506  |       |
| 3 1/2 | 51000  |       | -          |       | -                 |       | -      |       |
| 4     | 51001  |       | 50988      |       | 51016             |       | -      |       |
| 5     | 51002  |       | -          |       | -                 |       | -      |       |
| 6     | 51003  |       | -          |       | -                 |       | -      |       |

|       | PVC SCH. 80 |       | CPVC SCH. 80 |       | CHROME PLATED BRASS |       | 304 STAINLESS STEEL |       | 316 STAINLESS STEEL |       |
|-------|-------------|-------|--------------|-------|---------------------|-------|---------------------|-------|---------------------|-------|
| SIZE  | FIG NO      | PRICE | FIG NO       | PRICE | FIG NO              | PRICE | FIG NO              | PRICE | FIG NO              | PRICE |
| 1/8   | -           |       | -            |       | -                   |       | 44507               |       | 36405               |       |
| 1/4   | -           |       | 51030        |       | -                   |       | 44508               |       | 36406               |       |
| 3/8   | 51018       |       | 51031        |       | 12638               |       | 44509               |       | 36407               |       |
| 1/2   | 51019       |       | 51032        |       | 12640               |       | 44510               |       | 36408               |       |
| 3/4   | 51020       |       | 51033        |       | 12641               |       | 44511               |       | 36409               |       |
| 1     | 51021       |       | 51034        |       | -                   |       | 44512               |       | 36410               |       |
| 1 1/4 | 51022       |       | 51035        |       | -                   |       | 44513               |       | 36411               |       |
| 1 1/2 | 51023       |       | 51036        |       | -                   |       | 44514               |       | 36412               |       |
| 2     | 51024       |       | 51037        |       | -                   |       | 44515               |       | 36413               |       |
| 2 1/2 | 51025       |       | -            |       | -                   |       | -                   |       | -                   |       |
| 3     | 51026       |       | -            |       | -                   |       | -                   |       | -                   |       |
| 4     | 51027       |       | -            |       | -                   |       | -                   |       | -                   |       |
| 5     | -           |       | -            |       | -                   |       | -                   |       | -                   |       |
| 6     | -           |       | -            |       | -                   |       | -                   |       | -                   |       |



## 125 LB. CAST IRON SCREWED FITTINGS



| Size  | 90° Elbow |       | 45° Elbow |       | Tee      |       |
|-------|-----------|-------|-----------|-------|----------|-------|
|       | FIG. NO.  | PRICE | FIG. NO.  | PRICE | FIG. NO. | PRICE |
| 1/4   | 32631     |       | 32699     |       | 32704    |       |
| 3/8   | 32632     |       | 32700     |       | 32705    |       |
| 1/2   | 938       |       | 974       |       | 984      |       |
| 3/4   | 939       |       | 975       |       | 985      |       |
| 1     | 940       |       | 976       |       | 986      |       |
| 1 1/4 | 941       |       | 977       |       | 987      |       |
| 1 1/2 | 942       |       | 978       |       | 988      |       |
| 2     | 943       |       | 979       |       | 989      |       |
| 2 1/2 | 944       |       | 980       |       | 990      |       |
| 3     | 945       |       | 981       |       | 991      |       |
| 4     | 946       |       | 982       |       | 992      |       |

| Size        | Reducing 90° Elbow |       | Eccentric Reducer |       |
|-------------|--------------------|-------|-------------------|-------|
|             | Fig. No.           | Price | Fig. No.          | Price |
| 1/2x3/8     | 32697              |       | -                 |       |
| 3/4x1/2     | 948                |       | -                 |       |
| 1x1/2       | 949                |       | -                 |       |
| 1x3/4       | 950                |       | 1080              |       |
| 1 1/4x1/2   | 951                |       | -                 |       |
| 1 1/4x3/4   | 952                |       | 1081              |       |
| 1 1/4x1     | 953                |       | 1082              |       |
| 1 1/2x1/2   | 954                |       | -                 |       |
| 1 1/2x3/4   | 955                |       | 1083              |       |
| 1 1/2x1     | 956                |       | 1084              |       |
| 1 1/2x1 1/4 | 957                |       | 1085              |       |
| 2x1/2       | 958                |       | -                 |       |
| 2x3/4       | 959                |       | 32765             |       |
| 2x1         | -                  |       | 1086              |       |
| 2x1 1/4     | -                  |       | -                 |       |
| 2x1/12      | 962                |       | 1088              |       |
| 2 1/2x1     | -                  |       | -                 |       |
| 2 1/2x1 1/4 | -                  |       | -                 |       |
| 2 1/2x1 1/2 | -                  |       | 32767             |       |
| 2 1/2x2     | -                  |       | -                 |       |
| 3x1 1/4     | -                  |       | -                 |       |
| 3x1 1/2     | -                  |       | 32769             |       |
| 3x2         | 969                |       | -                 |       |
| 3x2 1/2     | -                  |       | -                 |       |
| 4x2         | -                  |       | 32772             |       |
| 4x2 1/2     | -                  |       | -                 |       |
| 4x3         | -                  |       | -                 |       |

### BRASS SADDLE TEE



| SIZE      | FIG.  | PRICE |
|-----------|-------|-------|
| 1/2 1/2   | 47202 |       |
| 3/4 1/2   | 47203 |       |
| 3/4 3/4   | 52524 |       |
| 1 1/2     | 48743 |       |
| 1 3/4     | 52525 |       |
| 1 1/4 1/2 | 26515 |       |
| 1 1/4 3/4 | 26517 |       |
| 1 1/4 1   | 26519 |       |
| 1 1/2 1/2 | 26521 |       |
| 1 1/2 3/4 | 26522 |       |
| 1 1/2 1   | 26523 |       |
| 2 1/2     | 26524 |       |
| 2 3/4     | 26525 |       |
| 2 1       | 26526 |       |
| 2 1/2 3/4 | 26527 |       |
| 2 1/2 1   | 26528 |       |
| 3 3/4     | 26529 |       |
| 3 1       | 26530 |       |
| 4 3/4     | 26531 |       |
| 4 1       | 26532 |       |
| 4 1 1/4   | 51066 |       |
| 4 2       | 41565 |       |

### ADDITIONAL CAST IRON FITTINGS READY FOR QUICK DELIVERY!



Concentric Reducer



Cross Straight or Reducing



Lateral



Return Bend



Flanged Union

CAST IRON FITTINGS ALSO AVAILABLE IN EXTRA HEAVY (250 LB.)

125 LB. CAST IRON SCREWED REDUCING TEE



| SIZE  |       |       | FIG   | PRICE |
|-------|-------|-------|-------|-------|
| A     | B     | C     |       |       |
| 1/2   | 1/2   | 3/4   | —     |       |
| 1/2   | 1/2   | 1     | —     |       |
| 3/4   | 1/2   | 1/2   | 995   |       |
| 3/4   | 1/2   | 3/4   | 996   |       |
| 3/4   | 3/4   | 1/4   | —     |       |
| 3/4   | 3/4   | 3/8   | —     |       |
| 3/4   | 3/4   | 1/2   | 5600  |       |
| 1     | 1/2   | 1/2   | —     |       |
| 1     | 1/2   | 3/4   | —     |       |
| 1     | 1/2   | 1     | 1000  |       |
| 1     | 3/4   | 1/2   | 5601  |       |
| 1     | 3/4   | 3/4   | —     |       |
| 1     | 3/4   | 1     | —     |       |
| 1     | 3/4   | 1 1/2 | —     |       |
| 1     | 3/4   | 2     | —     |       |
| 1     | 1     | 1/4   | —     |       |
| 1     | 1     | 3/8   | —     |       |
| 1     | 1     | 1/2   | 1003  |       |
| 1     | 1     | 3/4   | 1004  |       |
| 1     | 1     | 1 1/4 | 5602  |       |
| 1     | 1     | 1 1/2 | 32714 |       |
| 1 1/4 | 3/4   | 3/4   | —     |       |
| 1 1/4 | 3/4   | 1     | 5604  |       |
| 1 1/4 | 3/4   | 1 1/4 | 1006  |       |
| 1 1/4 | 3/4   | 1 1/2 | —     |       |
| 1 1/4 | 3/4   | 2     | —     |       |
| 1 1/4 | 1     | 1/2   | 1009  |       |
| 1 1/4 | 1     | 3/4   | —     |       |
| 1 1/4 | 1     | 1     | 1011  |       |
| 1 1/4 | 1     | 1 1/4 | 1012  |       |
| 1 1/4 | 1     | 1 1/2 | —     |       |
| 1 1/4 | 1     | 2     | —     |       |
| 1 1/4 | 1 1/4 | 1/2   | 1013  |       |
| 1 1/4 | 1 1/4 | 3/4   | 1014  |       |
| 1 1/4 | 1 1/4 | 1     | 1015  |       |
| 1 1/4 | 1 1/4 | 1 1/2 | —     |       |
| 1 1/4 | 1 1/2 | 2     | —     |       |
| 1 1/2 | 1/2   | 1 1/4 | 5607  |       |
| 1 1/2 | 1/2   | 1 1/2 | —     |       |
| 1 1/2 | 3/4   | 1/2   | —     |       |
| 1 1/2 | 3/4   | 3/4   | —     |       |
| 1 1/2 | 3/4   | 1     | —     |       |
| 1 1/2 | 3/4   | 1 1/4 | 5608  |       |
| 1 1/2 | 3/4   | 1 1/2 | 1019  |       |
| 1 1/2 | 1     | 1     | —     |       |
| 1 1/2 | 1     | 1 1/4 | 5612  |       |
| 1 1/2 | 1     | 1 1/2 | 1022  |       |
| 1 1/2 | 1 1/4 | 1/2   | 21181 |       |
| 1 1/2 | 1 1/4 | 3/4   | 5613  |       |
| 1 1/2 | 1 1/4 | 1     | 5614  |       |
| 1 1/2 | 1 1/4 | 1     | 1023  |       |
| 1 1/2 | 1 1/4 | 1     | 1024  |       |
| 1 1/2 | 1 1/4 | 2     | 32718 |       |
| 1 1/2 | 1 1/2 | 3/8   | 39334 |       |

| SIZE  |       |       | FIG   | PRICE |
|-------|-------|-------|-------|-------|
| A     | B     | C     |       |       |
| 1 1/2 | 1 1/2 | 1/2   | 1025  |       |
| 1 1/2 | 1 1/2 | 3/4   | 1026  |       |
| 1 1/2 | 1 1/2 | 1     | 1027  |       |
| 1 1/2 | 1 1/2 | 1 1/4 | 1028  |       |
| 1 1/2 | 1 1/2 | 2     | —     |       |
| 2     | 1/2   | 2     | —     |       |
| 2     | 3/4   | 1 1/4 | —     |       |
| 2     | 3/4   | 1 1/2 | 5616  |       |
| 2     | 3/4   | 2     | —     |       |
| 2     | 1     | 3/4   | 39330 |       |
| 2     | 1     | 1     | —     |       |
| 2     | 1     | 1 1/4 | —     |       |
| 2     | 1     | 1 1/2 | —     |       |
| 2     | 1     | 2     | —     |       |
| 2     | 1 1/4 | 1     | 32721 |       |
| 2     | 1 1/4 | 1 1/4 | —     |       |
| 2     | 1 1/4 | 1 1/2 | 5621  |       |
| 2     | 1 1/4 | 2     | —     |       |
| 2     | 1 1/2 | 1/2   | 20597 |       |
| 2     | 1 1/2 | 3/4   | 23495 |       |
| 2     | 1 1/2 | 1     | —     |       |
| 2     | 1 1/2 | 1 1/4 | —     |       |
| 2     | 1 1/2 | 1 1/2 | —     |       |
| 2     | 1 1/2 | 2     | 1036  |       |
| 2     | 2     | 1/2   | 1037  |       |
| 2     | 2     | 3/4   | 1038  |       |
| 2     | 2     | 1     | 1039  |       |
| 2     | 2     | 1 1/4 | 1040  |       |
| 2     | 2     | 1 1/2 | 1041  |       |
| 2     | 2     | 2 1/2 | —     |       |
| 2     | 2     | 3     | —     |       |
| 2 1/2 | 2     | 1 1/2 | —     |       |
| 2 1/2 | 2     | 2     | —     |       |
| 2 1/2 | 2     | 2 1/2 | —     |       |
| 2 1/2 | 2 1/2 | 1/2   | —     |       |
| 2 1/2 | 2 1/2 | 3/4   | 1047  |       |
| 2 1/2 | 2 1/2 | 1     | 1048  |       |
| 2 1/2 | 2 1/2 | 1 1/4 | 1049  |       |
| 2 1/2 | 2 1/2 | 1 1/2 | 1050  |       |
| 2 1/2 | 2 1/2 | 2     | —     |       |
| 3     | 1     | 3     | —     |       |
| 3     | 1 1/4 | —     | —     |       |
| 3     | 1 1/2 | 2 1/2 | —     |       |
| 3     | 1 1/2 | 3     | —     |       |
| 3     | 2     | 1 1/2 | —     |       |
| 3     | 2     | 2     | 1053  |       |
| 3     | 2     | 2 1/2 | —     |       |
| 3     | 2     | 3     | —     |       |
| 3     | 2 1/2 | 1     | —     |       |
| 3     | 2 1/2 | 1 1/4 | 32739 |       |
| 3     | 2 1/2 | 1 1/2 | —     |       |
| 3     | 2 1/2 | 2     | 32741 |       |
| 3     | 2 1/2 | 2 1/2 | —     |       |
| 3     | 2 1/2 | 3     | —     |       |
| 3     | 3     | 1/2   | 32742 |       |
| 3     | 3     | 3/4   | —     |       |
| 3     | 3     | 1     | —     |       |
| 3     | 3     | 1 1/4 | —     |       |
| 3     | 3     | 1 1/2 | —     |       |
| 3     | 3     | 2     | —     |       |
| 3     | 3     | 2 1/2 | —     |       |
| 3     | 3     | 4     | —     |       |

## CAST IRON FLANGES

COMPANION  
FLANGES  
(Threaded)

BLIND  
FLANGES

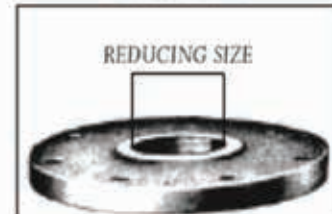


| 125 LB. STANDARD |        |           |       |        |       |
|------------------|--------|-----------|-------|--------|-------|
| SIZE             | O.D.   | COMPANION |       | BLIND  |       |
|                  |        | FIG NO    | PRICE | FIG NO | PRICE |
| 3/4              | 3 7/8  | 12011     | -     | -      | -     |
| 1                | 4 1/4  | 12018     | -     | -      | -     |
| 1 1/4            | 4 5/8  | 1180      | -     | 12045  | -     |
| 1 1/2            | 5      | 1181      | -     | 12046  | -     |
| 2                | 6      | 1182      | -     | 12048  | -     |
| 2 1/2            | 7      | 1183      | -     | 12049  | -     |
| 3                | 7 1/2  | 1184      | -     | 12050  | -     |
| 3 1/2            | 8 1/2  | -         | -     | -      | -     |
| 4                | 9      | 1185      | -     | 12054  | -     |
| 5                | 10     | 5636      | -     | 12055  | -     |
| 6                | 11     | 1186      | -     | 12057  | -     |
| 7                | 13 1/2 | -         | -     | -      | -     |
| 8                | -      | -         | -     | 12058  | -     |
| 10               | 16     | -         | -     | -      | -     |
| 12               | 19     | -         | -     | -      | -     |

| 250LB. STANDARD |           |       |
|-----------------|-----------|-------|
| SIZE            | COMPANION |       |
|                 | FIG NO    | PRICE |
| -               | -         | -     |
| -               | -         | -     |
| -               | -         | -     |
| -               | -         | -     |
| 2 X 6 1/2       | 18314     | -     |
| 2 1/2 X 7 1/2   | 18315     | -     |
| 3 X 8 1/4       | 18316     | -     |
| 9               | -         | -     |
| 4 X 10          | 18317     | -     |
| 11              | -         | -     |
| 6 X 12 1/2      | 18318     | -     |
| -               | -         | -     |
| -               | -         | -     |
| -               | -         | -     |

REDUCED SIZE

REDUCING  
FLANGE



REDUCING SIZE

FLANGE  
BOLTS AND  
NUTS



| SIZE  | BOLT  | HEAVY HEX NUT |       | WASHER |       |
|-------|-------|---------------|-------|--------|-------|
|       |       | FIG NO        | PRICE | FIG NO | PRICE |
| 1/2   | 2 1/4 | 14552         | 14542 | 50642  | -     |
| 5/8   | 2 3/4 | 14554         | 14546 | 55291  | -     |
|       | 3     | 14555         | -     | -      | -     |
| 3 1/2 | 14557 | -             | -     | -      | -     |
| 4 1/2 | 23734 | -             | -     | -      | -     |
| 5     | 24140 | -             | -     | -      | -     |
| 5 1/2 | 23733 | -             | -     | -      | -     |
| 3/4   | 3 1/4 | 14559         | 14547 | 55486  | -     |
|       | 3 1/2 | 14562         | -     | -      | -     |
|       | 3 3/4 | 14565         | -     | -      | -     |
| 7/8   | 4     | 14566         | 14549 | 14370  | -     |

| 125 LB. STANDARD         |                               |                            |        |       |
|--------------------------|-------------------------------|----------------------------|--------|-------|
| Reduced Size Flange O.D. | Reducing Size (Threaded Size) | Reduced Size (Flange Size) | FIG NO | PRICE |
| 6                        | 1 1/2                         | 2                          | 32776  | -     |
| 7                        | 2                             | 2 1/2                      | 12064  | -     |
| 7 1/2                    | 1 1/2                         | 3                          | 32777  | -     |
| 7 1/2                    | 2                             | 3                          | 12065  | -     |
| 7 1/2                    | 2 1/2                         | 3                          | 12068  | -     |
| 9                        | 2                             | 4                          | 12070  | -     |
| 9                        | 2 1/2                         | 4                          | 12072  | -     |
| 9                        | 3                             | 4                          | 12075  | -     |
| 10                       | 2 1/2                         | 5                          | 19493  | -     |
| 10                       | 3                             | 5                          | 12077  | -     |
| 10                       | 4                             | 5                          | 12082  | -     |
| 11                       | 2 1/2                         | 6                          | 19494  | -     |
| 11                       | 3                             | 6                          | 12085  | -     |
| 11                       | 4                             | 6                          | 12086  | -     |
| 11                       | 5                             | 6                          | 20774  | -     |
| 13 1/2                   | 6                             | 8                          | 32778  | -     |



125 LB. CAST IRON FLANGED FITTINGS

(STANDARD, BLACK, FACED AND DRILLED)



90° Elbow



45° Elbow



Tee



Cross



Concentric Reducer

| Size  | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 2 1/2 | 12089  | -     | -      | -     | 12112  | -     | -      | -     |
| 3     | 12092  | -     | -      | -     | 12113  | -     | -      | -     |
| 4     | 12095  | -     | -      | -     | 12114  | -     | 22265  | -     |
| 5     | -      | -     | -      | -     | -      | -     | -      | -     |
| 6     | 12097  | -     | 12109  | -     | 12115  | -     | 23502  | -     |

| Size    | Fig No | Price |
|---------|--------|-------|
| 3x2 1/2 | 12116  | -     |
| 3x2     | -      | -     |
| 4x3     | 12120  | -     |
| 4x2     | 12121  | -     |
| 5x3     | -      | -     |
| 5x4     | -      | -     |
| 6x4     | 12122  | -     |
| 6x3     | 12124  | -     |



Reducing 90° Elbow



Wye

**BOTH AVAILABLE FOR QUICK DELIVERY!**



**FLANGED FITTINGS ALSO AVAILABLE IN EXTRA HEAVY (250LB.)**

FLANGE GASKETS



| NON-ASBESTOS         |        |                         |        |                      |        |                         |        |               |        |                    |        |       |
|----------------------|--------|-------------------------|--------|----------------------|--------|-------------------------|--------|---------------|--------|--------------------|--------|-------|
| RING                 |        |                         |        |                      |        | FULL FACE               |        |               |        | RED RUBBER         |        |       |
| Standard (125#/150#) |        | Extra Heavy (250#/300#) |        | Standard (125#/150#) |        | Extra Heavy (250#/300#) |        | Ring Standard |        | Full Face Standard |        |       |
| Size                 | Fig No | Price                   | Fig No | Price                | Fig No | Price                   | Fig No | Price         | Fig No | Price              | Fig No | Price |
| 1/2                  | 29935  | -                       | -      | -                    | 29936  | -                       | 40978  | -             | 23555  | -                  | 29939  | -     |
| 3/4                  | 23177  | -                       | -      | -                    | 29937  | -                       | 40979  | -             | 27955  | -                  | 29940  | -     |
| 1                    | 8003   | -                       | 36007  | -                    | 8065   | -                       | 40980  | -             | 8103   | -                  | 8145   | -     |
| 1 1/4                | 8007   | -                       | 40968  | -                    | 8067   | -                       | 40981  | -             | 8107   | -                  | 8149   | -     |
| 1 1/2                | 8012   | -                       | 36008  | -                    | 8070   | -                       | 40982  | -             | 8112   | -                  | 8152   | -     |
| 2                    | 8019   | -                       | 40969  | -                    | 8073   | -                       | 35698  | -             | 8114   | -                  | 8154   | -     |
| 2 1/2                | 8022   | -                       | 40970  | -                    | 8076   | -                       | 35696  | -             | 8118   | -                  | 8156   | -     |
| 3                    | 8025   | -                       | 35975  | -                    | 8079   | -                       | 40983  | -             | 8120   | -                  | 8160   | -     |
| 3 1/2                | 8029   | -                       | 40971  | -                    | 8082   | -                       | 40984  | -             | 8124   | -                  | 8163   | -     |
| 4                    | 8032   | -                       | 40972  | -                    | 8085   | -                       | 40985  | -             | 8126   | -                  | 8166   | -     |
| 5                    | 8039   | -                       | 40973  | -                    | 8088   | -                       | 40986  | -             | 8129   | -                  | 8167   | -     |
| 6                    | 8050   | -                       | 40974  | -                    | 8089   | -                       | 40987  | -             | 8133   | -                  | 8171   | -     |
| 8                    | 8054   | -                       | 40975  | -                    | 8094   | -                       | 40988  | -             | 8136   | -                  | 67232  | -     |
| 10                   | 8057   | -                       | 40976  | -                    | 8096   | -                       | 40989  | -             | 8139   | -                  | 8176   | -     |
| 12                   | 8061   | -                       | 40977  | -                    | 8099   | -                       | 40990  | -             | 8142   | -                  | 8178   | -     |

## FLANGE AND BOLTING DIMENSIONS

| 125 & 150 LB STEEL FLANGES |                     |               |              |                                   |             |           | 250 & 300 LB STEEL FLANGES |                     |               |              |                                   |             |           |
|----------------------------|---------------------|---------------|--------------|-----------------------------------|-------------|-----------|----------------------------|---------------------|---------------|--------------|-----------------------------------|-------------|-----------|
| NOM PIPE SIZE              | DIAM OF BOLT CIRCLE | DIAM OF BOLTS | NO. OF BOLTS | LENGTH OF STUDS 1/16" RAISED FACE | BOLT LENGTH | FLANGE OD | NOM PIPE SIZE              | DIAM OF BOLT CIRCLE | DIAM OF BOLTS | NO. OF BOLTS | LENGTH OF STUDS 1/16" RAISED FACE | BOLT LENGTH | FLANGE OD |
| 1/2                        | 2 3/8               | 1/2           | 4            | 2 1/4                             | 1 3/4       | 3 1/2     | 1/2                        | 25/8                | 1/2           | 4            | 2 1/2                             | 2           | 3 3/4     |
| 3/4                        | 2 3/4               | 1/2           | 4            | 2 1/4                             | 2           | 3 7/8     | 3/4                        | 3 1/4               | 5/8           | 4            | 2 3/4                             | 2 1/2       | 4 5/8     |
| 1                          | 3 1/8               | 1/2           | 4            | 2 1/2                             | 2           | 4 1/4     | 1                          | 3 1/2               | 5/8           | 4            | 3                                 | 2 1/2       | 4 7/8     |
| 1 1/4                      | 3 1/2               | 1/2           | 4            | 2 1/2                             | 2 1/4       | 4 5/8     | 1 1/4                      | 3 7/8               | 5/8           | 4            | 3                                 | 2 3/4       | 5 1/4     |
| 1 1/2                      | 3 7/8               | 1/2           | 4            | 2 3/4                             | 2 1/4       | 5         | 1 1/2                      | 4 1/2               | 3/4           | 4            | 3 1/2                             | 3           | 6 1/8     |
| 2                          | 4 3/4               | 5/8           | 4            | 3                                 | 2 3/4       | 6         | 2                          | 5                   | 5/8           | 8            | 3 1/4                             | 3           | 6 1/2     |
| 2 1/2                      | 5 1/2               | 5/8           | 4            | 3 1/4                             | 3           | 7         | 2 1/2                      | 5 7/8               | 3/4           | 8            | 3 3/4                             | 3 1/4       | 7 1/2     |
| 3                          | 6                   | 5/8           | 4            | 3 1/2                             | 3           | 7 1/2     | 3                          | 6 5/8               | 3/4           | 8            | 4                                 | 3 1/2       | 8 1/4     |
| 3 1/2                      | 7                   | 5/8           | 8            | 3 1/2                             | 3           | 8 1/2     | 3 1/2                      | 7 1/4               | 3/4           | 8            | 4 1/4                             | 3 3/4       | 9         |
| 4                          | 7 1/2               | 5/8           | 8            | 3 1/2                             | 3           | 9         | 4                          | 7 7/8               | 3/4           | 8            | 4 1/4                             | 3 3/4       | 10        |
| 5                          | 8 1/2               | 3/4           | 8            | 3 3/4                             | 3 1/4       | 10        | 5                          | 9 1/4               | 3/4           | 8            | 4 1/2                             | 4           | 11        |
| 6                          | 9 1/2               | 3/4           | 8            | 3 3/4                             | 3 1/4       | 11        | 6                          | 10 5/8              | 3/4           | 12           | 4 3/4                             | 4 1/4       | 12 1/2    |
| 8                          | 11 3/4              | 3/4           | 8            | 4                                 | 3 1/2       | 13 1/2    | 8                          | 13                  | 7/8           | 12           | 5 1/4                             | 4 3/4       | 15        |
| 10                         | 14 1/4              | 7/8           | 12           | 4 1/2                             | 3 3/4       | 16        | 10                         | 15 1/4              | 1             | 16           | 6                                 | 5 1/4       | 17 1/2    |
| 12                         | 17                  | 7/8           | 12           | 4 1/2                             | 4           | 19        | 12                         | 17 3/4              | 1 1/8         | 16           | 6 1/2                             | 5 3/4       | 20 1/2    |
| 14                         | 18 3/4              | 1             | 12           | 5                                 | 4 1/4       | 21        | 14                         | 20 1/4              | 1 1/8         | 20           | 6 3/4                             | 6           | 23        |
| 16                         | 21 1/4              | 1             | 16           | 5 1/4                             | 4 1/2       | 23 1/2    | 16                         | 22 1/2              | 1 1/4         | 20           | 7 1/4                             | 6 1/2       | 25 1/2    |
| 18                         | 22 3/4              | 1 1/8         | 16           | 5 3/4                             | 4 3/4       | 25        | 18                         | 24 3/4              | 1 1/4         | 24           | 7 1/2                             | 6 3/4       | 28        |
| 20                         | 25                  | 1 1/8         | 20           | 6                                 | 5 1/4       | 27 1/2    | 20                         | 27                  | 1 1/4         | 24           | 8                                 | 7           | 30 1/2    |
| 22                         | 27 1/4              | 1 1/4         | 20           | 6 1/2                             | 5 1/2       | 29 1/2    | 22                         | 29 1/4              | 1 1/2         | 24           | 8 3/4                             | 7 1/2       | 33        |
| 24                         | 29 1/2              | 1 1/4         | 20           | 6 3/4                             | 5 3/4       | 32        | 24                         | 32                  | 1 1/2         | 24           | 9                                 | 7 3/4       | 36        |
| 26                         | 31 3/4              | 1 1/4         | 24           | 7                                 | 6           | 34 1/4    | 26                         | 34 1/2              | 1 5/8         | 28           | 10                                | 8 3/4       | 38 1/4    |
| 30                         | 36                  | 1 1/4         | 28           | 7 1/4                             | 6 1/4       | 38 3/4    | 30                         | 39 1/4              | 1 3/4         | 28           | 11 1/4                            | 10          | 43        |
| 34                         | 40 1/2              | 1 1/2         | 32           | 8                                 | 7           | 43 3/4    | 34                         | 43 1/2              | 1 7/8         | 28           | 12 1/4                            | 10 3/4      | 47 1/2    |
| 36                         | 42 3/4              | 1 1/2         | 32           | 8 1/4                             | 7           | 46        | 36                         | 46                  | 2             | 32           | 12 3/4                            | 11 1/4      | 50        |
| 42                         | 49 1/2              | 1 1/2         | 36           | 8 3/4                             | 7 1/2       | 53        | 42                         | 42 3/4              | 2             | 36           | 13 3/4                            | 13 1/2      | 57        |

Stud lengths for lap joint flanges are equal to lengths shown plus the thickness of two laps of the stub ends

### DUFFTIP:1

Bolting arrangement for 125 lb. cast iron flanges are the same as shown for 150 lb. steel flanges.

### DUFFTIP:2

Bolting arrangement for 250 lb. cast iron flanges are the same as shown for 300 lb. steel flanges.



### FLEXITALLIC GASKETS

Flexitallic Gaskets - The solid metal compression ring make the gasket easier to install and adds to service life. As a simple centering device, it provides fast accurate seating of the gasket in the flange. During "bolt-up", it prevents crushing the gasket beyond the predetermined thickness. In operation, it eliminates excess strain on studs. The solid compression ring resists radial pressure,

thus preventing blowout of the spirally wound area. Recommended for standard piping where superior service life is required under wide variations in pressure and/or temperature.

**300# ALSO AVAILABLE!**

| 150#   |        |       |
|--------|--------|-------|
| Size   | Fig No | Price |
| 1/2"   | 58311  |       |
| 3/4"   | 58312  |       |
| 1"     | 58314  |       |
| 1 1/4" | —      |       |
| 1 1/2" | 58316  |       |
| 2"     | 57667  |       |
| 3"     | 57908  |       |
| 4"     | —      |       |
| 5"     | 58320  |       |
| 6"     | 58321  |       |
| 8"     | 58323  |       |
| 10"    | 57925  |       |
| 12"    | 57926  |       |
| 14"    | 57927  |       |



PIPE WEIGHTS AND WALL THICKNESS

| Pipe Size Nominal | OD (Inches) | 5             | 10             | 20             | 30             | STD            | 40             | 60             | XH             | 80              | 100             | 120             | 140             | 160             | XXH             |
|-------------------|-------------|---------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1                 | 1.315       | .065<br>0.87  | .109<br>1.41   |                |                | .133<br>1.68   | .133<br>1.68   |                | .179<br>2.17   | .179<br>2.17    |                 |                 |                 | .250<br>2.85    | .358<br>3.66    |
| 1 1/4             | 1.66        | .065<br>1.11  | .109<br>1.81   |                |                | .140<br>2.27   | .140<br>2.27   |                | .191<br>3.00   | .191<br>3.00    |                 |                 |                 | .250<br>3.77    | .382<br>5.22    |
| 1 1/2             | 1.9         | .065<br>1.28  | .109<br>2.09   |                |                | .145<br>2.72   | .145<br>2.72   |                | .200<br>3.63   | .200<br>3.63    |                 |                 |                 | .281<br>4.86    | .400<br>6.41    |
| 2                 | 2.375       | .065<br>1.61  | .109<br>2.64   |                |                | .154<br>3.66   | .154<br>3.66   |                | .218<br>5.03   | .218<br>5.03    |                 |                 |                 | .344<br>7.47    | .436<br>9.04    |
| 2 1/2             | 2.875       | .083<br>2.48  | .120<br>3.53   |                |                | .203<br>5.80   | .203<br>5.80   |                | .276<br>7.67   | .276<br>7.67    |                 |                 |                 | .375<br>10.02   | .552<br>13.71   |
| 3                 | 3.5         | .083<br>3.03  | .120<br>4.34   |                |                | .216<br>7.58   | .216<br>7.58   |                | .300<br>10.26  | .300<br>10.26   |                 |                 |                 | .438<br>14.34   | .600<br>18.60   |
| 3 1/2             | 4           | .083<br>3.48  | .120<br>4.98   |                |                | .226<br>9.12   | .226<br>9.12   |                | .318<br>12.52  | .318<br>12.52   |                 |                 |                 |                 | .636<br>22.87   |
| 4                 | 4.5         | .083<br>3.92  | .120<br>5.62   |                |                | .237<br>10.80  | .237<br>10.80  | .281<br>12.67  | .337<br>15.00  | .337<br>15.00   |                 | .437<br>19.02   |                 | .531<br>22.53   | .674<br>27.57   |
| 4 1/2             | 5           |               |                |                |                | .247<br>12.55  |                |                | .355<br>17.63  |                 |                 |                 |                 |                 | .710<br>32.56   |
| 5                 | 5.563       | .109<br>6.36  | .134<br>7.78   |                |                | .258<br>14.63  | .258<br>14.63  |                | .375<br>20.80  | .375<br>20.80   |                 | .500<br>27.06   |                 | .625<br>32.99   | .750<br>38.59   |
| 6                 | 6.625       | .109<br>7.59  | .134<br>9.30   |                |                | .280<br>18.99  | .280<br>18.99  |                | .432<br>28.60  | .432<br>28.60   |                 | .562<br>36.43   |                 | .719<br>45.39   | .864<br>53.21   |
| 8                 | 8.625       | .109<br>9.92  | .148<br>13.41  | .250<br>22.38  | .277<br>24.72  | .322<br>28.58  | .322<br>28.58  | .406<br>35.67  | .500<br>43.43  | .500<br>43.43   | .593<br>50.92   | .718<br>60.69   | .812<br>67.82   | .906<br>74.76   | .875<br>72.49   |
| 10                | 10.75       | .134<br>15.21 | .165<br>18.67  | .250<br>28.06  | .307<br>34.27  | .365<br>40.52  | .365<br>40.52  | .500<br>54.79  | .500<br>54.79  | .594<br>64.49   | .719<br>77.10   | .844<br>89.38   | 1.000<br>104.23 | 1.125<br>115.75 | 1.000<br>104.23 |
| 12                | 12.75       | .165<br>22.20 | .180<br>24.19  | .250<br>33.41  | .330<br>43.81  | .375<br>49.61  | .406<br>53.57  | .562<br>73.22  | .500<br>65.48  | .688<br>88.71   | .843<br>107.30  | 1.000<br>125.61 | 1.125<br>139.81 | 1.312<br>160.42 | 1.000<br>125.61 |
| 14                | 14          |               | .250<br>36.75  | .312<br>45.65  | .375<br>54.62  | .375<br>54.62  | .438<br>63.50  | .594<br>85.13  | .500<br>72.16  | .750<br>106.23  | .937<br>130.85  | 1.093<br>150.81 | 1.250<br>170.37 | 1.406<br>189.29 |                 |
| 16                | 16          |               | .250<br>42.09  | .312<br>52.32  | .375<br>62.64  | .375<br>62.64  | .500<br>82.85  | .656<br>107.60 | .500<br>82.85  | .844<br>136.74  | 1.031<br>164.98 | 1.219<br>192.61 | 1.438<br>223.85 | 1.594<br>245.48 |                 |
| 18                | 18          |               | .250<br>47.44  | .312<br>58.99  | .438<br>82.23  | .375<br>70.65  | .562<br>104.76 | .750<br>138.30 | .500<br>93.54  | .938<br>171.08  | 1.156<br>208.15 | 1.375<br>244.37 | 1.562<br>274.48 | 1.781<br>308.79 |                 |
| 20                | 20          |               | .250<br>52.78  | .375<br>78.67  | .500<br>104.23 | .375<br>78.67  | .593<br>123.02 | .812<br>166.56 | .500<br>104.23 | 1.031<br>209.06 | 1.281<br>256.34 | 1.500<br>296.65 | 1.750<br>341.41 | 1.969<br>379.53 |                 |
| 22                | 22          |               | .250<br>58.13  | .375<br>86.69  | .500<br>114.92 | .375<br>86.69  |                | .875<br>197.60 | .500<br>114.92 | 1.125<br>251.05 | 1.375<br>303.16 | 1.625<br>353.94 | 1.875<br>403.38 | 2.125<br>451.49 |                 |
| 24                | 24          |               | .250<br>63.47  | .375<br>94.71  | .562<br>140.81 | .375<br>94.71  | .688<br>171.45 | .969<br>238.57 | .500<br>125.61 | 1.219<br>296.86 | 1.531<br>367.74 | 1.812<br>429.79 | 2.062<br>483.57 | 2.343<br>542.44 |                 |
| 26                | 26          |               | .312<br>85.68  | .500<br>136.30 |                | .375<br>102.72 |                |                | .500<br>136.30 |                 |                 |                 |                 |                 |                 |
| 28                | 28          |               | .312<br>92.35  | .500<br>146.99 | .625<br>182.90 | .375<br>110.74 |                |                | .500<br>146.99 |                 |                 |                 |                 |                 |                 |
| 30                | 30          |               | .312<br>99.02  | .500<br>157.68 | .625<br>196.26 | .375<br>118.76 |                |                | .500<br>157.68 |                 |                 |                 |                 |                 |                 |
| 32                | 32          |               | .312<br>105.69 | .500<br>168.37 | .625<br>209.62 | .375<br>126.78 | .688<br>230.29 |                | .500<br>168.37 |                 |                 |                 |                 |                 |                 |
| 34                | 34          |               | .312<br>112.36 | .500<br>179.06 | .625<br>222.99 | .375<br>134.79 | .688<br>245.00 |                | .500<br>179.06 |                 |                 |                 |                 |                 |                 |
| 36                | 36          |               | .312<br>119.03 | .500<br>189.75 | .625<br>236.35 | .375<br>142.81 | .750<br>282.62 |                | .500<br>189.75 |                 |                 |                 |                 |                 |                 |
| 42                | 42          |               |                |                |                | .375<br>166.86 |                |                | .500<br>221.82 |                 |                 |                 |                 |                 |                 |
| 48                | 48          |               |                |                |                | .375<br>190.92 |                |                | .500<br>253.89 |                 |                 |                 |                 |                 |                 |
| 54                | 54          |               |                |                |                | .375<br>214.97 |                |                | .500<br>285.96 |                 |                 |                 |                 |                 |                 |

est. 1947

**DUFF** CO.

When you need it now... or don't know how

Material is available in sizes 1/8" through 60" and pressures from 150# to 15000#.

We have over 65 years of experience in the industry and are confident that we will be an effective vendor for our clients.



## PIPE



| STEEL                       |          |                               |          |                 |                           |                 |          |             |          | BRASS       |             |             |  | CHROME PLATED BRASS |  |
|-----------------------------|----------|-------------------------------|----------|-----------------|---------------------------|-----------------|----------|-------------|----------|-------------|-------------|-------------|--|---------------------|--|
| SCHEDULE 40 (Standard Wall) |          |                               |          |                 | SCHEDULE 80 (Extra Heavy) |                 |          |             |          | SCHEDULE 40 | SCHEDULE 80 | SCHEDULE 40 |  |                     |  |
| BLACK Threaded & Coupled    |          | GALVANIZED Threaded & Coupled |          | BLACK Plain End |                           | BLACK Plain End |          | 12' Lengths |          | 6' Lengths  |             |             |  |                     |  |
| SIZE                        | FIG. NO. | PRICE                         | FIG. NO. | PRICE           | FIG. NO.                  | PRICE           | FIG. NO. | PRICE       | FIG. NO. | PRICE       | FIG. NO.    | PRICE       |  |                     |  |
| 1/8                         | 13478    |                               | 13570    |                 | -                         |                 | 13492    |             | 21146    |             | -           |             |  |                     |  |
| 1/4                         | 13571    |                               | 70       |                 | -                         |                 | 5333     |             | 7665     |             | -           |             |  |                     |  |
| 3/8                         |          |                               | 11       |                 | -                         |                 | 5334     |             | 7666     |             | 12657       |             |  |                     |  |
| 1/2                         | 8815     |                               | 12       |                 | 13479                     |                 | 5335     |             | 7667     |             | 12659       |             |  |                     |  |
| 3/4                         | 5677     |                               | 13       |                 | 13480                     |                 | 5336     |             | 7668     |             | 12676       |             |  |                     |  |
| 1                           | 3        |                               | 14       |                 | 13481                     |                 | 5337     |             | 7672     |             | 12677       |             |  |                     |  |
| 1 1/4                       | 4        |                               | 15       |                 | 13482                     |                 | 5338     |             | 7673     |             | 12679       |             |  |                     |  |
| 1 1/2                       | 5        |                               | 16       |                 | 13483                     |                 | 5339     |             | 7674     |             | 12686       |             |  |                     |  |
| 2                           | 6        |                               | 17       |                 | 13484                     |                 | 5340     |             | 7675     |             | 12689       |             |  |                     |  |
| 2 1/2                       | 7        |                               | 18       |                 | 13485                     |                 | 5341     |             | -        |             | -           |             |  |                     |  |
| 3                           | 8        |                               | 19       |                 | 13486                     |                 | 5342     |             | 7677     |             | -           |             |  |                     |  |
| 3 1/2                       | 5343     |                               | -        |                 | 13488                     |                 | -        |             |          |             |             |             |  |                     |  |
| 4                           | 9        |                               | 13504    |                 | 13489                     |                 | 13496    |             |          |             |             |             |  |                     |  |
| 5                           | -        |                               | -        |                 | 13563                     |                 | -        |             |          |             |             |             |  |                     |  |
| 6                           | -        |                               | -        |                 | 13564                     |                 | -        |             |          |             |             |             |  |                     |  |
| 8                           | -        |                               | -        |                 | 13565                     |                 | -        |             |          |             |             |             |  |                     |  |
| 10                          | -        |                               | -        |                 | 13566                     |                 | -        |             |          |             |             |             |  |                     |  |
| 12                          | -        |                               | -        |                 | 13569                     |                 | -        |             |          |             |             |             |  |                     |  |



\*Steel pipe provided in 21 ft. lengths through 4". Sizes 5" and above are provided in single random lengths, 17 ft. through 22 ft. Prices are per length through 4" and per foot for 5" and above.

\*Larger size and heavier wall pipe are always available from stock. As is seamless, pressure pipe and tubing in all sizes and wall thicknesses.

**CALL FOR GLASS PIPE,  
TEFLON LINED PIPE,  
ALLOY PIPE, ALL TYPES  
OF EXTRUDICATED  
(COATED FOR GAS  
SERVICE PIPE**

\*Structural pipe and used pipe always available.

\*Pipe cut to size upon request.

\*Galvanized schedule 80 is also available.



*The outside diameter of all pipe is always the same no matter what the wall thickness is. For example, 1/2" nominal pipe always has an od of .84 whether it is schedule 40 or schedule 80 steel, brass, PVC, etc.*

PIPE OUTSIDE DIAMETER GUIDE

**IMPORTANT:** This pipe OD guide is furnished for your convenience and is based on the latest pipe standards and information supplied by pipe manufacturers. Due to occasional changes in outside diameters by pipe manufacturers, the pipe OD or circumference should always be checked and furnished when ordering fittings.

| Nominal Pipe Size (Inches)      | VI  | %    | 1    | 1½   | 1¾   | 2    | 2½   | 3    | 4    | 5    | 6    | 8    | 10     | 12     | 14    | 15    | 16    | 18    | 20    | 24    | 30    |
|---------------------------------|---|------|------|------|------|------|------|------|------|------|------|------|--------|--------|-------|-------|-------|-------|-------|-------|-------|
| Copper Tubing                   | .63   | .88  | 1.13 | 1.38 | 1.63 | 2.13 | 2.63 | 3.13 | 4.13 | 5.13 | 6.13 |      |        |        |       |       |       |       |       |       |       |
| Steel Pipe—Schedule 40          | .84   | 1.05 | 1.32 | 1.66 | 1.90 | 2.38 | 2.88 | 3.50 | 4.50 | 5.56 | 6.63 | 8.63 | 10.75  | 12.75  | 14.00 |       | 16.00 | 18.00 | 20.00 | 24.00 | 30.00 |
| Plastic Pipe—(P.V.C.)—STD       |   |      | 1.32 |      | 1.90 | 2.38 | 2.88 | 3.50 | 4.50 |      | 6.63 | 8.63 | 10.75  | 12.75  |       |       |       |       |       |       |       |
| Plastic Pipe—(P.V.C.)—C 1. Size |   |      |      |      |      |      |      |      | 4.80 |      | 6.90 | 9.05 | 11.10  | 13.20  |       |       |       |       |       |       |       |
| Polyethylene Tubing & Pipe      | P.E. Tubing Can Be To Iron Copoer Or Schedule 40 Size |      |      |      |      |      |      | 3.50 | 4.50 |      | 6.63 | 8.63 | 10.75  | 12.75  | 14.00 |       | 16.00 | 18.00 | 20.00 | 24.00 |       |
| Polyethylene Pipe—"Sclair"      |   |      |      |      |      | 2.38 |      | 3.50 | 4.50 |      | 6.63 | 8.63 | 9.90   | 12.47  | 14.05 |       | 15.85 | 17.87 | 19.84 | 25.02 |       |
| Plastic Irrigation Pipe (PIP)   |   |      |      |      |      |      |      |      | 4.13 |      | 6.14 | 8.16 | 10.20  | 12.24  |       | 15.30 |       |       |       |       |       |
| <b>CAST IRON PIPE</b>           |   |      |      |      |      |      |      |      |      |      |      |      |        |        |       |       |       |       |       |       |       |
| Class 100-250 AWWA Centrifugal  |   |      |      |      |      |      |      | 3.96 | 4.80 |      | 6.90 | 9.05 | 11.10  | 13.20  | 15.30 |       | 17.40 | 19.50 | 21.60 | 25.80 | 32.00 |
| Class A AWWA Pit Cast           |   |      |      |      |      | 2.50 |      | 3.80 | 4.80 |      | 6.90 | 9.05 | 11.10  | 13.20  | 15.30 |       | 17.40 | 19.50 | 21.60 | 25.80 | 31.74 |
| Class B AWWA Pit Cast           |   |      |      |      |      |      |      | 3.96 | 5.00 |      | 7.10 | 9.05 | 11.10  | 13.20  | 15.30 |       | 17.40 | 19.50 | 21.60 | 25.80 | 32.00 |
| Class C-D AWWA Pit Cast         |   |      |      |      |      |      |      | 3.96 | 5.00 |      | 7.10 | 9.30 | 11.40  | 13.50  | 15.65 |       | 17.80 | 19.92 | 22.06 | 26.32 |       |
| <b>ASBESTOS-CEMENT PIPE</b>     |   |      |      |      |      |      |      |      |      |      |      |      |        |        |       |       |       |       |       |       |       |
| <b>CLASS 100</b>                |   |      |      |      |      |      |      |      |      |      |      |      |        |        |       |       |       |       |       |       |       |
| Machined End                    |   |      |      |      |      |      |      | 3.74 | 4.64 |      | 6.91 | 9.11 | 11.24* | 13.44* | 15.07 |       | 17.15 |       |       |       |       |
| Fluid-Tite Rough Barrel         |   |      |      |      |      |      |      | 3.93 | 5.05 |      | 7.16 | 9.32 | 11.46  | 13.70  | 15.36 |       | 17.50 |       |       |       |       |
| Flintite Rough Barrel           |   |      |      |      |      |      |      | 3.94 | 4.90 |      | 7.13 | 9.33 | 11.30  | 13.42  | 15.45 |       | 17.60 |       |       |       |       |
| Ring-Tite Rough Barrel          |   |      |      |      |      |      |      | 3.95 | 4.92 |      | 7.19 | 9.39 | 11.47  | 13.74  | 15.51 |       | 17.65 |       |       |       |       |
| Permaflex Rough Barrel          |   |      |      |      |      |      |      |      | 4.84 |      | 7.15 | 9.35 | 11.47  | 13.74  | 15.55 |       | 17.55 |       |       |       |       |
| Minimum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 4.79 |      | 7.05 | 9.22 | 11.25  | 13.37  | 15.36 |       | 17.50 |       |       |       |       |
| Maximum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 5.26 |      | 7.40 | 9.57 | 11.77  | 14.04  | 15.80 |       | 17.94 |       |       |       |       |
| <b>CLASS 150</b>                |   |      |      |      |      |      |      |      |      |      |      |      |        |        |       |       |       |       |       |       |       |
| Machined End                    |   |      |      |      |      |      |      | 3.84 | 4.81 |      | 6.91 | 9.11 | 11.66  | 13.92  | 16.22 |       | 18.46 |       |       |       |       |
| Fluid-Tite Rough Barrel         |   |      |      |      |      |      |      | 4.03 | 5.14 |      | 7.12 | 9.32 | 11.85  | 14.11  | 16.41 |       | 18.65 |       |       |       |       |
| Flintite Rough Barrel           |   |      |      |      |      |      |      | 4.04 | 5.01 |      | 7.13 | 9.33 | 11.88  | 14.14  | 16.48 |       | 18.72 |       |       |       |       |
| Ring-Tite Rough Barrel          |   |      |      |      |      |      |      | 4.13 | 5.07 |      | 7.17 | 9.37 | 11.92  | 14.18  | 16.48 |       | 18.72 |       |       |       |       |
| Permaflex Rough Barrel          |   |      |      |      |      |      |      |      | 5.00 |      | 7.20 | 9.40 | 11.92  | 14.20  | 16.50 |       | 18.75 |       |       |       |       |
| Minimum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 4.97 |      | 7.07 | 9.27 | 11.82  | 14.08  | 16.38 |       | 18.62 |       |       |       |       |
| Maximum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 5.32 |      | 7.37 | 9.62 | 12.12  | 14.38  | 16.73 |       | 18.97 |       |       |       |       |
| <b>CLASS 200</b>                |   |      |      |      |      |      |      |      |      |      |      |      |        |        |       |       |       |       |       |       |       |
| Machined End                    |   |      |      |      |      |      |      | 3.84 | 4.81 |      | 6.91 | 9.11 | 11.66  | 13.92  | 16.22 |       | 18.46 |       |       |       |       |
| Fluid-Tite Rough Barrel         |   |      |      |      |      |      |      | 4.18 | 5.32 |      | 7.36 | 9.46 | 11.88  | 14.11  | 16.44 |       | 18.74 |       |       |       |       |
| Flintite Rough Barrel           |   |      |      |      |      |      |      | 4.17 | 5.32 |      | 7.26 | 9.44 | 11.88  | 14.14  | 16.53 |       | 18.84 |       |       |       |       |
| Ring-Tite Rough Barrel          |   |      |      |      |      |      |      | 4.17 | 5.33 |      | 7.32 | 9.50 | 11.92  | 14.18  | 16.55 |       | 18.90 |       |       |       |       |
| Permatlex Rough Barrel          |   |      |      |      |      |      |      |      | 5.32 |      | 7.26 | 9.50 | 11.95  | 14.20  | 16.55 |       | 18.90 |       |       |       |       |
| Minimum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 5.22 |      | 7.26 | 9.39 | 11.77  | 14.03  | 16.44 |       | 18.74 |       |       |       |       |
| Maximum Standard Rough Barrel   |   |      |      |      |      |      |      |      | 5.57 |      | 7.60 | 9.79 | 12.12  | 14.38  | 16.88 |       | 19.19 |       |       |       |       |
|                                 | VI  | ¾    | 1    | 1½   | 1¾   | 2    | 2½   | 3    | 4    | 5    | 6    | 8    | 10     | 12     | 14    | 15    | 16    | 18    | 20    | 24    | 30    |

\*Finite ME is 10.89 for 10" and 12.99 for 12" sizes.

**IMPORTANT:** Please refer to the manufacturers data supplied at time of pipe installation or measure the pipe OD or circumference prior to the ordering of fittings.

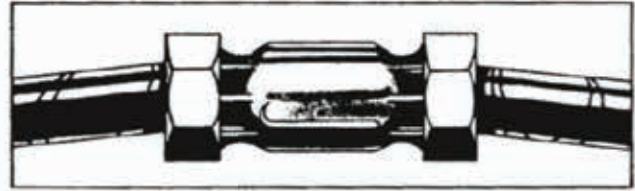
**DUFFNOTE:** Always check pipe OD before ordering couplings.



## CLAMPS AND COUPLINGS COMPRESSION COUPLINGS



Compression couplings provide a quick, low cost, time proven, simple to install, flexible connection for steel pipe and copper tube.



**MISALIGNED PIPE** Couplings eliminate the need for exact mating of pipe ends. Up to 6" deflection is permissible.



**PIPE MOVEMENT** After installation, moderate movement of pipe due to external loads, ground settlement or expansion/contraction will not affect the seal. Such conditions create severe stresses in threaded joints or unions.

**DEFLECTION** Can accommodate moderate deflection to join misaligned pipe or absorb settlement, or other moderate pipe movement after installation.

**LIMITED SPACE** Easy to install in cramped space with no threading or exact cutting of pipe.

**JOIN PLAIN END PIPE** Compression coupling join plain end pipe. No threading, grooving, flaring, brazing or welding is necessary. Threading or grooving removes up to 40% of the pipe wall, creating a weakened area.

**FAST, SIMPLE INSTALLATION** Simply slide the assembled coupling into the pipe, center and tighten the compression nuts. Requires no special training.

**NO EXACT PIPE FITTING** Compression couplings do not require exact cutting and fitting of pipe.

**FAST CUT-IN** A pair of compression couplings provide a fast means of replacing a damaged section of pipe or adding valves, meters, regulators, or appliances to a pipeline. Simply cut out a section of pipe and insert the new pipe section or fittings. No threading or exact pipe fitting required.

**BETTER THAN UNION** Compression couplings do not require treading or exact cutting of pipe. Are faster and easier to install than ground joint union.



**VIBRATION** Over a period of time vibration in piping can cause damage creating hazards. Rockwell couplings act as dampeners absorbing vibration and noise.

### STEEL

### BRASS

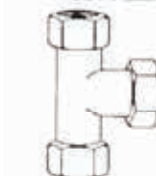
| STEEL PIPE SIZE | FIG. NO. | PRICE | COPPER TUBE SIZE | FIG. NO. | PRICE |
|-----------------|----------|-------|------------------|----------|-------|
| 1/2"            | 7292     |       | 1/2"             | 7306     |       |
| 3/4"            | 17602    |       | 3/4"             | 7307     |       |
| 1"              | 7294     |       | 1"               | 7308     |       |
| 1 1/4"          | 7295     |       | 1 1/4"           | 7309     |       |
| 1 1/2"          | 7296     |       | 1 1/2"           | 7310     |       |
| 2"              | 7297     |       | 2"               | 7317     |       |
| 2 1/2"          | 7298     |       |                  |          |       |
| 3"              | 158368   |       |                  |          |       |

## STEAM-RATED LOW-PRESSURE "DRESSER" STYLE COMPRESSION COUPLINGS

| SIZE   | FIG NO. |
|--------|---------|
| 1/2"   | 156600  |
| 3/4"   | 156601  |
| 1"     | 156602  |
| 1-1/4" | 156603  |
| 1-1/2" | 156604  |
| 2"     | 156605  |
| 3"     | 213747  |



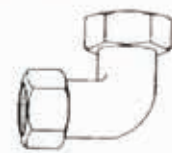
### OTHER COMPRESSION FITTINGS AVAILABLE FOR IMMEDIATE DELIVERY



GALVANIZED TEE WITH ARMORED GASKET



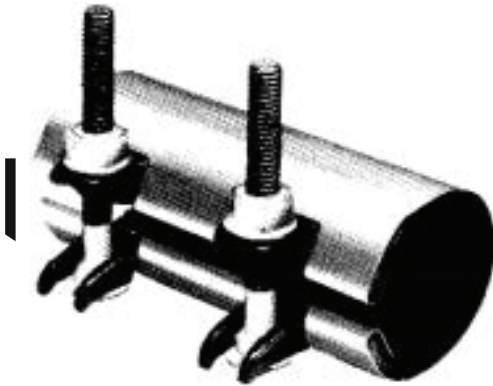
MALE ADAPTER WITH ARMORED GASKET



GALVANIZED ELBOW

CLAMPS AND COUPLINGS

REDI-CLAMPS

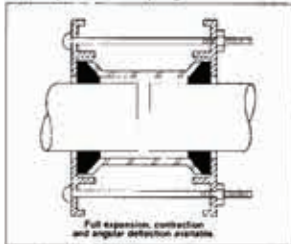


Redi-Clamps provide a fast, economical means of repair for pinholes, punctures or splits in pipe. The gaskets have finely gridded surfaces that will conform to irregularities on the pipe surface and provide superior sealing ability on rough or pitted areas. The bands are stainless steel, selected to meet the exacting requirements of corrosion resistance, flexibility and strength. The lugs are precision cast ductile iron with a contoured surface to equalize clamping pressure around the pipe. The lug design includes a drop-in bolt feature that eliminates loose parts, saves time and aids installation under adverse conditions.

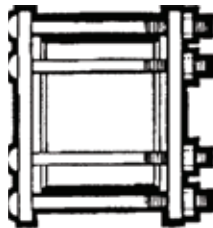
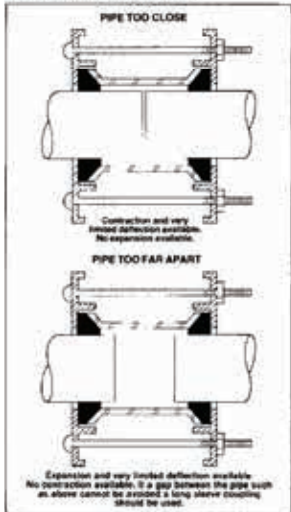
| NOMIAL SIZE | OD IN INCH-ES | WIDTH IN INCHES | FIG. NO. | PRICE |
|-------------|---------------|-----------------|----------|-------|
| 1/2         | .84           | 3               | 7493     |       |
| 1/2         | .84           | 6               | 7495     |       |
| 3/4         | 1.05          | 3               | 7500     |       |
| 3/4         | 1.05          | 6               | 7502     |       |
| 1           | 1.32          | 3               | 7526     |       |
| 1           | 1.32          | 6               | 7529     |       |
| 1 1/4       | 1.66          | 3               | 7539     |       |
| 1 1/4       | 1.66          | 6               | 7546     |       |
| 1 1/2       | 1.90          | 3               | 7549     |       |
| 1 1/2       | 1.90          | 6               | 7551     |       |
| 2           | 2.38          | 3               | 7366     |       |
| 2           | 2.38          | 6               | 7370     |       |
| 2 1/2       | 2.88          | 3               | 7375     |       |
| 2 1/2       | 2.88          | 6               | 7376     |       |
| 3           | 3.50          | 3               | 7380     |       |
| 3           | 3.50          | 6               | 7402     |       |
| 3 1/2       | 4.00          | 6               | 39049    |       |
| 4           | 4.50          | 3               | 7405     |       |
| 4           | 4.50          | 6               | 7408     |       |
| 5           | 5.56          | 3               | 7410     |       |
| 5           | 5.56          | 6               | 7411     |       |
| 6           | 6.63          | 3               | 7423     |       |
| 6           | 6.63          | 6               | 7426     |       |
| 8           | 8.63          | 3               | 7428     |       |
| 8           | 8.63          | 6               | 7430     |       |

BOLT-TYPE

Properly installed coupling



Improperly installed couplings

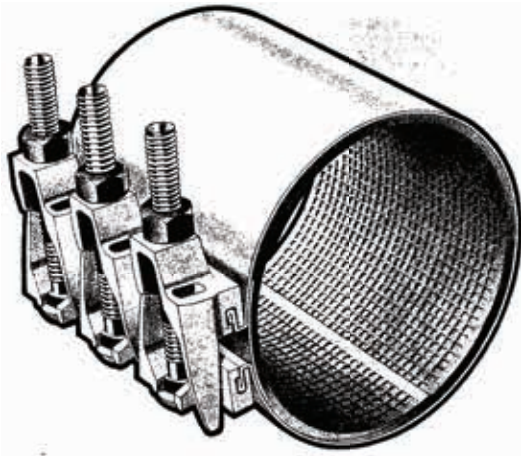


| STEEL PIPE SIZE | OD INCHES | BOLTS | SLEEVE LENGTH INCHES | FIG. NO. | PRICE |
|-----------------|-----------|-------|----------------------|----------|-------|
| 1 1/4           | 1.66      | 2     | 5                    | 40028    |       |
| 1 1/2           | 1.90      | 2     | 5                    | 22399    |       |
| 2               | 2.38      | 2     | 5                    | 7321     |       |
| 2 1/2           | 2.88      | 2     | 5                    | 7328     |       |
| 3               | 3.50      | 3     | 5                    | 17728    |       |
| 4               | 4.50      | 4     | 7                    | 7334     |       |
| 5               | 5.56      | 4     | 7                    | 7335     |       |
| 6               | 6.63      | 6     | 7                    | 7338     |       |
| 8               | 8.63      | 6     | 10                   | 7340     |       |
| 10              | 10.75     | 8     | 10                   | 7341     |       |

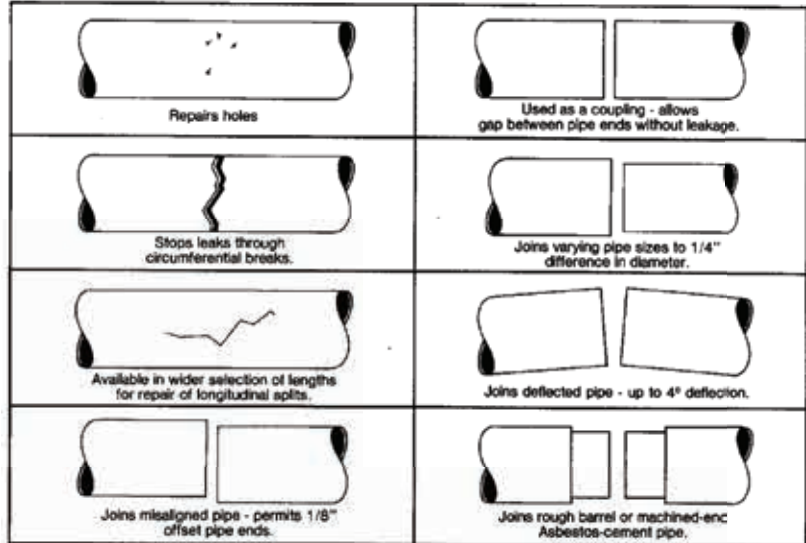
These steel bolt-type couplings are referred to as "Flexible Coupling" or "Mechanical Joints". They provide a flexible, strong, leak-resistant joint. Flexible couplings are designed to float on the pipeline. Therefore, stresses resulting from expansion, contraction and deflection are relieved. The ability of the coupling to absorb deflection permits the laying of pipelines on curves and grades using straight lengths of pipe. Working pressure = Up to 1500 PSI depending on size. Temperature = 150o or higher with special gaskets.



## CLAMPS AND COUPLINGS FULL CIRCLE REPAIR CLAMPS



Solves All These Problems



Flexible repair clamps consisting of one or more stainless steel band sections to which cast lugs are securely attached to accommodate bolts and nuts for the purpose of mounting the clamp on pipe. It has a full encirclement tapered, overlapping, gridded gasket with a flush mounted, bonded-in stainless steel bridge plate to span the band opening between the lugs, to provide a full circumferential seal on the pipe.

A full circle clamp coupling is fast and simple to install, and requires no special tools. The clamp is wrapped around the pipe, properly positioned over the area to be repaired or connected, and the bolts tightened. This compacts the rubber gasket tightly against the full circumference of the pipe wall forming a leak resistant seal.

### NOT JUST A REPAIR CLAMP

Full circle clamp couplings are often used as a coupling to join plain end pipe for new installations and pipe replacement programs.

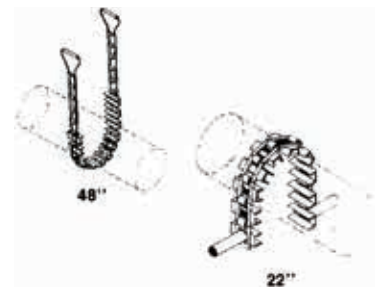


ALL SIZES ALSO AVAILABLE IN TAPPED FULL CIRCLE CLAMP COUPLINGS!

| STEEL PIPE NOMINAL SIZE | OD RANGE INCHES | WIDTH INCHES | FIGURE NUMBER | PRICE |
|-------------------------|-----------------|--------------|---------------|-------|
| 1 1/4                   | 1.66            | 7.5          | 7448          |       |
| 1 1/2                   | 1.88-1.92       | 7.5          | 7451          |       |
| 2                       | 2.35-2.63       | 7.5          | 7452          |       |
| 2 1/2                   | 2.70-3.00       | 7.5          | 7453          |       |
| 3                       | 2.97-3.25       | 7.5          | 7456          |       |
| 3 1/2                   | 3.96-4.25       | 7.5          | 22398         |       |
| 4                       | 4.45-4.73       | 10           | 7459          |       |
| 5                       | 5.22-5.62       | 10           | 7460          |       |
| 6                       | 6.56-6.96       | 10           | 7462          |       |
| 8                       | 8.54-8.94       | 10           | 7463          |       |
| 10                      | 10.64-11.04     | 10           | 7464          |       |



### PIPE SCRAPERS



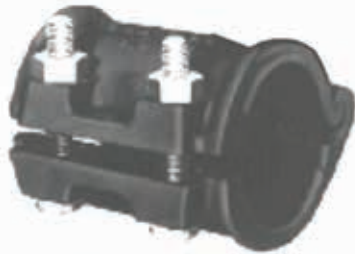
| LENGTH | FIG NO   | PRICE |
|--------|----------|-------|
| 48"    | DC230037 |       |
| 22"    | DC230038 |       |

**CLAMPS AND COUPLINGS**



**PIPE JOINT CLAMP** - For stopping leaks at joints where pipe is screwed into a fitting. Quickly put on under pressure - without interruption of service. The Skinner Pipe Joint Clamp will withstand tremendous pressure. Saves the cost of tearing out and renewing leaky fittings. A positive repair not hindered by vibration or expansion. In use over 80 years on gas, oil, gasoline, steam, water, ammonia and brine leaks. The sliding push ring in the Skinner Pipe Joint Clamp transmits the pressure of the thrust screws to the gasket. The gasket, completely confined and guided by the lip on the face of the container ring, is forced directly into the threads, stopping the leak at its source. For temperatures over 300o, we can furnish clamps with silicone gaskets at additional an cost.

|          |       |       |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SIZE     | 1/2   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     | 3 1/2 | 4     |
| FIG. NO. | 40926 | 40927 | 40928 | 40930 | 40929 | 40931 | 40932 | 40933 | 40934 | 40935 |
| PRICE    |       |       |       |       |       |       |       |       |       |       |



**EMERGENCY CLAMP** - For repairing pit holes, splits and corrosion leaks in both steel and cast iron pipe lines. Absolutely effective under extreme pressure or temperature. The universal repair clamp, the world over, for over three quarters of a century. Use on gas, water, steam, oil, ammonia, almost anything! The repair lasts for years. The emergency pipe clamp offers a triple economy. It saves: the cost of new pipe - the job of abandoning the old pipe and putting in the new - the expense of shutting down while work is being done, often thousands of dollars. It's no job at all to put on an emergency pipe clamp. Owing to the long open hinge, the two halves of the clamp may be

slid together along the pipe, when conditions are crowded. The clamp is usually put on under pressure - without interruption of service. Gasket, cemented into slight recess in bottom half, cannot "blow out". Bolts can be inserted from either side so that clamp can be installed easily under the most most awkward conditions. Made of malleable iron; strongly proportioned, and fitted with sturdy, electro-plated Iridite dipped steel bolts. Note the raised bosses for wrench convenience. All clamps painted to resist rust.

|          |       |       |       |       |       |       |       |       |       |       |
|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| SIZE     | 1/2   | 3/4   | 1     | 1 1/4 | 1 1/2 | 2     | 2 1/2 | 3     | 3 1/2 | 4     |
| FIG. NO. | 40916 | 40917 | 40918 | 40919 | 40920 | 40921 | 40922 | 40923 | 40924 | 40925 |
| PRICE    |       |       |       |       |       |       |       |       |       |       |

**DUFF TIP:**

*Don't forget to order nuts, bolts and gaskets with your flanges.*



**DUFF gladly accepts VISA & Mastercard**

## CORRUGATED STEEL PIPE AND PIPE ARCHES

### PLAIN GALVANIZED



Plain galvanized pipe is fabricated or copper-bearing steel for maximum service life. This pipe meets the applicable requirements of both Federal and State Highway specifications.

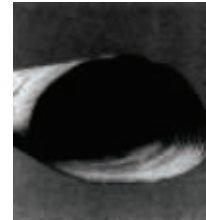
| SIZE | PIPE     |       | COUPLING |       |
|------|----------|-------|----------|-------|
|      | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 8    | 43685    |       | 50743    |       |
| 10   | 43686    |       | 50744    |       |
| 12   | 6192     |       | 50745    |       |
| 15   | 6194     |       | 50746    |       |
| 18   | 6195     |       | 50747    |       |
| 21   | 6196     |       | 50748    |       |
| 24   | 6197     |       | 50749    |       |
| 30   | 6198     |       | 50750    |       |
| 36   | 6199     |       | 50751    |       |

### FULLY ASPHALT-COATED AND PAVED



Designed for maximum service life where corrosion and wear are usually severe. The pipe is completely coated with asphalt, and is paved in the bottom quarter (90°)

### CONVOLUTED (ARCHED) PIPE



### HALF ASPHALT-COATED AND PAVED



Recommended wherever corrosion or surface-wearing elements are factors. Lower half (180 deg.) of pipe is asphalt coated and a smooth paving in the bottom quarter (90 deg) completely covers the corrugations.

### FULLY ASPHALT-COATED



Fully asphalt coated pipe is designed for installations where corrosive elements are present in the water or earth. This extra protection is also recommended where solids are waterborne.



MAN HOLE



HANDHOLE



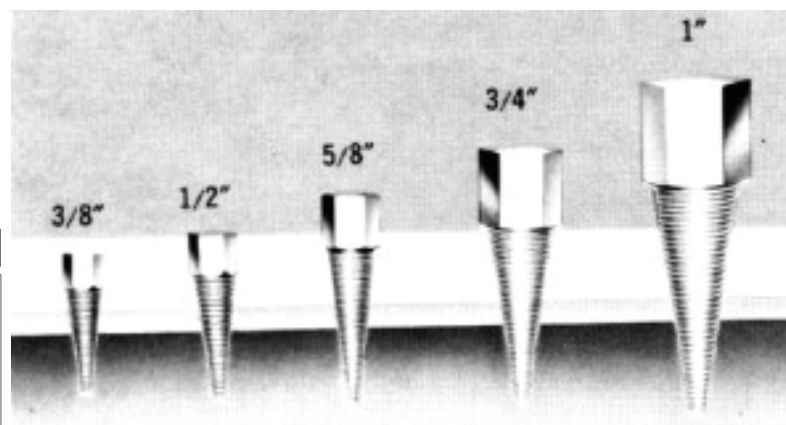
CLOSURE

### VESSEL OPENINGS

**ALL AVAILABLE IMMEDIATELY!**

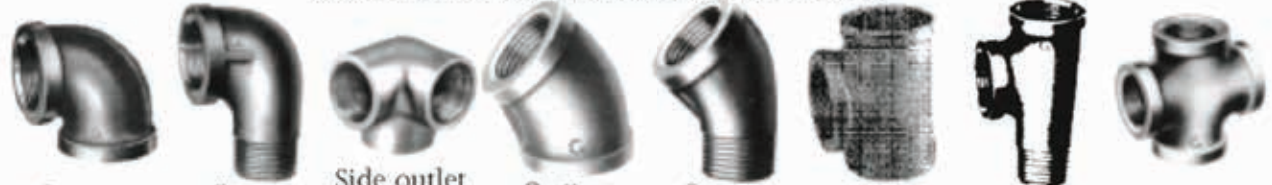
### LEAK REPAIR PLUGS

| SIZE | FIG NO | PRICE |
|------|--------|-------|
| 3/8  | 20716  |       |
| 1/2  | 20717  |       |
| 5/8  | 20718  |       |
| 3/4  | 20719  |       |
| 1    | 20763  |       |





125 LB. CAST BRASS FITTINGS



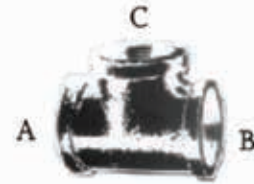
| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1/8   | 2259   |       | 48560  |       | —      |       | 2293   |       | 2302   |       | 2311   |       | —      |       | 12126  |       |
| 1/4   | 2260   |       | 2285   |       | —      |       | 2294   |       | 2303   |       | 48852  |       | —      |       | 12128  |       |
| 3/8   | 2261   |       | 48562  |       | —      |       | 2295   |       | 2304   |       | 2313   |       | —      |       | 12129  |       |
| 1/2   | 48557  |       | 48563  |       | —      |       | 48828  |       | 2305   |       | 48567  |       | —      |       | 12131  |       |
| 3/4   | 485589 |       | 48564  |       | —      |       | 102516 |       | 2306   |       | 48568  |       | 31961  |       | 12132  |       |
| 1     | 66307  |       | 48565  |       | 51717  |       | 22998  |       | 2307   |       | 489569 |       | 31959  |       | 12133  |       |
| 1-1/4 | 2265   |       | 48566  |       | 26372  |       | 2299   |       | 2308   |       | 48570  |       | 31962  |       | 12134  |       |
| 1-1/2 | 70232  |       | 2291   |       | —      |       | 2300   |       | 2309   |       | 49692  |       | —      |       | 12136  |       |
| 2     | 2267   |       | 2292   |       | —      |       | 2301   |       | 2310   |       | 2329   |       | 31964  |       | 12138  |       |
| 2-1/2 | 12089  |       | 12083  |       | —      |       | 12087  |       | —      |       | 12090  |       | —      |       | 12139  |       |
| 3     | 12071  |       | 12084  |       | —      |       | 12088  |       | —      |       | 12091  |       | —      |       | 12140  |       |
| 3-1/2 | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       |
| 4     | 31899  |       | —      |       | —      |       | —      |       | —      |       | 31924  |       | —      |       | —      |       |



| SIZE  | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1/8   | —      |       | 48578  |       | 2364   |       | 2373   |       | 12156  |       | 51740  |       | 12169  |       | 2382   |       |
| 1/4   | —      |       | 48579  |       | 48851  |       | 2374   |       | 12157  |       | —      |       | 12170  |       | 2383   |       |
| 3/8   | 12144  |       | 2334   |       | 2366   |       | 2375   |       | 12158  |       | —      |       | 12171  |       | 2384   |       |
| 1/2   | 12145  |       | 48851  |       | 48596  |       | 48590  |       | 12159  |       | 12180  |       | 77538  |       | 2385   |       |
| 3/4   | 12147  |       | 2336   |       | 48597  |       | 48591  |       | 12161  |       | 12181  |       | 77539  |       | 2386   |       |
| 1     | 12148  |       | 2337   |       | 48598  |       | 2378   |       | 12162  |       | —      |       | 7754   |       | 2387   |       |
| 1-1/4 | 12150  |       | 2338   |       | 2370   |       | 2379   |       | 12163  |       | 12183  |       | 12175  |       | 48593  |       |
| 1-1/2 | 12151  |       | 75377  |       | 70233  |       | 70234  |       | 12164  |       | 12184  |       | 77541  |       | 48594  |       |
| 2     | 12152  |       | 2340   |       | 2372   |       | 2381   |       | 12165  |       | 12185  |       | 12177  |       | 48595  |       |
| 2-1/2 | —      |       | 12098  |       | 12105  |       | 12111  |       | 12166  |       | 12186  |       | 12178  |       | 2391   |       |
| 3     | —      |       | 12099  |       | 12107  |       | 5895   |       | 12167  |       | 12187  |       | 12179  |       | 12125  |       |
| 3-1/2 | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       | —      |       |
| 4     | —      |       | 31967  |       | —      |       | 31977  |       | 32045  |       | 32044  |       | 31991  |       | 32038  |       |

\*CAST BRASS FITTINGS ALSO AVAILABLE IN EXTRA HEAVY (250LB)

## 125 LB. CAST BRASS REDUCING FITTINGS

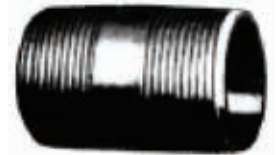


| SIZE  | Bushing  |       | Face Bushing |       | Reducing Coupling |       | Reducing 90 |       |
|-------|----------|-------|--------------|-------|-------------------|-------|-------------|-------|
|       | FIG. NO. | PRICE | FIG. NO.     | PRICE | FIG. NO.          | PRICE | FIG. NO.    | PRICE |
| 1/4   | 1/8      | 2392  | 32010        | -     | 2341              | -     | 2270        | -     |
| 3/8   | 1/8      | 2394  | 32011        | -     | 2343              | -     | 2269        | -     |
| 3/8   | 1/4      | 2393  | 32012        | -     | 2342              | -     | 2268        | -     |
| 1/2   | 1/8      | 2397  | -            | -     | 2346              | -     | -           | -     |
| 1/2   | 1/4      | -     | 32014        | -     | 2345              | -     | 2272        | -     |
| 1/2   | 3/8      | 2395  | 2422         | -     | 2344              | -     | 2271        | -     |
| 3/4   | 1/8      | 2401  | -            | -     | 2350              | -     | -           | -     |
| 3/4   | 1/4      | 2400  | -            | -     | 2349              | -     | 31901       | -     |
| 3/4   | 3/8      | 2399  | 32016        | -     | 2348              | -     | 31902       | -     |
| 3/4   | 1/2      | 2398  | 2423         | -     | 2347              | -     | 48559       | -     |
| 1     | 1/4      | 2405  | -            | -     | 5891              | -     | 51715       | -     |
| 1     | 3/8      | 2404  | -            | -     | 5890              | -     | 31903       | -     |
| 1     | 1/2      | 77543 | -            | -     | 2352              | -     | 2275        | -     |
| 1     | 3/4      | 48585 | -            | -     | 2351              | -     | 2274        | -     |
| 1 1/4 | 1/4      | 25419 | -            | -     | -                 | -     | -           | -     |
| 1 1/4 | 3/8      | 26328 | -            | -     | -                 | -     | -           | -     |
| 1 1/4 | 1/2      | 2408  | -            | -     | 2355              | -     | 2278        | -     |
| 1 1/4 | 3/4      | 2407  | -            | -     | 2354              | -     | 2277        | -     |
| 1 1/4 | 1        | 67941 | -            | -     | 2353              | -     | 2276        | -     |
| 1 1/2 | 1/4      | 26327 | -            | -     | -                 | -     | -           | -     |
| 1 1/2 | 3/8      | 26325 | -            | -     | -                 | -     | -           | -     |
| 1 1/2 | 1/2      | 2412  | -            | -     | 5894              | -     | -           | -     |
| 1 1/2 | 3/4      | 2411  | -            | -     | 2358              | -     | 12074       | -     |
| 1 1/2 | 1        | 2410  | -            | -     | 2357              | -     | 2280        | -     |
| 1 1/2 | 1 1/4    | 2409  | -            | -     | 2356              | -     | 2279        | -     |
| 2     | 1/4      | 31992 | -            | -     | -                 | -     | -           | -     |
| 2     | 3/8      | 51734 | -            | -     | -                 | -     | -           | -     |
| 2     | 1/2      | 2417  | -            | -     | 2363              | -     | 51716       | -     |
| 2     | 3/4      | 2416  | -            | -     | 2362              | -     | 12078       | -     |
| 2     | 1        | 2415  | -            | -     | 2361              | -     | -           | -     |
| 2     | 1 1/4    | 2414  | -            | -     | 2360              | -     | 2282        | -     |
| 2     | 1 1/2    | 2413  | -            | -     | 2359              | -     | 2281        | -     |
| 2 1/2 | 1/2      | 31993 | -            | -     | -                 | -     | -           | -     |
| 2 1/2 | 3/4      | 31994 | -            | -     | -                 | -     | -           | -     |
| 2 1/2 | 1        | 31995 | -            | -     | -                 | -     | -           | -     |
| 2 1/2 | 1 1/4    | 22913 | -            | -     | -                 | -     | -           | -     |
| 2 1/2 | 1 1/2    | 2419  | -            | -     | 31969             | -     | 31904       | -     |
| 2 1/2 | 2        | 2418  | -            | -     | 12102             | -     | 31905       | -     |
| 3     | 1/2      | -     | -            | -     | -                 | -     | -           | -     |
| 3     | 3/4      | -     | -            | -     | -                 | -     | -           | -     |
| 3     | 1        | 26332 | -            | -     | -                 | -     | -           | -     |
| 3     | 1 1/4    | 26330 | -            | -     | -                 | -     | -           | -     |
| 3     | 1 1/2    | 26329 | -            | -     | 31970             | -     | -           | -     |
| 3     | 2        | 2421  | -            | -     | 31971             | -     | -           | -     |
| 3     | 2 1/2    | 2420  | -            | -     | 12103             | -     | 31907       | -     |

| REDUCING TEE |       |       |          |       |
|--------------|-------|-------|----------|-------|
| SIZE         |       |       | FIG. NO. | PRICE |
| A            | B     | C     |          |       |
| 1/8          | 1/8   | 1/4   | -        | -     |
| 1/4          | 1/4   | 1/8   | 5858     | -     |
| 3/8          | 3/8   | 1/4   | -        | -     |
| 1/2          | 1/2   | 1/4   | 2320     | -     |
| 1/2          | 1/2   | 3/8   | 2321     | -     |
| 1/2          | 1/2   | 3/4   | 13355    | -     |
| 3/4          | 1/2   | 3/4   | 48574    | -     |
| 3/4          | 3/4   | 1/4   | 21416    | -     |
| 3/4          | 3/4   | 3/8   | 23527    | -     |
| 3/4          | 3/4   | 1/2   | 48571    | -     |
| 3/4          | 3/4   | 1     | 26378    | -     |
| 3/4          | 1/2   | 1/2   | 48573    | -     |
| 1            | 1/2   | 3/4   | 48576    | -     |
| 1            | 1/2   | 1     | 189672   | -     |
| 1            | 3/4   | 3/4   | 49693    | -     |
| 1            | 3/4   | 1     | 20004    | -     |
| 1            | 1     | 3/8   | 21511    | -     |
| 1            | 1     | 1/2   | 5864     | -     |
| 1            | 1     | 3/4   | 48572    | -     |
| 1            | 1     | 1 1/4 | 26379    | -     |
| 1            | 1     | 1 1/2 | 26381    | -     |
| 1            | 3/4   | 3/4   | -        | -     |
| 1 1/4        | 3/4   | 1 1/4 | -        | -     |
| 1 1/4        | 1     | 1     | 5869     | -     |
| 1 1/4        | 1 1/4 | 1/2   | 2328     | -     |
| 1 1/4        | 1 1/4 | 3/4   | 2329     | -     |
| 1 1/4        | 1 1/4 | 1     | 2330     | -     |
| 1 1/4        | 1 1/4 | 1 1/2 | -        | -     |
| 1 1/4        | 1 1/4 | 1/2   | 5870     | -     |
| 1 1/2        | 1 1/2 | 3/4   | 5871     | -     |
| 1 1/2        | 1 1/2 | 1     | 5872     | -     |
| 1 1/2        | 1 1/2 | 1 1/4 | 5873     | -     |
| 1 1/2        | 1 1/2 | 1/2   | 5880     | -     |
| 2            | 2     | 3/4   | 5881     | -     |
| 2            | 2     | 1     | 5882     | -     |
| 2            | 2     | 1 1/4 | 5883     | -     |
| 2            | 2     | 1 1/2 | 5884     | -     |
| 2 1/2        | 2 1/2 | 1     | 31954    | -     |
| 2 1/2        | 2 1/2 | 1 1/4 | 31955    | -     |
| 2 1/2        | 2 1/2 | 1 1/2 | 31956    | -     |
| 2 1/2        | 2 1/2 | 2     | 12096    | -     |
| 3            | 3     | 2 1/2 | 12094    | -     |



BRASS NIPPLES



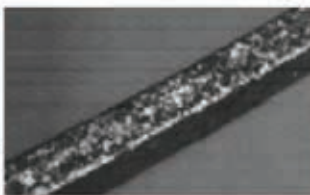
| SIZE  | 1/8"   |       | 1/4"   |       | 3/8"   |       | 1/2"   |       | 3/4"   |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 2424   |       | 2436   |       | 2448   |       | 2460   |       | 2475   |       |
| Sh.   | 2425   |       | 2437   |       | 2449   |       | 2461   |       | 2476   |       |
| 2     | 2426   |       | 2438   |       | 2450   |       | 2462   |       | 2477   |       |
| 2 1/2 | 2427   |       | 2439   |       | 2451   |       | 2463   |       | 2478   |       |
| 3     | 2428   |       | 2440   |       | 2452   |       | 2464   |       | 2479   |       |
| 3 1/2 | 2429   |       | 2441   |       | 2453   |       | 2465   |       | 2480   |       |
| 4     | 2430   |       | 2442   |       | 2454   |       | 2466   |       | 2481   |       |
| 4 1/2 | 2431   |       | 2443   |       | 2455   |       | 2467   |       | 2482   |       |
| 5     | 2432   |       | 2444   |       | 2456   |       | 2468   |       | 2483   |       |
| 5 1/2 | 2433   |       | 2445   |       | 2457   |       | 2469   |       | 2484   |       |
| 6     | 2434   |       | 2446   |       | 2458   |       | 2470   |       | 2485   |       |
| 7     | 35746  |       | 35752  |       | 35757  |       | 35763  |       | 35700  |       |
| 8     | 35747  |       | 35753  |       | 35758  |       | 35764  |       | 35701  |       |
| 9     | 35748  |       | 35754  |       | 35759  |       | 35765  |       | 35702  |       |
| 10    | 35749  |       | 21196  |       | 35760  |       | 35766  |       | 35703  |       |
| 11    | 35750  |       | 23348  |       | 35761  |       | 35767  |       | 35704  |       |
| 12    | 35751  |       | 35755  |       | 35762  |       | 35768  |       | 35705  |       |

| SIZE  | 1"     |       | 1 1/4" |       | 1 1/2" |       | 2"     |       | 2 1/2" |       | 3"     |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE | FIG NO | PRICE |
| Close | 2487   |       | 2498   |       | 2509   |       | 2520   |       | 12363  |       | 12376  |       |
| Sh.   | 2488   |       | 2499   |       | 2510   |       | 2521   |       | 12366  |       | 12377  |       |
| 2     | -      |       | -      |       | -      |       | -      |       | -      |       | -      |       |
| 2 1/2 | 2489   |       | 2500   |       | 2511   |       | -      |       | -      |       | -      |       |
| 3     | 2490   |       | 2501   |       | 2512   |       | 2522   |       | -      |       | -      |       |
| 3 1/2 | 2491   |       | 2502   |       | 2513   |       | 2523   |       | 12367  |       | 12378  |       |
| 4     | 2492   |       | 2503   |       | 2514   |       | 2524   |       | 12369  |       | 12379  |       |
| 4 1/2 | 2493   |       | 2504   |       | 2515   |       | 2525   |       | 12371  |       | 12380  |       |
| 5     | 2494   |       | 2505   |       | 2516   |       | 2526   |       | 12372  |       | 12381  |       |
| 5 1/2 | 2495   |       | 2506   |       | 2517   |       | 2527   |       | 12373  |       | 12382  |       |
| 6     | 2496   |       | 2507   |       | 2518   |       | 2528   |       | 12374  |       | 12383  |       |
| 7     | 35709  |       | 35715  |       | 35721  |       | 35726  |       | 35733  |       | 35739  |       |
| 8     | 35710  |       | 35716  |       | 35722  |       | 35727  |       | 35734  |       | 35740  |       |
| 9     | 35711  |       | 35717  |       | 35723  |       | 35728  |       | 35735  |       | 35741  |       |
| 10    | 35712  |       | 35718  |       | 35724  |       | 35729  |       | 35736  |       | 35742  |       |
| 11    | 35713  |       | 35719  |       | 35725  |       | 35730  |       | 35737  |       | 35743  |       |
| 12    | 34722  |       | 35720  |       | 23715  |       | 35731  |       | 35738  |       | 35744  |       |



## PACKING AND GASKET MATERIAL

### NON-ASBESTOS PACKING



**CONSTRUCTION:** Multi-Lok Braid

**FEATURES:** Non-asbestos fibers treated with a specially formulated blend of lubricants.

**RECOMMENDED FOR:**

Steam, super heated steam, air petroleum products, hot gases.

**LIMITATIONS:** Maximum line temperature 1200

*Sold by the pound.*

| SIZE | FEET PER POUND | FIG. NO. | PRICE |
|------|----------------|----------|-------|
| 3/16 | 57             | 8213     |       |
| 5/16 | 19             | 8219     |       |
| 7/16 | 8.2            | 8224     |       |
| 1/8  | 80             | 8210     |       |
| 3/8  | 9.7            | 8220     |       |
| 5/8  | 3.2            | 8230     |       |
| 1/2  | 6.0            | 8228     |       |
| 1/4  | 22             | 8217     |       |
| 3/4  | 2.8            | 8237     |       |

### TEFLON PACKING



**CONSTRUCTION:** Multi-Lok Braid.

**FEATURES:** Yarns are coated in PTFE suspensoid. This system of impregnation assures even distribution of the PTFE. The fibers are saturated and sealed with the PTFE particles, protecting the fibers from chemical action.

**SURFACE TREATMENT:** A surface coating of PTFE is applied after braiding. To assure good break-in characteristics, a special high temperature synthetic lubricant is added. **EQUIPMENT:** General service on rotary and reciprocating pumps, agitators.

**RECOMMENDED FOR:** Caustics, mild acids, difficult chemicals, air, gases, solvents, oils, general chemical plant applications.

**LIMITATIONS:** Shaft speeds to 1885; temperatures to 500°F 260°C; pH 3-11.

**REMARKS:** Our PTFE dispersion system provides greater penetration and more thorough dissemination of the insert PTFE.

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 1/8  | 8185     |       |
| 1/4  | 8190     |       |
| 3/16 | 8188     |       |
| 5/16 | 8194     |       |
| 3/8  | 8197     |       |
| 7/16 | 8200     |       |
| 1/2  | 8201     |       |
| 5/8  | 8202     |       |
| 3/4  | 8205     |       |
| 1    | 8208     |       |

**Neoprene and cloth inserted neoprene sheets available!**

### RED RUBBER SHEET



High grade red rubber compound. General purpose for water, air, etc. Standard width 36". Max temperature 375°F.

**6 X 6 RED RUBBER SHEET**

| FIG. NO. | PRICE |
|----------|-------|
| 44323    |       |

### PER SQUARE FOOT

| SIZE | FIG. NO. | @ WT PER SQ FT | PRICE |
|------|----------|----------------|-------|
| 1/16 | 8256     | 1/2 LB         |       |
| 3/32 | 8260     | 3/4 LB         |       |
| 1/8  | 8261     | 1 LB           |       |
| 1/4  | 8266     | 2 LB           |       |

**ALSO AVAILABLE: GUM, BUNA, EPDM/BUTYL, TEFLON/SILICON**

### COMPRESSED NON-ASBESTOS SHEET



Selected long fiber non-asbestos mixed with a special heat and chemical resisting binder. Excellent for use against oil, steam, (saturated and superheated) acids, alkalis, etc. Standard sheet 60"x60". Max temp

700°F, Max pressure 400 PSI. *Sold by sheet or by the pound.*

### BY 60" X 60" SHEET

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 1/64 | 40051    |       |
| 1/32 | 40052    |       |
| 1/16 | 40053    |       |
| 1/8  | 40054    |       |
| 1/4  | 40055    |       |
| 3/32 | 47227    |       |

2000# FORGED STEEL THREADED FITTINGS



| SIZE  | 90° ELBOW |       | 45° ELBOW |       | TEE      |       | CROSS    |       |
|-------|-----------|-------|-----------|-------|----------|-------|----------|-------|
|       | FIG. NO.  | PRICE | FIG. NO.  | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/4   | 5109      |       | 5125      |       | 5117     |       | 5133     |       |
| 3/8   | 5110      |       | 5126      |       | 5118     |       | 5134     |       |
| 1/2   | 5111      |       | 5127      |       | 5119     |       | 5135     |       |
| 3/4   | 5112      |       | 5128      |       | 5120     |       | 5136     |       |
| 1     | 5113      |       | 5129      |       | 5121     |       | 5137     |       |
| 1 1/4 | 5114      |       | 5130      |       | 5122     |       | 5138     |       |
| 1 1/2 | 5115      |       | 5131      |       | 5123     |       | 5139     |       |
| 2     | 5116      |       | 5132      |       | 5124     |       | 5140     |       |
| 2 1/2 | 20449     |       | 32223     |       | 31280    |       | 32226    |       |
| 3     | 32219     |       | 32224     |       | 32221    |       | 32227    |       |
| 4     | 32220     |       | 32225     |       | 32222    |       | 32228    |       |

3000# FORGED STEEL THREADED AND SOCKET WELD FITTINGS



| SIZE  | 90° Elbow |       |          |       | 45° Elbow |       |          |       | 90° Street Elbow |       | TEE      |       |          |       |
|-------|-----------|-------|----------|-------|-----------|-------|----------|-------|------------------|-------|----------|-------|----------|-------|
|       | THREAD    |       | SOCKET   |       | THREAD    |       | SOCKET   |       | THREAD           |       | THREAD   |       | SOCKET   |       |
|       | FIG. NO.  | PRICE | FIG. NO. | PRICE | FIG. NO.  | PRICE | FIG. NO. | PRICE | FIG. NO.         | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/8   | 5141      | -     |          |       | 5160      | -     |          |       | 5170             |       | 5151     |       |          |       |
| 1/4   | 17582     |       | 5325     |       | 5161      |       | 5724     |       | 5171             |       | 5152     |       | 5696     |       |
| 3/8   | 5144      |       | 5326     |       | 5162      |       | 5727     |       | 5172             |       | 5153     |       | 5700     |       |
| 1/2   | 5145      |       | 5680     |       | 5163      |       | 5730     |       | 5173             |       | 5154     |       | 5702     |       |
| 3/4   | 5146      |       | 5681     |       | 5164      |       | 5733     |       | 5174             |       | 5155     |       | 5706     |       |
| 1     | 5147      |       | 5682     |       | 5165      |       | 5735     |       | 5175             |       | 5156     |       | 5710     |       |
| 1 1/4 | 5148      |       | 5685     |       | 5167      |       | 5738     |       | 5176             |       | 5157     |       | 5713     |       |
| 1 1/2 | 5149      |       | 5687     |       | 5168      |       | 5740     |       | 5177             |       | 5158     |       | 5715     |       |
| 2     | 5150      |       | 5690     |       | 5169      |       | 5743     |       | 5178             |       | 5159     |       | 5718     |       |
| 2 1/2 | 32235     |       | 32262    |       | 32243     |       | 32269    |       | -                |       | 32239    |       | 32266    |       |
| 3     | 32237     |       | 32264    |       | 32244     |       | 32270    |       | -                |       | 32241    |       | 32267    |       |
| 4     | 32238     |       | 32265    |       | 32245     |       | 32271    |       | -                |       | 32242    |       | 32268    |       |



| SIZE  | CROSS  |        | WYE    |        |        |        | UNION  |        |          |       |          |       |
|-------|--------|--------|--------|--------|--------|--------|--------|--------|----------|-------|----------|-------|
|       | THREAD | SOCKET | THREAD | SOCKET | THREAD | SOCKET | THREAD | SOCKET | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/8   | -      |        |        |        |        |        |        |        | 40024    |       | -        |       |
| 1/4   | 5181   |        |        |        |        |        |        |        | 5301     |       | 5780     |       |
| 3/8   | -      |        |        |        |        |        |        |        | 5302     |       | 5781     |       |
| 1/2   | 5185   |        |        |        |        |        |        |        | 5305     |       | 5782     |       |
| 3/4   | 5186   |        |        |        |        |        |        |        | 5309     |       | 5783     |       |
| 1     | 5187   |        |        |        |        |        |        |        | 5313     |       | 5784     |       |
| 1 1/4 | 5188   |        |        |        |        |        |        |        | 5316     |       | 5785     |       |
| 1 1/2 | 5189   |        |        |        |        |        |        |        | 5320     |       | 5786     |       |
| 2     | 5190   |        |        |        |        |        |        |        | 5323     |       | 5787     |       |
| 2 1/2 | 32246  |        |        |        |        |        |        |        | 26492    |       | 32278    |       |
| 3     | 32247  |        |        |        |        |        |        |        | 26494    |       | 32279    |       |
| 4     | 32248  |        |        |        |        |        |        |        | -        |       | 32280    |       |



## 3000 FORGED STEEL FITTINGS



COUPLING



HALF COUPLING



CAP



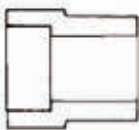
PLUG

| SIZE  | THREAD |       | SOCKET |       | THREAD |       | THREAD |       | SOCKET |       | THREAD |       |
|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|       | FIG.   | PRICE | FIG.   | PRICE | FIG.   | PRICE | FIG.   | PRICE | FIG.   | PRICE | FIG.   | PRICE |
| 1/8   | 5191   |       | —      |       | 23769  |       | 5201   |       | —      |       | 5211   |       |
| 1/4   | 5192   |       | 5753   |       | 23770  |       | 5202   |       | 5770   |       | 5212   |       |
| 3/8   | 5193   |       | 5754   |       | 23771  |       | 5203   |       | 5771   |       | 5213   |       |
| 1/2   | 5194   |       | 5755   |       | 20326  |       | 5205   |       | 5772   |       | 5214   |       |
| 3/4   | 5196   |       | 5756   |       | 20327  |       | 5206   |       | 5773   |       | 5215   |       |
| 1     | 5197   |       | 5758   |       | 23772  |       | 5207   |       | 5774   |       | 5216   |       |
| 1 1/4 | 5198   |       | 5759   |       | 23773  |       | 5208   |       | 5776   |       | 5217   |       |
| 1 1/2 | 5199   |       | 5762   |       | 20328  |       | 5209   |       | 5778   |       | 5218   |       |
| 2     | 5200   |       | 5765   |       | 20452  |       | 5210   |       | 5779   |       | 5219   |       |
| 2 1/2 | 25181  |       | 32272  |       | 26487  |       | 32249  |       | 32275  |       | 32252  |       |
| 3     | 26484  |       | 32273  |       | 26489  |       | 32250  |       | 32276  |       | 32253  |       |
| 4     | 26485  |       | 32274  |       | 26491  |       | 32251  |       | 32277  |       | 32254  |       |

### BUSHING (THREADED)



### REDUCER INSERT



Use to make reducing fittings.  
All sizes available.

| SIZE  | FIG.  | PRICE | SIZE  | FIG.  | PRICE |
|-------|-------|-------|-------|-------|-------|
| 1/4   | 1/8   | 5221  | 2     | 1/8   | —     |
| 3/8   | 1/8   | 5223  |       | 1/4   | 5295  |
|       | 1/4   | 5222  |       | 3/8   | —     |
| 1/2   | 1/8   | 5226  |       | 1/2   | 5288  |
|       | 1/4   | 5225  |       | 3/4   | 5286  |
|       | 3/8   | 5224  |       | 1     | 5285  |
| 3/4   | 1/8   | 5230  |       | 1 1/4 | 5282  |
|       | 1/4   | 5229  |       | 1 1/2 | 5278  |
|       | 3/8   | 5228  | 2 1/2 | 1/2   | 26472 |
|       | 1/2   | 5227  |       | 3/4   | —     |
| 1     | 1/8   | 5236  |       | 1     | 26464 |
|       | 1/4   | 5235  |       | 1 1/4 | —     |
|       | 3/8   | 5233  |       | 1 1/2 | 26461 |
|       | 1/2   | 5232  |       | 2     | 26460 |
|       | 3/4   | 5231  | 3     | 1     | 26481 |
| 1 1/4 | 1/8   | 5260  |       | 1 1/4 | —     |
|       | 1/4   | 5253  |       | 1 1/2 | 26477 |
|       | 3/8   | 5247  |       | 2     | 26476 |
|       | 1/2   | 5242  |       | 2 1/2 | 26474 |
|       | 3/4   | 5239  | 4     | 1     | 32261 |
|       | 1     | 5237  |       | 1 1/4 | —     |
| 1 1/2 | 1/8   | 5275  |       | 1 1/2 | —     |
|       | 1/4   | 5272  |       | 2     | 32258 |
|       | 3/8   | 5269  |       | 2 1/2 | —     |
|       | 1/2   | 5267  |       | 3     | 32256 |
|       | 3/4   | 5265  |       |       |       |
|       | 1     | 5262  |       |       |       |
|       | 1 1/4 | 5261  |       |       |       |

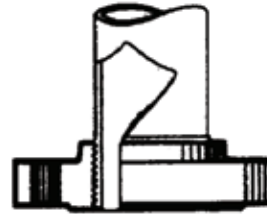
6000# THREADED AND SOCKET  
WELD FLANGES ALWAYS AVAILABLE!



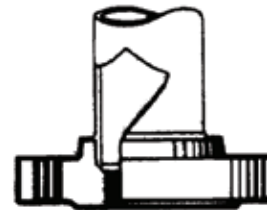
SELECTION AND APPLICATION OF FORGED STEEL FLANGES



**Welding Neck Flanges** are distinguished from other types by their long tapered hub and gentle transition of thickness in the region of the butt weld joining them to the pipe. The long tapered hub provides an important reinforcement of the flange proper from the standpoint of strength and resistance to dishing. The smooth transition from flange thickness to pipe wall thickness effected by the taper is extremely beneficial under conditions of repeated bending, caused by line expansion or other variable forces, and produces an endurance strength of welding neck flanged assemblies equivalent to that of a butt welded joint between pipes, which, in practice, is the same as that of unwelded pipe. Thus this type of flange is preferred for every severe service condition, whether this results from high pressure or from sub-zero or elevated temperature, and whether loading conditions are substantially constant or fluctuate between wide limits; welding neck flanges are particularly recommended for handling explosive, flammable or costly liquids, where loss of tightness or local failure may be accompanied by disastrous consequences.



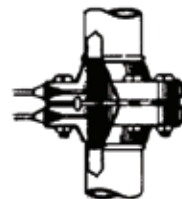
**Screwed Flanges** made of steel are confined to special applications. Their chief merit lies in the fact that they can be assembled without welding; this explains their use in extremely high pressure services, particularly at or near atmospheric temperature, where alloy steel is essential for strength and where the necessary post-weld heat treatment is impractical. Screwed flanges are unsuited for conditions involving temperature or bending stresses of any magnitude, particularly under cyclic conditions, where leakage through the threads may occur in relatively few cycles of heating or stress; seal welding is sometimes employed to overcome this, but cannot be considered as entirely satisfactory.



**Socket Welding Flanges** were initially developed for use on small-size high pressure piping. Their initial cost is about 10% greater than that of slip-on flanges; when provided with an internal weld as illustrated, their static strength is equal to, but their fatigue strength 50% greater than double-welded slip-on flanges. Smooth, pocketless bore conditions can readily be attained (by grinding the internal weld) without having to bevel the flange face and, after welding, to reface the flange as would be required with slip-on flanges. The internally welded socket type flange is becoming increasingly popular in chemical process piping for this reason.



**Slip-On Flanges** continue to be preferred to welding neck flanges by many users on account of their initially lower cost, the reduced accuracy required in cutting the pipe to length, and the somewhat greater ease by alignment of the assembly; however, their final installed cost is probably not much, if any, less than that of welding neck flanges. Their calculated strength under internal pressure is of the order of two-thirds that of welding neck flanges, and their life under fatigue is about one-third that of the latter. For these reasons, slip-on flanges are limited to sized NPS 1/2 to 2 1/2 in the 1500 standard.



**Orifice Flanges** are widely used in conjunction with orifice meters for measuring the rate of flow of liquids and gases. They are basically the same as standard welding neck, slip-on and screwed flanges except for the provision of radial, tapped holes in the flange ring for meter connections and additional bolts to act as jack screws to facilitate separating the flanges for inspection or replacement of the orifice plate. In choosing the type of orifice flange, the considerations affecting the choice of welding neck, slip-on and screwed standard flanges apply with equal force.



**Lap Joint Flanges** are primarily employed with lap joint stubs, the combined initial cost of the two items being approximately one-third higher than that of comparable welding neck flanges. Their pressure-holding ability is little, if any, better than that of slip-on flanges and the fatigue life for the assembly is only one-tenth that of welding neck flanges. The chief use of lap joint flanges in carbon or low alloy steel piping systems is in services necessitating frequent dismantling for inspection and cleaning and where the ability to swivel flanges and to align bolt holes materially simplifies the erection of large diameter of unusually stiff piping. Their use at points where severe bending stress occurs should be avoided.



**Blind Flanges** are used to blank off the ends of piping, valves and pressure vessel openings. From the standpoint of internal pressure and bolt loading, blind flanges, particularly in the larger sizes, are the most highly stressed of all American Standard flange types. However, since the maximum stressed in a blind flange are bending stresses at the center, they can safely be permitted to be higher than in other types of flanges. Where temperature is a service factor, or repeated severe water hammer, consideration should be given to closures made of welding neck flanges and caps.

## CARBON STEEL WELDING FLANGES

Lap Joint and Socket Weld Flanges available for Immediate Delivery!



| SIZE  | 150 #  |        | 300 #            |       | 150#           |       | 300#         |       | 150# LAP |       |
|-------|--------|--------|------------------|-------|----------------|-------|--------------|-------|----------|-------|
|       | OD     | OD     | WELD NECK FLANGE |       | SLIP-ON FLANGE |       | JOINT FLANGE |       | FIG. NO. | PRICE |
|       |        |        | FIG. NO.         | PRICE | FIG. NO.       | PRICE | FIG. NO.     | PRICE | FIG. NO. | PRICE |
| 1/2   | 3 1/2  | 3 3/4  | 6409             |       | 6796           |       | 6448         | 6806  | 52053    |       |
| 3/4   | 3 7/8  | 4 5/8  | 6414             |       | 6797           |       | 6452         | 6807  | 52054    |       |
| 1     | 4 1/4  | 4 7/8  | 6417             |       | 6798           |       | 6456         | 6808  | 52055    |       |
| 1 1/4 | 4 5/8  | 5 1/4  | 6424             |       | 6799           |       | 6457         | 6809  | 52056    |       |
| 1 1/2 | 5      | 6 1/8  | 6429             |       | 6800           |       | 6463         | 6810  | 52057    |       |
| 2     | 6      | 6 1/2  | 6431             |       | 6801           |       | 6466         | 6811  | 52058    |       |
| 2 1/2 | 7      | 7 1/2  | 6433             |       | 6802           |       | 6468         | 6812  | 52059    |       |
| 3     | 7 1/2  | 8 1/4  | 6437             |       | 6803           |       | 6472         | 6813  | 52060    |       |
| 3 1/2 | 8 1/2  | 9      | 6440             |       | -              |       | 6475         | -     | -        |       |
| 4     | 9      | 10     | 6442             |       | 6804           |       | 6477         | 6814  | 65383    |       |
| 5     | 10     | 11     | 6443             |       | -              |       | 6482         | 52076 | 65384    |       |
| 6     | 11     | 12/12  | 6444             |       | 6805           |       | 6485         | 6815  | 65385    |       |
| 8     | 13 1/2 | 15     | 6446             |       | 52062          |       | 6490         | 61943 | -        |       |
| 10    | 16     | 17 1/2 | 6447             |       | -              |       | 6494         | -     | 52061    |       |
| 12    | 19     | 20 1/2 | 19795            |       | -              |       | 19796        | -     | -        |       |

Reducing Slip-on and threaded flanges, special bores, and Classes 400, 600, 900, 1500, and 2500 flanges available in all sizes at all times.



THREADED



BLIND



| SIZE  | 150 #  |        | 300 #    |       | 150#     |       | 300#     |       |
|-------|--------|--------|----------|-------|----------|-------|----------|-------|
|       | 150#OD | 300#OD | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/2   | 3 1/2  | 3 3/4  | 6498     |       | 6816     |       | 6542     | 6826  |
| 3/4   | 3 7/8  | 4 5/8  | 6501     |       | 6817     |       | 6548     | 6827  |
| 1     | 4 1/4  | 4 7/8  | 6506     |       | 6818     |       | 6550     | 6828  |
| 1 1/4 | 4 5/8  | 5 1/4  | 6510     |       | 6819     |       | 6554     | 6829  |
| 1 1/2 | 5      | 6 1/8  | 6514     |       | 6820     |       | 6560     | 6830  |
| 2     | 6      | 6 1/2  | 6516     |       | 6821     |       | 6565     | 6831  |
| 2 1/2 | 7      | 7 1/2  | 6522     |       | 6822     |       | 6570     | 6832  |
| 3     | 7 1/2  | 8 1/4  | 6525     |       | 6823     |       | 6573     | 6833  |
| 3 1/2 | 8 1/2  | 9      | -        |       | -        |       | 6576     | -     |
| 4     | 9      | 10     | 6528     |       | 6824     |       | 6580     | 6834  |
| 5     | 10     | 11     | 6532     |       | -        |       | 6583     | -     |
| 6     | 11     | 12/12  | 6535     |       | 6825     |       | 6595     | 6835  |
| 8     | 13 1/2 | 15     | 6536     |       | -        |       | 6603     | -     |
| 10    | 16     | 17 1/2 | 6539     |       | -        |       | 6608     | -     |
| 12    | 19     | 20 1/2 | -        |       | -        |       | -        | -     |



**CARBON STEEL WELD FITTINGS**



90° Long Radius Elbow



90° Short Radius Elbow



45° Long Radius Elbow



Tee

| SIZE  | STANDARD |       | EXTRA HEAVY |       | FIG. NO. | PRICE | STANDARD |       | EXTRA HEAVY |       | STANDARD |       | EXTRA HEAVY |       |
|-------|----------|-------|-------------|-------|----------|-------|----------|-------|-------------|-------|----------|-------|-------------|-------|
|       | FIG. NO. | PRICE | FIG. NO.    | PRICE |          |       | FIG. NO. | PRICE | FIG. NO.    | PRICE | FIG. NO. | PRICE | FIG. NO.    | PRICE |
| 1/2   | 5788     |       | 6613        |       | -        |       | 6058     |       | 6650        |       | 6090     |       | 6679        |       |
| 3/4   | 5791     |       | 6619        |       | -        |       | 6059     |       | 6653        |       | 6093     |       | 6681        |       |
| 1     | 5794     |       | 6622        |       | 6026     |       | 6060     |       | 6657        |       | 6099     |       | 6683        |       |
| 1 1/4 | 5797     |       | 6628        |       | 6029     |       | 6061     |       | 6660        |       | 6100     |       | 6686        |       |
| 1 1/2 | 5799     |       | 6631        |       | 6033     |       | 6062     |       | 6663        |       | 6104     |       | 6688        |       |
| 2     | 5836     |       | 6634        |       | 6036     |       | 6063     |       | 6664        |       | 6110     |       | 6691        |       |
| 2 1/2 | 5855     |       | 6638        |       | 6039     |       | 6064     |       | 6667        |       | 6115     |       | 6693        |       |
| 3     | 5904     |       | 6641        |       | 6041     |       | 6066     |       | 6670        |       | 6120     |       | 6696        |       |
| 3 1/2 | 5999     |       | 6645        |       | 6044     |       | 6067     |       | 6673        |       | 6124     |       | -           |       |
| 4     | 6001     |       | 6647        |       | 6045     |       | 6077     |       | 6676        |       | 6126     |       | 6698        |       |
| 5     | 6006     |       | -           |       | 6048     |       | 6078     |       | -           |       | 6130     |       | -           |       |
| 6     | 6009     |       | -           |       | 6050     |       | 6080     |       | 52079       |       | 6134     |       | 52108       |       |
| 8     | 6012     |       | -           |       | 6053     |       | 6083     |       | 52067       |       | 6136     |       | -           |       |
| 10    | 6014     |       | -           |       | 6056     |       | 6086     |       | 52100       |       | 6138     |       | -           |       |
| 12    | 19797    |       | -           |       | 19799    |       | -        |       | -           |       | -        |       | -           |       |
| 14    | 19798    |       | -           |       | 19800    |       | -        |       | -           |       | -        |       | -           |       |



Cap



Cross



180° Long Return Bend



Lap Joint Stub End

| SIZE  | STANDARD |       | EXTRA HEAVY |       | STANDARD |       | STANDARD |       | STANDARD |       |
|-------|----------|-------|-------------|-------|----------|-------|----------|-------|----------|-------|
|       | FIG. NO. | PRICE | FIG. NO.    | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/2   | 6140     |       | 6702        |       | -        |       | 28546    |       | -        |       |
| 3/4   | 6143     |       | 6705        |       | -        |       | 28547    |       | -        |       |
| 1     | 6146     |       | 6708        |       | -        |       | 28548    |       | 28507    |       |
| 1 1/4 | 6148     |       | 6789        |       | -        |       | 28549    |       | 28508    |       |
| 1 1/2 | 6152     |       | 6790        |       | -        |       | 28550    |       | 28509    |       |
| 2     | 6155     |       | 6791        |       | -        |       | 28551    |       | 28510    |       |
| 2 1/2 | 6158     |       | 6792        |       | -        |       | 28552    |       | 28511    |       |
| 3     | 6162     |       | 6793        |       | -        |       | 28553    |       | 28513    |       |
| 3 1/2 | 6165     |       | 6794        |       | -        |       | -        |       | -        |       |
| 4     | 6168     |       | 6795        |       | -        |       | 28555    |       | 28514    |       |
| 5     | 6171     |       | -           |       | -        |       | 28556    |       | -        |       |
| 6     | 6173     |       | -           |       | -        |       | 28559    |       | 28515    |       |
| 8     | 6177     |       | -           |       | -        |       | 28560    |       | 28516    |       |
| 10    | 6178     |       | -           |       | -        |       | 28561    |       | -        |       |
| 12    | 22076    |       | -           |       | -        |       | -        |       | -        |       |
| 14    | 28506    |       | -           |       | -        |       | -        |       | -        |       |



## CARBON STEEL WELDING FITTINGS AND FLANGES



Concentric Reducer

Reducing 90 Elbow

| SIZE  |       | FIG.  | FIG.  |
|-------|-------|-------|-------|
| 2     | 1 1/4 | 6280  | 28479 |
|       | 1 1/2 | 6283  | —     |
| 2 1/2 | 1 1/4 | 6290  | —     |
|       | 1 1/2 | 6292  | 28482 |
| 3     | 2     | 6295  | —     |
|       | 1 1/2 | 6308  | 28484 |
|       | 2     | 6312  | 28485 |
| 3 1/2 | 2 1/2 | 6316  | 28486 |
|       | 2     | —     | —     |
|       | 2 1/2 | 28533 | 28489 |
| 4     | 3     | 28534 | —     |
|       | 2     | 6333  | —     |
|       | 2 1/2 | 6336  | —     |
| 5     | 3     | 6339  | —     |
|       | 3 1/2 | 6343  | —     |
|       | 2 1/2 | 28536 | —     |
|       | 3     | 28537 | —     |
| 6     | 3 1/2 | 28538 | —     |
|       | 4     | 28539 | —     |
|       | 3     | 6366  | —     |
|       | 3 1/2 | 6370  | —     |
| 8     | 4     | 6376  | 28501 |
|       | 5     | 6379  | —     |
|       | 4     | 6391  | —     |
|       | 5     | 6393  | —     |
|       | 6     | 6395  | —     |

ALSO AVAILABLE FOR QUICK DELIVERY!



LATERALS



REDUCING TEES



SADDLES



WELDING RINGS

### WELDOLETS & THREDOLETS

Used for making relatively small branch outlet connections. Easy to install -- provide 100% pipe strength and full fluid flow.



BUTT WELDING

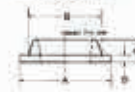
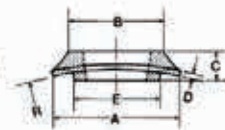


THREADED

| Size  | Weld-O-Let |       | Thread-O-Let |       |
|-------|------------|-------|--------------|-------|
|       | Fig No     | Price | Fig No       | Price |
| 1/8   | -          | -     | -            | -     |
| 1/4   | -          | -     | 18091        | -     |
| 3/8   | -          | -     | -            | -     |
| 1/2   | 18080      | -     | 18093        | -     |
| 3/4   | 18081      | -     | 18094        | -     |
| 1     | 18082      | -     | 18095        | -     |
| 1 1/4 | 18083      | -     | 18096        | -     |
| 1 1/2 | 18084      | -     | 18097        | -     |
| 2     | 18085      | -     | 18098        | -     |
| 2 1/2 | 18086      | -     | 18099        | -     |
| 3     | 18087      | -     | 18100        | -     |
| 3 1/2 | -          | -     | -            | -     |
| 4     | 18089      | -     | 18101        | -     |

### PHOENIX FLANGES

The perfect item for making outlets on plate or vessels.




Standard-Tapped from hub side




| Size  | Without Pilot |       | With Pilot |       |
|-------|---------------|-------|------------|-------|
|       | Fig No        | Price | Fig No     | Price |
| 1/8   | 38802         | -     | -          | -     |
| 1/4   | 38803         | -     | -          | -     |
| 3/8   | 38804         | -     | -          | -     |
| 1/2   | 38805         | -     | -          | -     |
| 3/4   | 38806         | -     | 38813      | -     |
| 1     | 38807         | -     | 38814      | -     |
| 1 1/4 | 38809         | -     | 38815      | -     |
| 1 1/2 | 38808         | -     | 38816      | -     |
| 2     | 38810         | -     | 38817      | -     |
| 2 1/2 | -             | -     | 41041      | -     |

RAILING FITTINGS SLIP-ON TYPE


**DUFFTIP**  For use with steel or aluminum pipe




| #30 90° ELBOW |        |       |  |
|---------------|--------|-------|--|
| Size          | Fig No | Price |  |
| 3/4           | 6065   |       |  |
| 1             | 6068   |       |  |
| 1 1/4         | 6070   |       |  |
| 1 1/2         | 6072   |       |  |




| #32 TEE |        |       |  |
|---------|--------|-------|--|
| Size    | Fig No | Price |  |
| 3/4     | 6082   |       |  |
| 1       | 6084   |       |  |
| 1 1/4   | 6085   |       |  |
| 1 1/2   | 6087   |       |  |




| #37 3-WAY RACK FITTING |        |       |  |
|------------------------|--------|-------|--|
| Size                   | Fig No | Price |  |
| 3/4                    | -      | -     |  |
| 1                      | 6116   |       |  |
| 1 1/4                  | 6117   |       |  |
| 1 1/2                  | 6118   |       |  |




| #95 ROUND FLANGE |        |       |  |
|------------------|--------|-------|--|
| Size             | Fig No | Price |  |
| 3/4              | 6166   |       |  |
| 1                | 6167   |       |  |
| 1 1/4            | 6169   |       |  |
| 1 1/2            | 6170   |       |  |




| #34 CROSS |        |       |  |
|-----------|--------|-------|--|
| Size      | Fig No | Price |  |
| 3/4       | 6094   |       |  |
| 1         | 6095   |       |  |
| 1 1/4     | 6096   |       |  |
| 1 1/2     | 6098   |       |  |




| #36 OFFSET FITTING |        |       |  |
|--------------------|--------|-------|--|
| Size               | Fig No | Price |  |
| 3/4                | 6106   |       |  |
| 1                  | 6108   |       |  |
| 1 1/4              | 6109   |       |  |
| 1 1/2              | 6111   |       |  |




| #90 ADJ. FLANGE |        |       |  |
|-----------------|--------|-------|--|
| Size            | Fig No | Price |  |
| 3/4             | 6137   |       |  |
| 1               | 6139   |       |  |
| 1 1/4           | 6141   |       |  |
| 1 1/2           | 6142   |       |  |




| #31 SIDE OUTLET ELBOW |        |       |  |
|-----------------------|--------|-------|--|
| Size                  | Fig No | Price |  |
| 3/4                   | 6074   |       |  |
| 1                     | 6076   |       |  |
| 1 1/4                 | 6079   |       |  |
| 1 1/2                 | 6081   |       |  |




| #8 RAIL CAP |        |       |  |
|-------------|--------|-------|--|
| Size        | Fig No | Price |  |
| 3/4         | 6172   |       |  |
| 1           | 6174   |       |  |
| 1 1/4       | 6175   |       |  |
| 1 1/2       | 6176   |       |  |




| #55 SWIVEL |        |       |  |
|------------|--------|-------|--|
| Size       | Fig No | Price |  |
| 3/4        | 6154   |       |  |
| 1          | 6156   |       |  |
| 1 1/4      | 6157   |       |  |
| 1 1/2      | 6159   |       |  |




| #33 SIDE OUTLET TEE |        |       |  |
|---------------------|--------|-------|--|
| Size                | Fig No | Price |  |
| 3/4                 | 6088   |       |  |
| 1                   | 6089   |       |  |
| 1 1/4               | 6091   |       |  |
| 1 1/2               | 6092   |       |  |




| #65 COUPLINGS |        |       |  |
|---------------|--------|-------|--|
| Size          | Fig No | Price |  |
| 3/4           | 6160   |       |  |
| 1             | 6161   |       |  |
| 1 1/4         | 6163   |       |  |
| 1 1/2         | 6164   |       |  |




| #40 ELBOW OR TEE |        |       |  |
|------------------|--------|-------|--|
| Size             | Fig No | Price |  |
| 3/4              | 6119   |       |  |
| 1                | 6121   |       |  |
| 1 1/4            | 6122   |       |  |
| 1 1/2            | 6123   |       |  |




| #35 SIDE OUTLET CROSS |        |       |  |
|-----------------------|--------|-------|--|
| Size                  | Fig No | Price |  |
| 3/4                   | 6101   |       |  |
| 1                     | 6102   |       |  |
| 1 1/4                 | 6103   |       |  |
| 1 1/2                 | 6105   |       |  |




| #25 SIDE MOUNT FLANGE |        |       |  |
|-----------------------|--------|-------|--|
| Size                  | Fig No | Price |  |
| 3/4                   | -      | -     |  |
| 1                     | 6149   |       |  |
| 1 1/4                 | 6151   |       |  |
| 1 1/2                 | 6153   |       |  |




| #42 ADJUSTABLE TEE |        |       |  |
|--------------------|--------|-------|--|
| Size               | Fig No | Price |  |
| 3/4                | 6131   |       |  |
| 1                  | 6132   |       |  |
| 1 1/4              | 6133   |       |  |
| 1 1/2              | 6135   |       |  |



| #26 CORNER OR RACK FITTING |        |       |  |
|----------------------------|--------|-------|--|
| Size                       | Fig No | Price |  |
| 3/4                        | -      | -     |  |
| 1                          | 6112   |       |  |
| 1 1/4                      | 6113   |       |  |
| 1 1/2                      | 6114   |       |  |



| #24 FLANGE |        |       |  |
|------------|--------|-------|--|
| Size       | Fig No | Price |  |
| 3/4        | -      | -     |  |
| 1          | 6144   |       |  |
| 1 1/4      | 6145   |       |  |



| #41 SIDE OUTLET ELL OR TEE |        |       |  |
|----------------------------|--------|-------|--|
| Size                       | Fig No | Price |  |
| 3/4                        | 6125   |       |  |
| 1                          | 6127   |       |  |
| 1 1/4                      | 6128   |       |  |

## 304 STAINLESS STEEL NIPPLES

|       | 1/8"     |       | 1/4"     |       | 3/8"     |       | 1/2"     |       | 3/4"     |       | 1"       |       | 1 1/4"   |       | 1 1/2"   |       | 2"       |       |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| CL    | 6239     |       | 6269     |       | 6296     |       | 6329     |       | 6372     |       | 6408     |       | 6432     |       | 17578    |       | 17579    |       |
| 1 1/2 | 6241     |       | 17559    |       | 6298     |       | 6335     |       | 6374     |       | -        |       | -        |       | -        |       | -        |       |
| 2     | 6243     |       | 6273     |       | 6301     |       | 6338     |       | 17577    |       | 17562    |       | 6434     |       | 6467     |       | -        |       |
| 2 1/2 | 17560    |       | 6274     |       | 17575    |       | 6341     |       | 6381     |       | 17563    |       | 6435     |       | 6470     |       | 6499     |       |
| 3     | 6249     |       | 6276     |       | 6309     |       | 17561    |       | 6383     |       | 6416     |       | 6436     |       | 6473     |       | 6504     |       |
| 3 1/2 | 6251     |       | 6278     |       | 6313     |       | 6348     |       | 6386     |       | 6419     |       | 6438     |       | 6474     |       | 6507     |       |
| 4     | 6253     |       | 6281     |       | 6315     |       | 17576    |       | 6389     |       | 6420     |       | 6439     |       | 6478     |       | 6512     |       |
| 4 1/2 | 6260     |       | 6285     |       | 6319     |       | 6358     |       | 6396     |       | 6423     |       | 6451     |       | 6483     |       | 6515     |       |
| 5     | 6262     |       | 6286     |       | 6320     |       | 6364     |       | 6400     |       | 6426     |       | 6455     |       | 6487     |       | 6518     |       |
| 5 1/2 | 6265     |       | 6289     |       | 6325     |       | 6368     |       | 6403     |       | 6427     |       | 6459     |       | 6491     |       | 6523     |       |
| 6     | 6267     |       | 6294     |       | 6328     |       | 6369     |       | 6407     |       | 6430     |       | 17564    |       | 6493     |       | 6527     |       |

## 316 STAINLESS STEEL NIPPLES

|       | 1/8"     |       | 1/4"     |       | 3/8"     |       | 1/2"     |       | 3/4"     |       | 1"       |       | 1 1/4"   |       | 1 1/2"   |       | 2"       |       |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| CL    | 36310    |       | 36321    |       | 36332    |       | 36343    |       | 36354    |       | 36365    |       | 36375    |       | 36385    |       | 36395    |       |
| SH    | 36311    |       | 36322    |       | 36333    |       | 36344    |       | 36355    |       | 36366    |       | 36376    |       | 36386    |       | 36396    |       |
| 1 1/2 | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       | -        |       |
| 2     | 36312    |       | 36323    |       | 36334    |       | 36345    |       | 36356    |       | -        |       | -        |       | -        |       | -        |       |
| 2 1/2 | 36313    |       | 36324    |       | 36335    |       | 36346    |       | 36357    |       | 36367    |       | 36377    |       | 36387    |       | -        |       |
| 3     | 36314    |       | 36325    |       | 36336    |       | 36347    |       | 36358    |       | 36368    |       | 36378    |       | 36388    |       | 36397    |       |
| 3 1/2 | 36315    |       | 36326    |       | 36337    |       | 36348    |       | 36359    |       | 36369    |       | 36379    |       | 36389    |       | 36398    |       |
| 4     | 36316    |       | 36327    |       | 36338    |       | 36349    |       | 36360    |       | 36370    |       | 36380    |       | 36390    |       | 36399    |       |
| 4 1/2 | 36317    |       | 36328    |       | 36339    |       | 36350    |       | 36361    |       | 36371    |       | 36381    |       | 36391    |       | 36400    |       |
| 5     | 36318    |       | 36329    |       | 36340    |       | 36351    |       | 36362    |       | 36372    |       | 36382    |       | 36392    |       | 36401    |       |
| 5 1/2 | 36319    |       | 36330    |       | 36341    |       | 36352    |       | 36363    |       | 36373    |       | 36383    |       | 36393    |       | 36402    |       |
| 6     | 36320    |       | 36331    |       | 36342    |       | 36353    |       | 36364    |       | 36374    |       | 36384    |       | 36394    |       | 36403    |       |

# DUFF TIP:

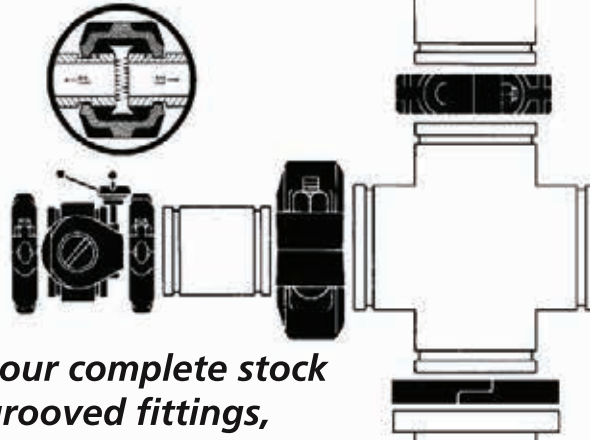
When ordering Stainless Steel Nipples or Fittings, don't forget to order our special Teflon tape for Stainless Steel (Fig. No. 61360).



## VICTAULIC FITTINGS

CALL FOR PRICING!

**Victaulic**  
Grooved Piping Method



For our complete stock of grooved fittings, see page 152



STAINLESS STEEL THREADED FITTINGS



90° ELBOW



90° STREET ELBOW



45° ELBOW



Tee

|       | 304      |       | 316      |       | 304      |       | 316      |       | 304      |       | 316      |       | 304      |       | 316      |       |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/8   | 6552     |       | 6872     |       | 6627     |       | 6900     |       | 6585     |       | 6881     |       | 6607     |       | 6891     |       |
| 1/4   | 6557     |       | 6873     |       | 6629     |       | 6901     |       | 6587     |       | 6882     |       | 17581    |       | 6892     |       |
| 3/8   | 6561     |       | 6874     |       | 6633     |       | 6902     |       | 6589     |       | 6883     |       | 6609     |       | 6893     |       |
| 1/2   | 6566     |       | 6875     |       | 6635     |       | 6903     |       | 6591     |       | 6884     |       | 6611     |       | 6894     |       |
| 3/4   | 17565    |       | 6876     |       | 6639     |       | 6904     |       | 6593     |       | 6885     |       | 6615     |       | 6895     |       |
| 1     | 17580    |       | 6877     |       | 6642     |       | 6905     |       | 17566    |       | 6887     |       | 6617     |       | 6896     |       |
| 1 1/4 | 6574     |       | 6878     |       | 6646     |       | 6906     |       | 17567    |       | 6888     |       | 6621     |       | 6897     |       |
| 1 1/2 | 6577     |       | 6879     |       | 6649     |       | 6907     |       | 17568    |       | 6889     |       | 6624     |       | 6898     |       |
| 2     | 6579     |       | 6880     |       | 6652     |       | 6908     |       | 6604     |       | 6890     |       | 6625     |       | 6899     |       |
| 2 1/2 | 33260    |       | 33303    |       | -        |       | -        |       | 33262    |       | 33306    |       | 33265    |       | 33309    |       |
| 3     | 32783    |       | 33304    |       | -        |       | -        |       | 33263    |       | 33307    |       | 32781    |       | 33310    |       |
| 4     | 33261    |       | 33305    |       | -        |       | -        |       | 33264    |       | 33308    |       | 33266    |       | 33311    |       |



Union



Coupling



Cap



Square Head Plug

|       | 304      |       | 316      |       | 304      |       | 316      |       | 304      |       | 316      |       | 304      |       | 316      |       |
|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/8   | 6687     |       | 6918     |       | 6711     |       | 6927     |       | 6655     |       | 6909     |       | 17573    |       | 6936     |       |
| 1/4   | 6689     |       | 6919     |       | 6713     |       | 6928     |       | 6659     |       | 6910     |       | 6723     |       | 6937     |       |
| 3/8   | 17569    |       | 6920     |       | 6714     |       | 6929     |       | 6666     |       | 6911     |       | 6724     |       | 6938     |       |
| 1/2   | 6695     |       | 6921     |       | 17571    |       | 6930     |       | 6669     |       | 6912     |       | 6725     |       | 6939     |       |
| 3/4   | 6697     |       | 6922     |       | 17522    |       | 6931     |       | 6672     |       | 6913     |       | 6726     |       | 6940     |       |
| 1     | 6700     |       | 6923     |       | 6718     |       | 6932     |       | 6677     |       | 6914     |       | 6727     |       | 6941     |       |
| 1 1/4 | 6703     |       | 6924     |       | 6719     |       | 6933     |       | 6680     |       | 6915     |       | 6728     |       | 6942     |       |
| 1 1/2 | 6707     |       | 6925     |       | 6720     |       | 6934     |       | 6682     |       | 6916     |       | 6729     |       | 6943     |       |
| 2     | 17570    |       | 6926     |       | 6721     |       | 6935     |       | 6684     |       | 6917     |       | 6730     |       | 6944     |       |
| 2 1/2 | 33269    |       | -        |       | 33272    |       | 33315    |       | 32240    |       | 33312    |       | 33283    |       | 33318    |       |
| 3     | 33270    |       | -        |       | 33273    |       | 33316    |       | 33267    |       | 33313    |       | 33284    |       | 33319    |       |
| 4     | 33271    |       | -        |       | 33274    |       | 33317    |       | 33268    |       | 33314    |       | 33285    |       | 33320    |       |

## STAINLESS STEEL HEX BUSHING

| SIZE  | 304      |       | 316      |       | SIZE  | 304      |       | 316      |       |
|-------|----------|-------|----------|-------|-------|----------|-------|----------|-------|
|       | FIG. NO. | PRICE | FIG. NO. | PRICE |       | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1/4   | 1/8      | 6836  | 6945     |       | 2     | 1 1/2    | 6864  | 6973     |       |
| 3/8   | 1/4      | 6837  | 6946     |       |       | 1 1/4    | 6865  | 6974     |       |
|       | 1/8      | 6838  |          |       |       | 1        | 6866  | 6975     |       |
| 1/2   | 3/8      | 6839  | 6948     |       |       | 3/4      | 6867  | 6976     |       |
|       | 1/4      | 6840  | 6949     |       |       | 1/2      | 6868  | 6977     |       |
|       | 1/8      | 6841  | 6950     |       |       | 3/8      | 6869  | 6978     |       |
| 3/4   | 1/2      | 6842  | 6951     |       |       | 1/4      | 6870  | 6979     |       |
|       | 3/8      | 6843  | 6952     |       |       | 1/8      | 6871  | 6980     |       |
|       | 1/4      | 6844  | 6953     |       | 2 1/2 | 1/2      | 33286 | 33322    |       |
|       | 1/8      | 6845  | 6954     |       |       | 3/4      | 33287 | 33323    |       |
| 1     | 3/4      | 6846  | 6955     |       |       | 1        | 33288 | 33324    |       |
|       | 1/2      | 6847  | 6956     |       |       | 1 1/4    | 33289 | 33325    |       |
|       | 3/8      | 6848  | 6957     |       |       | 1 1/2    | 33290 | 33326    |       |
|       | 1/4      | 6849  | 6958     |       |       | 2        | 33291 | 33327    |       |
|       | 1/8      | 6850  | 6959     |       | 3     | 1/2      | 33292 | 33328    |       |
| 1 1/4 | 1        | 6851  | 6960     |       |       | 3/4      | 33293 | 33330    |       |
|       | 3/4      | 6852  | 6961     |       |       | 1        | 33294 | 33331    |       |
|       | 1/2      | 6853  | 6962     |       |       | 1 1/4    | 33295 | 33332    |       |
|       | 3/8      | 6854  | 6963     |       |       | 1 1/2    | 33296 | 33333    |       |
|       | 1/4      | 6855  | 6964     |       |       | 2        | 32782 | 33334    |       |
|       | 1/8      | 6856  | 6965     |       |       | 2 1/2    | 33297 | 33337    |       |
| 1 1/2 | 1 1/4    | 6857  | 6966     |       | 4     | 1        | 33298 | 33338    |       |
|       | 1        | 6858  | 6967     |       |       | 1 1/4    | 33299 | 33339    |       |
|       | 3/4      | 6859  | 6968     |       |       | 1 1/2    | 33300 | 33340    |       |
|       | 1/2      | 6860  | 6969     |       |       | 2        | 32796 | 33341    |       |
|       | 3/8      | 6861  | 6970     |       |       | 2 1/2    | 33301 | 33342    |       |
|       | 1/4      | 6862  | 6971     |       |       | 3        | 32795 | 33343    |       |
|       | 1/8      | 6863  | 6972     |       |       |          |       |          |       |

## SCHEDULE 40 STAINLESS STEEL WELDED PIPE

Priced per foot in full random lengths. Prices on Application.

| TYPE | 1/4      |       | 3/8      |       | 1/2      |       | 3/4      |       | 1        |       | 1 1/4    |       | 1 1/2    |       | 2        |       |
|------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|----------|-------|
|      | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 304  | 6982     |       | 6983     |       | 6984     |       | 6985     |       | 6986     |       | 6987     |       | 6988     |       | 6989     |       |
| 316  | 17574    |       | 6992     |       | 6993     |       | 6994     |       | 6995     |       | 6996     |       | 6997     |       | 6998     |       |

Call DUFF for Monel,  
Monel, Hastelloy, Inconel  
fittings and valves  
and Aluminum pipe fittings.

Forged Stainless and most alloys in 2000, 3000, 4000 and 6000 lbs., both screwed and socket weld, are available. On the shelf for immediate delivery are all types of Stainless Steel valves including gate, globe, check, ball, diaphragm and pop safety valves.



COPPER WATER TUBE/ENGINEERING DATA

| Nom-inal Tube Size in inches | Out-side Diam-eter in inches  | TOLERANCE Tubing O. D. in inches<br>Max. Min. |                               | TYPE "K"   |                         |                             |                               | TYPE "L"   |                               |                          |                         |            |     |               |     |
|------------------------------|-------------------------------|---|-------------------------------|--|-------------------------|-----------------------------|-------------------------------|--|-------------------------------|--------------------------|-------------------------|------------|-----|---------------|-----|
|                              |                               |   |                               | Hard Drawn—20 Ft. Straight Lengths<br>Soft Annealed—20 Ft. Straight Lengths or 40 Ft. and 80 Ft. Length Coils<br>(to and including 1 1/2") |                         |                             |                               | Hard Drawn—20 Ft. Straight Lengths<br>Soft Annealed—20 Ft. Straight Lengths or 40 Ft. and 80 Ft. Length Coils<br>(to and including 1 1/2") |                               |                          |                         |            |     |               |     |
|                              |                               |   |                               | Use: For Underground Service and General Plumbing and Heating Installations under Severe Conditions.                                       |                         |                             |                               | Use: For General Plumbing and Heating Installations.   |                               |                          |                         |            |     |               |     |
|                              |                               |   |                               | Wall Thickness in inches   | Weight per Foot in Lbs. | HARD DRAWN                  |                               | SOFT ANNEALED  |                               | Wall Thickness in inches | Weight per Foot in Lbs. | HARD DRAWN |     | SOFT ANNEALED |     |
| Bursting Pressure in Lbs. *  | Safe Working Stress in Lbs. Ⓢ | Bursting Pressure in Lbs. *                   | Safe Working Stress in Lbs. Ⓢ |  |                         | Bursting Pressure in Lbs. * | Safe Working Stress in Lbs. Ⓢ | Bursting Pressure in Lbs. *  | Safe Working Stress in Lbs. Ⓢ |                          |                         |            |     |               |     |
| 3/8"                         | .375                          | .376  | .374                          | .035   | .145                    | 6720                        | 1060                          | 5600   | 930                           | .030                     | .126                    | 5760       | 900 | 4800          | 800 |
| 1/2"                         | .500                          | .501  | .499                          | .049   | .269                    | 7100                        | 1170                          | 5900   | 980                           | .035                     | .198                    | 5000       | 800 | 4200          | 700 |
| 5/8"                         | .625                          | .626  | .624                          | .049   | .344                    | 5600                        | 920                           | 4700   | 780                           | .040                     | .285                    | 4600       | 740 | 3800          | 630 |
| 3/4"                         | .750                          | .751  | .749                          | .049   | .418                    | 4700                        | 760                           | 3900   | 650                           | .042                     | .362                    | 4000       | 650 | 3400          | 560 |
| 7/8"                         | .875                          | .876  | .874                          | .065   | .641                    | 5300                        | 880                           | 4500   | 750                           | .045                     | .455                    | 3700       | 590 | 3100          | 510 |
| 1"                           | 1.125                         | 1.1265  | 1.1235                        | .065   | .839                    | 4200                        | 680                           | 3500   | 580                           | .050                     | .655                    | 3200       | 510 | 2700          | 450 |
| 1 1/4"                       | 1.375                         | 1.3765  | 1.3735                        | .065   | 1.04                    | 3400                        | 550                           | 2800   | 465                           | .055                     | .884                    | 2900       | 460 | 2400          | 400 |
| 1 1/2"                       | 1.625                         | 1.627   | 1.623                         | .072   | 1.36                    | 3200                        | 520                           | 2700   | 450                           | .060                     | 1.14                    | 2700       | 430 | 2200          | 360 |
| 2"                           | 2.125                         | 2.127   | 2.123                         | .083   | 2.06                    | 2800                        | 450                           | 2300   | 380                           | .070                     | 1.75                    | 2400       | 370 | 2000          | 330 |
| 2 1/4"                       | 2.625                         | 2.627   | 2.623                         | .095   | 2.92                    | 2600                        | 420                           | 2200   | 360                           | .080                     | 2.48                    | 2220       | 350 | 1800          | 300 |
| 3"                           | 3.125                         | 3.127   | 3.123                         | .109   | 4.00                    | 2500                        | 410                           | 2100   | 350                           | .090                     | 3.33                    | 2100       | 330 | 1700          | 280 |
| 3 1/2"                       | 3.625                         | 3.627   | 3.623                         | .120   | 5.12                    | 2400                        | 380                           | 2000   | 330                           | .100                     | 4.29                    | 2000       | 320 | 1700          | 280 |
| 4"                           | 4.125                         | 4.127   | 4.123                         | .134   | 6.51                    | 2300                        | 370                           | 1900   | 320                           | .110                     | 5.38                    | 1900       | 300 | 1600          | 260 |
| 5"                           | 5.125                         | 5.127   | 5.123                         | .160   | 9.67                    | 2200                        | 360                           | 1900   | 320                           | .125                     | 7.61                    | 1800       | 280 | 1500          | 250 |
| 6"                           | 6.125                         | 6.127   | 6.123                         | .192   | 13.87                   | 2300                        | 370                           | 1900   | 320                           | .140                     | 10.20                   | 1600       | 260 | 1400          | 230 |
| 8"                           | 8.125                         | 8.127   | 8.121                         | .271   | 25.90                   | 2400                        | 390                           | 2000   | 330                           | .200                     | 19.29                   | 1800       | 280 | 1500          | 250 |
| 10"                          | 10.125                        | 10.127  | 10.119                        | .338   | 40.3                    | 2400                        | 390                           | 2000   | 330                           | .250                     | 30.1                    | 1800       | 290 | 1500          | 250 |
| 12"                          | 12.125                        | 12.127  | 12.119                        | .405   | 57.8                    | 2400                        | 400                           | 2000   | 330                           | .280                     | 40.4                    | 1700       | 270 | 1400          | 230 |

Note: Information and data contained in these charts as taken from A. S. T. M. Specifications No. B-88-75, Federal Specification WW-T-799, and various Copper Tube Mill chart standards.

Ⓢ From Cabra based on 150°F. with an allowable stress of 6000 P.S.I.

\* Bursting pressures are calculated from the following Formula for thin, hollow cylinders under tension:

$$P = \frac{2tS}{D}$$

Where P = Bursting pressure, Lb. per Sq. In.  
 t = Wall thickness, inches  
 D = Outside tube diameter, inches  
 S = Tensile strength (36,000 Lb. per Sq. In. for hard tubes and 30,000 for soft tubes)

☆ With safety factor of 6, maximum safe working pressure allowable by common usage up to 150°F. can be taken at 1/6 the above bursting pressure

● Rated internal pressure for copper water tube based on the strength of the tube alone and applicable to systems using suitable mechanical joints. (Pounds per Sq. Inch).

| Nom-inal Tube Size in inches | Out-side Diam-eter in inches  | TOLERANCE Tubing O. D. in inches<br>Max. Min. |        | TYPE "M"   |                         |            |     | TYPE "DWV"   |                         |                                      |
|------------------------------|-------------------------------|---|--------|--|-------------------------|------------|-----|--|-------------------------|--------------------------------------|
|                              |                               |   |        | Hard Drawn Only—20 Ft. Straight Lengths                        |                         |            |     | Hard Drawn Only—20 Ft. Straight Lengths                          |                         |                                      |
|                              |                               |   |        | Use: For General Plumbing, Heating and Drainage Installations. |                         |            |     | Use: For Drain, Waste, Vent and other non-pressure applications. |                         |                                      |
|                              |                               |   |        | Wall Thickness in inches                                       | Weight per Foot in Lbs. | HARD DRAWN |     | Wall Thickness in inches   | Weight per Foot in Lbs. | HARD DRAWN Bursting Pressure in Lbs. |
| Bursting Pressure in Lbs. *  | Safe Working Stress in Lbs. Ⓢ |   |        |  |                         |            |     |  |                         |                                      |
| 3/8"                         | .500                          | .501  | .499   | .025   | .144                    | 3600       | 560 | ....   | ....                    | ....                                 |
| 1/2"                         | .625                          | .626  | .624   | .028   | .203                    | 3230       | 510 | ....   | ....                    | ....                                 |
| 5/8"                         | .750                          | .751  | .749   | .032   | .268                    | 2640       | 420 | ....   | ....                    | ....                                 |
| 1"                           | 1.125                         | 1.1265  | 1.1235 | .035   | .464                    | 2240       | 340 | ....   | ....                    | ....                                 |
| 1 1/4"                       | 1.375                         | 1.3765  | 1.3735 | .042   | .681                    | 2220       | 340 | .040   | .650                    | 1950                                 |
| 1 1/2"                       | 1.625                         | 1.627   | 1.623  | .049   | .940                    | 2170       | 340 | .042   | .809                    | 1740                                 |
| 2"                           | 2.125                         | 2.127   | 2.123  | .058   | 1.48                    | 1965       | 300 | .042   | 1.07                    | 1310                                 |
| 2 1/4"                       | 2.625                         | 2.627   | 2.623  | .065   | 2.03                    | 1780       | 280 | ....   | ....                    | ....                                 |
| 3"                           | 3.125                         | 3.127   | 3.123  | .072   | 2.68                    | 1660       | 260 | .045   | 1.69                    | 950                                  |
| 3 1/2"                       | 3.625                         | 3.627   | 3.623  | .083   | 3.58                    | 1640       | 260 | ....   | ....                    | ....                                 |
| 4"                           | 4.125                         | 4.127   | 4.123  | .095   | 4.66                    | 1650       | 260 | .058   | 2.87                    | 900                                  |
| 5"                           | 5.125                         | 5.127   | 5.123  | .109   | 6.66                    | 1530       | 240 | .072   | 4.43                    | 910                                  |
| 6"                           | 6.125                         | 6.127   | 6.123  | .122   | 8.81                    | 1430       | 230 | .083   | 6.10                    | 890                                  |
| 8"                           | 8.125                         | 8.127   | 8.123  | .170   | 16.46                   | 1510       | 240 | ....   | ....                    | ....                                 |
| 10"                          | 10.125                        | 10.127  | 10.119 | .212   | 25.6                    | 1510       | 240 | ....   | ....                    | ....                                 |
| 12"                          | 12.125                        | 12.127  | 12.119 | .254   | 36.7                    | 1510       | 240 | ....   | ....                    | ....                                 |

Ⓢ From Cabra based on 150°F. with an allowable stress of 6000 P.S.I.

\* Bursting pressures are calculated from the following Formula for thin, hollow cylinders under tension

$$P = \frac{2tS}{D}$$

Where P = Bursting pressure, Lb. per Sq. In.  
 t = Wall thickness, inches  
 D = Outside tube diameter, inches  
 S = Tensile strength (36,000 Lb. per Sq. In. for hard tubes and 30,000 for soft tubes)

☆ With safety factor of 6, maximum safe working pressure allowable by common usage up to 150°F. can be taken at 1/6 the above bursting pressure

● Rated internal pressure for copper water tube based on the strength of the tube alone and applicable to systems using suitable mechanical joints. (Pounds per Square Inch).

Refrigeration Tubing (50 Foot Coils)

| OD    | WALL |
|-------|------|
| 1/8   | .030 |
| 3/16  | .030 |
| 1/4   | .030 |
| 5/16  | .032 |
| 3/8   | .032 |
| 1/2   | .032 |
| 5/8   | .035 |
| 3/4   | .035 |
| 7/8   | .045 |
| 1 1/8 | .050 |
| 1 3/8 | .055 |
| 1 5/8 | .060 |



## COPPER WATER TUBE

| NOM. SIZE | HARD TUBING (20' LENGTH) |       |        |       |        |       |      |       |
|-----------|--------------------------|-------|--------|-------|--------|-------|------|-------|
|           | TYPE M                   |       | TYPE L |       | TYPE K |       | DWV  |       |
|           | FIG.                     | PRICE | FIG.   | PRICE | FIG.   | PRICE | FIG. | PRICE |
| 1/8       | -                        | -     | -      | -     | -      | -     | -    | -     |
| 1/4       | -                        | -     | 7504   | -     | 7515   | -     | -    | -     |
| 3/8       | 7513                     | -     | 1661   | -     | 7516   | -     | -    | -     |
| 1/2       | 1671                     | -     | 1662   | -     | 7518   | -     | -    | -     |
| 3/4       | 1672                     | -     | 1663   | -     | 7521   | -     | -    | -     |
| 1         | 1673                     | -     | 1664   | -     | 7522   | -     | -    | -     |
| 1 1/4     | 1674                     | -     | 1665   | -     | 7524   | -     | 7538 | -     |
| 1 1/2     | 1675                     | -     | 1666   | -     | 7525   | -     | 1680 | -     |
| 2         | 1676                     | -     | 1667   | -     | 7528   | -     | 1681 | -     |
| 2 1/2     | 1677                     | -     | 1668   | -     | 7531   | -     | -    | -     |
| 3         | 1678                     | -     | 1669   | -     | 7534   | -     | 1682 | -     |
| 4         | 1679                     | -     | 1670   | -     | 7536   | -     | 1683 | -     |
| 5         | -                        | -     | 7510   | -     | -      | -     | -    | -     |
| 6         | -                        | -     | 7512   | -     | -      | -     | -    | -     |
| 8         | -                        | -     | 63826  | -     | -      | -     | -    | -     |

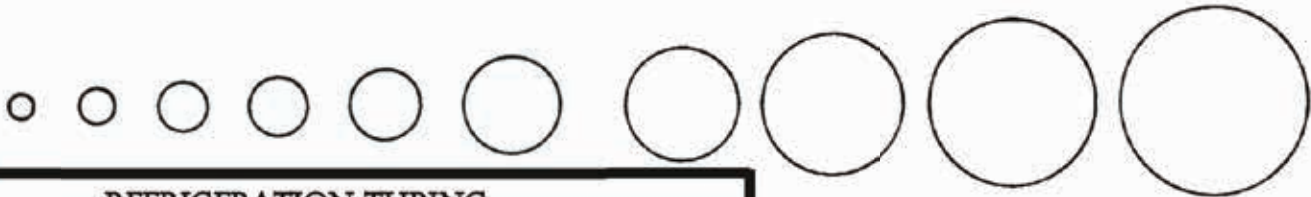
  

| 10' LENGTH |      |      |  |
|------------|------|------|--|
| 1/2        | 7545 | 7541 |  |
| 3/4        | 7552 | 7543 |  |

| SOFT TUBING |        |        |       |        |       |
|-------------|--------|--------|-------|--------|-------|
| NOM. SIZE   | LENGTH | TYPE L |       | TYPE K |       |
|             |        | FIG.   | PRICE | FIG.   | PRICE |
| 1/4         | 30     | 7556   | -     | 7567   | -     |
|             | 60     | 1684   | -     | 7565   | -     |
| 3/8         | 30     | 7557   | -     | 7572   | -     |
|             | 60     | 1685   | -     | 1689   | -     |
| 1/2         | 30     | 7558   | -     | 7574   | -     |
|             | 60     | 1686   | -     | 1690   | -     |
|             | 100    | 5840   | -     | -      | -     |
| 3/4         | 30     | 7559   | -     | 7576   | -     |
|             | 60     | 1687   | -     | 1691   | -     |
|             | 100    | 5841   | -     | 19783  | -     |
| 1           | 30     | 7561   | -     | 7578   | -     |
|             | 60     | 1688   | -     | 1692   | -     |
|             | 100    | 5842   | -     | 18987  | -     |
| 1 1/4       | 60     | -      | -     | 1693   | -     |
| 1 1/2       | 60     | 38575  | -     | 1694   | -     |
| 2           | 40     | -      | -     | 1695   | -     |

## ACTUAL OUTSIDE DIAMETERS OF TUBING

1/8"   3/16"   1/4"   5/16"   3/8"   1/2"   5/8"   3/4"   7/8"   1"



## REFRIGERATION TUBING

| SIZE OD | COILS (Soft) 50' |       | LENGTHS (Hard) 20' |       |
|---------|------------------|-------|--------------------|-------|
|         | FIG.             | PRICE | FIG.               | PRICE |
| 1/8     | 5838             | -     | -                  | -     |
| 3/16    | 7579             | -     | -                  | -     |
| 1/4     | 1696             | -     | -                  | -     |
| 5/16    | 7581             | -     | -                  | -     |
| 3/8     | 5839             | -     | 7590               | -     |
| 1/2     | 7583             | -     | 7592               | -     |
| 5/8     | 7585             | -     | 7593               | -     |
| 3/4     | 7587             | -     | 7660               | -     |
| 7/8     | 7588             | -     | 7661               | -     |
| 1 1/8   | -                | -     | 7662               | -     |
| 1 3/8   | -                | -     | 7663               | -     |
| 1 5/8   | -                | -     | 7664               | -     |

## BRASS PIPE (12' LENGTH)

| Size  | Fig No | Price |
|-------|--------|-------|
| 1/8   | 21146  | -     |
| 1/4   | 7665   | -     |
| 3/8   | 7666   | -     |
| 1/2   | 7667   | -     |
| 3/4   | 7668   | -     |
| 1     | 7672   | -     |
| 1 1/4 | 7673   | -     |
| 1 1/2 | 7674   | -     |
| 2     | 7675   | -     |
| 3     | 7677   | -     |




The outside diameter of any size copper water tube is always the same, no matter if it is type L, M, K, or DWV.

COPPER FITTINGS



| SIZE          | 90° Elbow<br>CXC |       | 45° Elbow<br>CXC |       | 90° Elbow<br>Ftg X C |       | 45° Elbow<br>Ftg X C |       | 90° LR Elbow<br>C X C |       |
|---------------|------------------|-------|------------------|-------|----------------------|-------|----------------------|-------|-----------------------|-------|
|               | Fig No           | Price | Fig No           | Price | Fig No               | Price | Fig No               | Price | Fig No                | Price |
| 1/8           | 13995            |       | 14005            |       | 14002                |       | -                    |       | -                     |       |
| 1/4           | 1697             |       | 14006            |       | 14003                |       | 14009                |       | 26415                 |       |
| 3/8           | 1698             |       | 1754             |       | 1744                 |       | 1764                 |       | 26417                 |       |
| 3/8 X 1/4     | 5801             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1/2           | 1699             |       | 1755             |       | 1745                 |       | 1765                 |       | 26419                 |       |
| 1/2 X 1/4     | 13997            |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1/2 X 3/8     | 1708             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 5/8           | 13996            |       | 14007            |       | 14004                |       | 14010                |       | 26421                 |       |
| 5/8 x 1/2     | 40046            |       | -                |       | -                    |       | -                    |       | -                     |       |
| 5/8 x 3/4     | 40045            |       | -                |       | -                    |       | -                    |       | -                     |       |
| 3/4           | 1700             |       | 1756             |       | 1746                 |       | 1766                 |       | 26422                 |       |
| 3/4 X 3/8     | 36779            |       | -                |       | -                    |       | -                    |       | -                     |       |
| 3/4 X 1/2     | 1709             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 7/8           | -                |       | -                |       | -                    |       | -                    |       | 249748                |       |
| 1             | 1701             |       | 1757             |       | 1747                 |       | 1767                 |       | 26424                 |       |
| 1 x 3/8       | 36780            |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 X 1/2       | 1710             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 X 3/4       | 1711             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/4         | 1702             |       | 1758             |       | 1748                 |       | 1768                 |       | 26426                 |       |
| 1 1/4 X 1/2   | 1712             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/4 X 3/4   | 1713             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/4 X 1     | 1714             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/2         | 1703             |       | 1759             |       | 1749                 |       | 1769                 |       | 26427                 |       |
| 1 1/2 x 1/2   | 1715             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/2 x 3/4   | 1716             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/2 x 1     | 1717             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 1 1/2 x 1 1/4 | 1718             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2             | 1704             |       | 1760             |       | 1750                 |       | 1770                 |       | 26429                 |       |
| 2 x 3/4       | 1719             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2 x 1         | 1720             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2 x 1 1/4     | 5802             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2 x 1 1/2     | 1721             |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2 1/2 x 1 1/2 | 1705             |       | 1761             |       | 1751                 |       | 1771                 |       | 26431                 |       |
| 2 1/2 x 1     | -                |       | -                |       | -                    |       | -                    |       | -                     |       |
| 2 1/2 x 2     | 33423            |       | -                |       | -                    |       | -                    |       | 25701                 |       |
| 3             | 1706             |       | 1762             |       | 1752                 |       | 1772                 |       | -                     |       |
| 3 1/2         | 35939            |       | -                |       | -                    |       | -                    |       | 25704                 |       |
| 4             | 1707             |       | 1763             |       | 1753                 |       | 5849                 |       | -                     |       |
| 5             | 33420            |       | 33403            |       | -                    |       | -                    |       | -                     |       |
| 6             | 33421            |       | 33404            |       | -                    |       | -                    |       | -                     |       |

**DUFF TIP:**  Don't forget to order sandcloth, fitting brushes, flux and solder with copper fittings!

## COPPER FITTINGS



| SIZE          | Coupling w/ Stop |       | Coupling Without Stop |       |
|---------------|------------------|-------|-----------------------|-------|
|               | FIG. NO.         | PRICE | FIG. NO.              | PRICE |
| 1/8           | 14147            | -     | -                     | -     |
| 1/4           | 1914             | -     | 5805                  | -     |
| 1/4 x 1/8     | 14148            | -     | -                     | -     |
| 3/8           | 1915             | -     | 1904                  | -     |
| 3/8 x 1/8     | 26398            | -     | -                     | -     |
| 3/8 x 1/4     | 1925             | -     | -                     | -     |
| 1/2           | -                | -     | 1905                  | -     |
| 1/2 x 1/4     | 1926             | -     | -                     | -     |
| 1/2 x 3/8     | 1927             | -     | -                     | -     |
| 5/8           | 14104            | -     | 35894                 | -     |
| 5/8 x 1/4     | 35886            | -     | -                     | -     |
| 5/8 x 3/8     | 35885            | -     | -                     | -     |
| 5/8 x 1/2     | 14105            | -     | -                     | -     |
| 3/4           | -                | -     | 1906                  | -     |
| 3/4 x 3/8     | 14149            | -     | -                     | -     |
| 3/4 X 1/2     | 1928             | -     | -                     | -     |
| 3/4 x 5/8     | 14106            | -     | -                     | -     |
| 1             | 1918             | -     | 1907                  | -     |
| 1 x 3/8       | 14150            | -     | -                     | -     |
| 1 x 1/2       | 1929             | -     | -                     | -     |
| 1 x 5/8       | 35888            | -     | -                     | -     |
| 1 x 3/4       | 1930             | -     | -                     | -     |
| 1 1/4         | 1919             | -     | 1908                  | -     |
| 1 1/4 x 1/2   | 1931             | -     | -                     | -     |
| 1 1/4 x 5/8   | -                | -     | -                     | -     |
| 1 1/4 x 3/4   | 1932             | -     | -                     | -     |
| 1 1/4 x 1     | 1933             | -     | -                     | -     |
| 1 1/2         | 1920             | -     | 1909                  | -     |
| 1 1/2 x 1/2   | 1934             | -     | -                     | -     |
| 1 1/2 x 3/4   | 1935             | -     | -                     | -     |
| 1 1/2 x 1     | 1936             | -     | -                     | -     |
| 1 1/2 x 1 1/4 | 1937             | -     | -                     | -     |
| 2             | 1921             | -     | 1910                  | -     |
| 2 x 1/2       | 1938             | -     | -                     | -     |
| 2 x 3/4       | 1939             | -     | -                     | -     |
| 2 x 1         | 1940             | -     | -                     | -     |
| 2 x 1 1/4     | 1941             | -     | -                     | -     |
| 2 1/2         | 1922             | -     | 1911                  | -     |
| 2 1/2 x 1     | 22899            | -     | -                     | -     |
| 2 1/2 x 1 1/4 | 1943             | -     | -                     | -     |
| 2 1/2 x 1 1/2 | 1944             | -     | -                     | -     |
| 2 1/2 x 2     | 1945             | -     | -                     | -     |
| 3             | 1923             | -     | 1912                  | -     |
| 3 x 1         | -                | -     | -                     | -     |
| 3 x 1 1/4     | -                | -     | -                     | -     |
| 3 x 1 1/2     | 1946             | -     | -                     | -     |
| 3 x 2         | 1947             | -     | -                     | -     |
| 3 x 2 1/2     | 1948             | -     | -                     | -     |
| 3 1/2         | 35890            | -     | -                     | -     |
| 3 1/2 x 3     | 35891            | -     | -                     | -     |
| 4             | 1924             | -     | 1913                  | -     |
| 4 x 2         | 1949             | -     | -                     | -     |
| 4 x 2 1/2     | 1950             | -     | -                     | -     |
| 4 x 3         | 1951             | -     | -                     | -     |
| 4 x 3 1/2     | -                | -     | -                     | -     |
| 5             | 33377            | -     | 33389                 | -     |
| 5 x 3         | -                | -     | -                     | -     |
| 5 x 4         | 33382            | -     | -                     | -     |
| 6             | 33378            | -     | 33390                 | -     |
| 6 x 2         | 33387            | -     | -                     | -     |
| 6 x 3         | -                | -     | -                     | -     |
| 6 x 4         | 33385            | -     | -                     | -     |
| 6 x 5         | -                | -     | -                     | -     |

| SIZE          | Adapter CXM |       | Adapter CXF |       |
|---------------|-------------|-------|-------------|-------|
|               | FIG. NO.    | PRICE | FIG. NO.    | PRICE |
| 1/8           | -           | -     | 30914       | -     |
| 1/8 X 1/4     | -           | -     | 24003       | -     |
| 1/4           | 2020        | -     | 19634       | -     |
| 1/4 X 3/8     | 26446       | -     | 35904       | -     |
| 1/4 X 1/2     | 26445       | -     | 35903       | -     |
| 3/8           | 2021        | -     | 1998        | -     |
| 3/8 X 1/4     | 25798       | -     | 14065       | -     |
| 3/8 X 1/2     | 26449       | -     | 26399       | -     |
| 3/8 X 3/4     | 26448       | -     | -           | -     |
| 3/8 X 1       | -           | -     | -           | -     |
| 1/2           | 2022        | -     | 1999        | -     |
| 1/2 X 1/4     | 2031        | -     | 2008        | -     |
| 1/2 X 3/8     | 2032        | -     | 2009        | -     |
| 1/2 X 3/4     | 2033        | -     | 2010        | -     |
| 1/2 X 1       | 2034        | -     | 35905       | -     |
| 5/8 X 1/2     | 35917       | -     | 35907       | -     |
| 5/8 X 3/4     | 35902       | -     | -           | -     |
| 3/4           | 2023        | -     | 2000        | -     |
| 3/4 X 3/8     | -           | -     | 20168       | -     |
| 3/4 X 1/2     | 2035        | -     | 2011        | -     |
| 3/4 X 1       | 2036        | -     | 2012        | -     |
| 3/4 X 1 1/4   | 2037        | -     | 2013        | -     |
| 3/4 X 1 1/2   | 26450       | -     | -           | -     |
| 1             | 2024        | -     | 2001        | -     |
| 1 X 1/2       | 2038        | -     | 2014        | -     |
| 1 X 3/4       | 2039        | -     | 2015        | -     |
| 1 X 1 1/4     | 2040        | -     | 2016        | -     |
| 1 X 1 1/2     | 2041        | -     | 26400       | -     |
| 1 X 2         | 14071       | -     | -           | -     |
| 1 1/4         | 2025        | -     | 2002        | -     |
| 1 1/4 X 1/2   | -           | -     | -           | -     |
| 1 1/4 X 3/4   | 21417       | -     | 35908       | -     |
| 1 1/4 X 1     | 2042        | -     | 2017        | -     |
| 1 1/4 X 1 1/2 | 2043        | -     | 2018        | -     |
| 1 1/4 X 2     | 14072       | -     | 20457       | -     |
| 1 1/2         | 2026        | -     | 2003        | -     |
| 1 1/2 X 3/4   | 20645       | -     | 14066       | -     |
| 1 1/2 X 1     | 2044        | -     | 14067       | -     |
| 1 1/2 X 1 1/4 | 2045        | -     | 2019        | -     |
| 1 1/2 X 2     | 2046        | -     | 14068       | -     |
| 2             | 2027        | -     | 2004        | -     |
| 2 X 1         | -           | -     | -           | -     |
| 2 X 1 1/4     | 14074       | -     | 23003       | -     |
| 2 X 1 1/2     | 33363       | -     | 14069       | -     |
| 2 X 2 1/2     | 2047        | -     | -           | -     |
| 2 1/2         | 2028        | -     | 2005        | -     |
| 2 1/2 X 2     | 14172       | -     | -           | -     |
| 3             | 2029        | -     | 2006        | -     |
| 4             | 2030        | -     | 2007        | -     |
| 5             | 33361       | -     | -           | -     |
| 6             | -           | -     | -           | -     |



COPPER FITTINGS



| Fitting Reducer Ftg X C |          |       | Flush Bushing Ftg X C |       | Fitting Adapter Ftg X M |       | Fitting Adapter Ftg X F |       |
|-------------------------|----------|-------|-----------------------|-------|-------------------------|-------|-------------------------|-------|
| SIZE                    | FIG. NO. | PRICE | FIG. NO.              | PRICE | FIG. NO.                | PRICE | FIG. NO.                | PRICE |
| 1/8                     | -        | -     | -                     | -     | 33364                   | -     | -                       | -     |
| 1/4                     | -        | -     | -                     | -     | 33365                   | -     | 33351                   | -     |
| 1/4 x 1/8               | 14029    | -     | 35969                 | -     | -                       | -     | -                       | -     |
| 3/8                     | -        | -     | -                     | -     | 33366                   | -     | 2050                    | -     |
| 3/8 x 1/4               | 14030    | -     | 5806                  | -     | -                       | -     | -                       | -     |
| 1/2                     | -        | -     | -                     | -     | 2048                    | -     | 2051                    | -     |
| 1/2 x 1/4               | 14031    | -     | 5808                  | -     | -                       | -     | 33355                   | -     |
| 1/2 x 3/8               | 14032    | -     | 5807                  | -     | 33370                   | -     | 33353                   | -     |
| 1/2 x 3/4               | -        | -     | -                     | -     | -                       | -     | -                       | -     |
| 3/4                     | -        | -     | -                     | -     | 2049                    | -     | 2052                    | -     |
| 3/4 x 1/4               | 14033    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3/4 x 3/8               | 14034    | -     | 1965                  | -     | -                       | -     | -                       | -     |
| 3/4 x 1/2               | 17753    | -     | 1964                  | -     | 33372                   | -     | 14076                   | -     |
| 3/4 x 5/8               | 35900    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1                       | -        | -     | -                     | -     | 5812                    | -     | 2053                    | -     |
| 1 x 3/8                 | 26405    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 x 1/2                 | 14035    | -     | 1966                  | -     | -                       | -     | -                       | -     |
| 1 x 5/8                 | 35901    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 x 3/4                 | 14036    | -     | 1967                  | -     | -                       | -     | 35911                   | -     |
| 1 1/4                   | -        | -     | -                     | -     | 5813                    | -     | 2054                    | -     |
| 1 1/4 x 1/2             | 14037    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 1/4 x 3/4             | 14038    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 1/4 x 1               | 14040    | -     | 1970                  | -     | -                       | -     | -                       | -     |
| 1 1/2                   | -        | -     | -                     | -     | 5814                    | -     | 2055                    | -     |
| 1 1/2 x 1/2             | 14041    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 1/2 x 3/4             | 14042    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 1/2 x 1               | 14043    | -     | -                     | -     | -                       | -     | -                       | -     |
| 1 1/2 x 1 1/4           | 14044    | -     | 1974                  | -     | -                       | -     | -                       | -     |
| 2                       | -        | -     | -                     | -     | 5815                    | -     | 2056                    | -     |
| 2 x 1/2                 | 14045    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 x 3/4                 | 14046    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 x 1                   | 14047    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 x 1 1/4               | 14048    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 x 1 1/2               | 14049    | -     | 1978                  | -     | -                       | -     | -                       | -     |
| 2 1/2                   | -        | -     | -                     | -     | 24131                   | -     | 35913                   | -     |
| 2 1/2 x 1               | 26407    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 1/2 x 1 1/4           | 14050    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 1/2 x 1 1/2           | 14051    | -     | -                     | -     | -                       | -     | -                       | -     |
| 2 1/2 x 2               | 14052    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3                       | -        | -     | -                     | -     | 26401                   | -     | 35914                   | -     |
| 3x1                     | -        | -     | -                     | -     | -                       | -     | -                       | -     |
| 3 x 1 1/4               | 14053    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3 x 1 1/2               | 14054    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3 x 2                   | 14055    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3 x 2 1/2               | 14056    | -     | -                     | -     | -                       | -     | -                       | -     |
| 3 1/2 x 3               | 33528    | -     | -                     | -     | -                       | -     | -                       | -     |
| 4 x 2                   | 20081    | -     | -                     | -     | -                       | -     | -                       | -     |
| 4 x 2 1/2               | 14057    | -     | -                     | -     | -                       | -     | -                       | -     |
| 4 x 3                   | 14058    | -     | -                     | -     | -                       | -     | -                       | -     |
| 4 x 3 1/2               | 33529    | -     | -                     | -     | -                       | -     | -                       | -     |
| 5 x 2                   | -        | -     | -                     | -     | -                       | -     | -                       | -     |
| 5 x 3                   | 26409    | -     | -                     | -     | -                       | -     | -                       | -     |
| 5 x 4                   | 26408    | -     | -                     | -     | -                       | -     | -                       | -     |
| 6 x 3                   | 26413    | -     | -                     | -     | -                       | -     | -                       | -     |
| 6 x 4                   | 26412    | -     | -                     | -     | -                       | -     | -                       | -     |
| 6 x 5                   | 26411    | -     | -                     | -     | -                       | -     | -                       | -     |

| Flush Bushing Ftg X F |          |       | Crossover C X C |       |
|-----------------------|----------|-------|-----------------|-------|
| SIZE                  | FIG. NO. | PRICE | FIG. NO.        | PRICE |
| 1/2                   | -        | -     | 14199           | -     |
| 1/2 x 1/8             | -        | -     | -               | -     |
| 1/2 x 1/4             | 17681    | -     | -               | -     |
| 3/4                   | -        | -     | 14203           | -     |
| 3/4 x 1/8             | -        | -     | -               | -     |
| 3/4 x 1/4             | -        | -     | -               | -     |
| 3/4 x 3/8             | -        | -     | -               | -     |
| 3/4 x 1/2             | 18969    | -     | -               | -     |
| 1 x 1/2               | 19426    | -     | -               | -     |
| 1 x 3/4               | -        | -     | -               | -     |
| 1 1/4 x 3/4           | 35972    | -     | -               | -     |
| 1 1/2 x 1             | 35973    | -     | -               | -     |



## COPPER TEES CXCXC



| SIZE  |       |       | Fig No |
|-------|-------|-------|--------|
| A     | B     | C     |        |
| 1/8   | 1/8   | 1/8   | 14011  |
| 1/4   | 1/4   | 1/4   | 1773   |
| 3/8   | 3/8   | 3/8   | 1774   |
| 3/8   | 3/8   | 1/8   | 14013  |
| 3/8   | 3/8   | 1/4   | 1784   |
| 3/8   | 3/8   | 1/2   | 14014  |
| 1/2   | 1/2   | 1/2   | 1775   |
| 1/2   | 1/2   | 1/4   | 33555  |
| 1/2   | 1/2   | 3/8   | 1785   |
| 1/2   | 1/2   | 3/4   | 1786   |
| 1/2   | 1/2   | 1     | 33553  |
| 5/8   | 5/8   | 5/8   | 14012  |
| 3/4   | 3/4   | 3/4   | 1776   |
| 3/4   | 3/4   | 1/4   | 22929  |
| 3/4   | 3/4   | 3/8   | 18119  |
| 3/4   | 3/4   | 1/2   | 1787   |
| 3/4   | 3/4   | 1     | 1790   |
| 3/4   | 1/2   | 1/2   | 1788   |
| 3/4   | 1/2   | 3/4   | 1789   |
| 7/8   | 7/8   | 7/8   | —      |
| 1     | 1     | 1     | 1777   |
| 1     | 1     | 1/4   | 33579  |
| 1     | 1     | 3/8   | 18120  |
| 1     | 1     | 1/2   | 1791   |
| 1     | 1/2   | 1/2   | 1792   |
| 1     | 1/2   | 3/4   | 1793   |
| 1     | 1/2   | 1     | 1794   |
| 1     | 1     | 5/8   | 33578  |
| 1     | 1     | 3/4   | 1795   |
| 1     | 3/4   | 1/2   | 1796   |
| 1     | 3/4   | 3/4   | 1797   |
| 1     | 3/4   | 1     | 1798   |
| 1     | 3/4   | 1 1/4 | —      |
| 1     | 1     | 1 1/4 | 33577  |
| 1     | 1     | 1 1/2 | 33576  |
| 1 1/4 | 1 1/4 | 1 1/4 | 1778   |
| 1 1/4 | 1 1/4 | 3/8   | 33582  |
| 1 1/4 | 1 1/4 | 3/4   | 1801   |
| 1 1/4 | 1/2   | 1/2   | 33584  |
| 1 1/4 | 1/2   | 3/4   | 1802   |
| 1 1/4 | 1/2   | 1     | 1803   |
| 1 1/4 | 1/2   | 1 1/4 | 22222  |
| 1 1/4 | 1 1/4 | 3/4   | 1804   |
| 1 1/4 | 3/4   | 1/2   | 33583  |
| 1 1/4 | 3/4   | 3/4   | 1805   |
| 1 1/4 | 3/4   | 1     | 1806   |
| 1 1/4 | 3/4   | 1 1/4 | 1807   |
| 1 1/4 | 1 1/4 | 1     | 1808   |
| 1 1/4 | 1     | 1/2   | 1809   |
| 1 1/4 | 1     | 3/4   | 1810   |
| 1 1/4 | 1     | 1     | 1811   |
| 1 1/4 | 1     | 1 1/4 | 1812   |
| 1 1/4 | 1 1/4 | 1 1/2 | 27957  |
| 1 1/2 | 1 1/2 | 1 1/2 | 1779   |
| 1 1/2 | 1 1/2 | 1/2   | 1813   |
| 1 1/2 | 1/2   | 1     | 33592  |
| 1 1/2 | 1/2   | 1 1/4 | —      |
| 1 1/2 | 1/2   | 1 1/2 | 1814   |
| 1 1/2 | 1 1/2 | 3/8   | 40043  |
| 1 1/2 | 1 1/2 | 3/4   | 1815   |
| 1 1/2 | 3/4   | 1/2   | 33590  |
| 1 1/2 | 3/4   | 3/4   | 1816   |
| 1 1/2 | 3/4   | 1     | 33589  |
| 1 1/2 | 3/4   | 1 1/4 | —      |
| 1 1/2 | 3/4   | 1 1/2 | 1817   |
| 1 1/2 | 1 1/2 | 1     | 1818   |
| 1 1/2 | 1     | 1/2   | 33588  |
| 1 1/2 | 1     | 3/4   | 1819   |
| 1 1/2 | 1     | 1     | 1820   |
| 1 1/2 | 1     | 1 1/4 | 1821   |
| 1 1/2 | 1     | 1 1/2 | 1822   |
| 1 1/2 | 1 1/2 | 1 1/4 | 1823   |
| 1 1/2 | 1 1/4 | 1/2   | 33587  |
| 1 1/2 | 1 1/4 | 3/4   | 1824   |
| 1 1/2 | 1 1/4 | 1     | 1825   |
| 1 1/2 | 1 1/4 | 1 1/4 | 1826   |
| 1 1/2 | 1 1/4 | 1 1/2 | 1827   |
| 1 1/2 | 1 1/2 | 2     | 33586  |
| 1 1/2 | 1 1/2 | 2 1/2 | —      |

| SIZE  |       |       | Fig No |
|-------|-------|-------|--------|
| A     | B     | C     |        |
| 2     | 2     | 2     | 1780   |
| 2     | 2     | 1/2   | 1828   |
| 2     | 1/2   | 2     | 1829   |
| 2     | 2     | 3/4   | 1830   |
| 2     | 3/4   | 2     | 1831   |
| 2     | 2     | 1     | 1832   |
| 2     | 1     | 1     | 21399  |
| 2     | 1     | 2     | 1834   |
| 2     | 2     | 1 1/4 | 1835   |
| 2     | 2     | 1 1/2 | 1838   |
| 2     | 1 1/2 | 1     | 1840   |
| 2     | 1 1/2 | 1 1/4 | 1841   |
| 2     | 1 1/2 | 1 1/2 | 1842   |
| 2     | 1 1/2 | 2     | 1843   |
| 2     | 2     | 1 1/2 | 33594  |
| 2     | 2     | 3     | —      |
| 2 1/2 | 2 1/2 | 2 1/2 | 1781   |
| 2 1/2 | 2 1/2 | 1/2   | 1844   |
| 2 1/2 | 1/2   | 2 1/2 | —      |
| 2 1/2 | 2 1/2 | 3/4   | 1845   |
| 2 1/2 | 3/4   | 2 1/2 | 1854   |
| 2 1/2 | 2 1/2 | 1     | 1846   |
| 2 1/2 | 1     | 2 1/2 | 1855   |
| 2 1/2 | 2 1/2 | 1 1/4 | 1847   |
| 2 1/2 | 1 1/4 | 2 1/2 | 1856   |
| 2 1/2 | 2 1/2 | 1 1/2 | 1848   |
| 2 1/2 | 1 1/2 | 1 1/2 | —      |
| 2 1/2 | 1 1/2 | 2     | 33603  |
| 2 1/2 | 1 1/2 | 3/4   | —      |
| 2 1/2 | 2 1/2 | 2     | 1849   |
| 2 1/2 | 2     | 1/2   | 33602  |
| 2 1/2 | 2     | 3/4   | 33601  |
| 2 1/2 | 2     | 1     | 1850   |
| 2 1/2 | 2     | 1 1/4 | 1851   |
| 2 1/2 | 2     | 1 1/2 | 1852   |
| 2 1/2 | 2     | 2     | 25716  |
| 2 1/2 | 2     | 2 1/2 | 1858   |
| 3     | 3     | 3     | 1782   |
| 3     | 3     | 1/2   | 1859   |
| 3     | 3     | 3/4   | 1860   |
| 3     | 3/4   | 3     | 30620  |
| 3     | 3     | 1     | 1861   |
| 3     | 1     | 3     | 33610  |
| 3     | 3     | 1 1/4 | 1862   |
| 3     | 1 1/4 | 3     | 33609  |
| 3     | 3     | 1 1/2 | 1863   |
| 3     | 1 1/2 | 3     | 33608  |
| 3     | 3     | 2     | 1864   |
| 3     | 2     | 2     | 1865   |
| 3     | 2     | 2 1/2 | 33607  |
| 3     | 2     | 3     | 1866   |
| 3     | 3     | 2 1/2 | 1867   |
| 3     | 2 1/2 | 3     | 33605  |
| 3 1/2 | 3 1/2 | 3 1/2 | 35964  |
| 4     | 4     | 4     | 1783   |
| 4     | 4     | 1/2   | 23702  |
| 4     | 4     | 3/4   | 20711  |
| 4     | 4     | 1     | 23703  |
| 4     | 4     | 1 1/4 | 23704  |
| 4     | 4     | 1 1/2 | 23705  |
| 4     | 4     | 2     | 1870   |
| 4     | 2     | 2     | 25703  |
| 4     | 2     | 4     | 33614  |
| 4     | 4     | 2 1/2 | 1871   |
| 4     | 2 1/2 | 4     | —      |
| 4     | 4     | 3     | 1872   |
| 4     | 3     | 2     | 33612  |
| 4     | 3     | 2 1/2 | 1873   |
| 4     | 3     | 3     | 33611  |
| 4     | 3     | 4     | 32487  |
| 5     | 5     | 5     | 33537  |
| 6     | 6     | 6     | 33538  |
| 8     | 8     | 8     | 33539  |

COPPER FITTINGS



TUBE CAP



RETURN BEND CXC

| Size  | Fig No | Price | Fig No | Price |
|-------|--------|-------|--------|-------|
| 1/4   | 1952   |       | 33531  |       |
| 3/8   | 1953   |       | 33532  |       |
| 1/2   | 1954   |       | -      |       |
| 5/8   | 14169  |       | 29067  |       |
| 3/4   | 1955   |       | 2057   |       |
| 1     | 1956   |       | 14078  |       |
| 1 1/4 | 1957   |       | 14079  |       |
| 1 1/2 | 1958   |       | 14080  |       |
| 2     | 1959   |       | 14081  |       |
| 2 1/2 | 1960   |       | -      |       |
| 3     | 1961   |       | -      |       |
| 4     | 1962   |       | -      |       |
| 5     | -      |       | -      |       |
| 6     | 33376  |       | -      |       |



TEE CXCXF

| Size            | Fig No | Price |
|-----------------|--------|-------|
| 1/4             | -      |       |
| 1/4 X 1/8       | -      |       |
| 3/8             | 14018  |       |
| 3/8 X 1/4       | 33645  |       |
| 3/8 X 1/2       | 14020  |       |
| 1/2             | 1874   |       |
| 1/2 X 1/8       | -      |       |
| 1/2 X 1/4       | 14021  |       |
| 1/2 X 3/8       | 14022  |       |
| 1/2 X 3/4       | 21771  |       |
| 3/4             | 1875   |       |
| 3/4 X 3/8       | 14023  |       |
| 3/4 X 1/2       | 1878   |       |
| 3/4 X 1/2 X 1/2 | -      |       |
| 3/4 X 1/2 X 3/4 | 1879   |       |
| 3/4 X 1         | 29790  |       |
| 1               | 1876   |       |
| 1 X 3/4         | 1881   |       |
| 1 X 3/4 X 1/2   | -      |       |
| 1 X 3/8         | -      |       |
| 1 X 1/2         | 1880   |       |
| 1 1/4           | 8018   |       |
| 1 1/4 X 1/2     | 1882   |       |
| 1 1/4 X 3/4     | 1883   |       |
| 1 1/4 X 1       | 1884   |       |
| 1 1/2           | 1877   |       |
| 1 1/2 X 1/2     | 18339  |       |
| 1 1/2 X 3/4     | 1885   |       |
| 1 1/2 X 1       | 33649  |       |
| 2               | 33650  |       |
| 2 X 1/2         | 1886   |       |
| 2 X 3/4         | 1887   |       |
| 2 X 1           | 1888   |       |
| 2 X 1 1/4       | -      |       |
| 2 X 1 1/2       | -      |       |



TEE CXFXC

| Size                | Fig No | Price |
|---------------------|--------|-------|
| 3/8                 | 33652  |       |
| 1/2                 | 1890   |       |
| 1/2 X 3/8 X 1/2     | 33654  |       |
| 1/2 X 3/4 X 1/2     | 1891   |       |
| 3/4                 | 1889   |       |
| 3/4 X 1/8 X 3/4     | -      |       |
| 3/4 1/2 X 3/4       | 1892   |       |
| 3/4 X 1/2           | 21660  |       |
| 1                   | 19427  |       |
| 1 X 1/8 X 1         | -      |       |
| 1 X 1/2 X           | 1893   |       |
| 1 X 3/4 X 1         | 1894   |       |
| 1 1/4               | 33658  |       |
| 1 1/4 X 1/2 X 1 1/4 | 23352  |       |
| 1 1/4 X 3/4 X 1 1/4 | 1895   |       |
| 1 1/2               | 33660  |       |
| 1 1/2 X 3/4 X 1 1/2 | 26483  |       |
| 1 1/2 X 1/2 X 1 1/2 | -      |       |
| 2                   | 36785  |       |
| 2 X 3/4 X 2         | 40040  |       |

TEE FXFXC



| Size | Fig No | Price |
|------|--------|-------|
| 1/2  | 20933  |       |
| 3/4  | 20764  |       |

AVAILABLE FOR IMMEDIATE DELIVERY!



Tee FXMXC



Tee CXFXF



Tee CXMXC



TEE CXCXM

| Size | Fig No | Price |
|------|--------|-------|
| 1/2  | -      |       |
| 3/4  | 20930  |       |



## COPPER FITTINGS



|               |               |                    |                    |                            |
|---------------|---------------|--------------------|--------------------|----------------------------|
| 90° Elbow CXM | 90° Elbow CXF | 90° Drop Elbow CXF | 90° Drop Elbow CXC | 90° Flanged Sink Elbow CXF |
|---------------|---------------|--------------------|--------------------|----------------------------|

| Size          | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price |
|---------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1/4           | -      | -     | 26009  | -     | -      | -     | -      | -     | -      | -     |
| 3/8           | 14016  | -     | 1722   | -     | 33495  | -     | -      | -     | -      | -     |
| 3/8 X 1/4     | -      | -     | 35955  | -     | -      | -     | -      | -     | -      | -     |
| 3/8 X 1/2     | 13998  | -     | 1729   | -     | 33501  | -     | -      | -     | -      | -     |
| 3/8 X 3/4     | -      | -     | -      | -     | -      | -     | -      | -     | -      | -     |
| 1/2           | 1733   | -     | 1723   | -     | 1742   | -     | 1743   | -     | 22118  | -     |
| 1/2 X 1/4     | -      | -     | 33489  | -     | -      | -     | -      | -     | -      | -     |
| 1/2 X 3/8     | 26442  | -     | 1728   | -     | 13999  | -     | -      | -     | -      | -     |
| 1/2 X 3/4     | 1740   | -     | 1730   | -     | -      | -     | -      | -     | -      | -     |
| 3/4           | 1734   | -     | 1724   | -     | 14000  | -     | 33522  | -     | -      | -     |
| 3/4 X 3/8     | -      | -     | 36499  | -     | -      | -     | -      | -     | -      | -     |
| 3/4 X 1/2     | 26444  | -     | 1731   | -     | 33502  | -     | -      | -     | -      | -     |
| 3/4 X 1       | 23621  | -     | 22365  | -     | -      | -     | -      | -     | -      | -     |
| 3/4 X 1 1/4   | -      | -     | -      | -     | -      | -     | -      | -     | -      | -     |
| 1             | 1735   | -     | 1725   | -     | -      | -     | -      | -     | -      | -     |
| 1 X 1/2       | -      | -     | 20574  | -     | -      | -     | -      | -     | -      | -     |
| 1 X 3/4       | -      | -     | 1732   | -     | -      | -     | -      | -     | -      | -     |
| 1 X 1 1/4     | -      | -     | -      | -     | -      | -     | -      | -     | -      | -     |
| 1 1/4         | 1736   | -     | 1726   | -     | -      | -     | -      | -     | -      | -     |
| 1 1/4 X 1/2   | -      | -     | 33500  | -     | -      | -     | -      | -     | -      | -     |
| 1 1/4 X 3/4   | -      | -     | 33499  | -     | -      | -     | -      | -     | -      | -     |
| 1 1/4 X 1     | -      | -     | 33498  | -     | -      | -     | -      | -     | -      | -     |
| 1 1/4 X 1 1/2 | -      | -     | -      | -     | -      | -     | -      | -     | -      | -     |
| 1 1/2         | 1737   | -     | 1727   | -     | -      | -     | -      | -     | -      | -     |
| 2             | 1738   | -     | 5848   | -     | -      | -     | -      | -     | -      | -     |

### **DUFF TIP:** Working with Copper Pipe

A properly soldered (or "sweated") joint on copper pipe is as strong as the pipe itself. A poorly soldered joint will leak. Work systematically because each step depends on the previous one: The pipe must be cut straight and all burrs removed. The inside of the fitting and the outside of the pipe must be clean. Flux must be applied for the solder to adhere. The solder must be fully drawn into the joint.

Pipe ends and fittings must be perfectly round. If either is dented or even slightly flattened, it is all but impossible to restore the original roundness. Cut the pipe again or buy a new fitting.

Cutting with a tubing cutter ensures roundness. If space is tight and you must cut with a hacksaw, do it slowly and gently. If you must bend a pipe to move it away from a wall, work carefully.

**ALL AVAILABLE FOR QUICK DELIVERY!**



90° Street Elbow CXF



90° Fitting Elbow Ftg X F



45° Elbow CXF



45° Elbow CXM



45° Fitting Elbow Ftg X M



45° Fitting Elbow Ftg x F

COPPER FITTINGS



|       | Union CXC | Union CXM | Union CXF | Fitting Plug | Cross CXCxCxC |
|-------|-----------|-----------|-----------|--------------|---------------|
| SIZE  | FIG. NO.  | FIG. NO.  | FIG. NO.  | FIG. NO.     | FIG. NO.      |
| 1/8   | -         | -         | -         | -            | -             |
| 1/4   | 14060     | 218313    | 206138    | -            | -             |
| 3/8   | 1989      | 14061     | 33669     | 14180        | -             |
| 1/2   | 1990      | 5809      | 8814      | 14182        | 14224         |
| 5/8   | 35974     | -         | -         | -            | -             |
| 3/4   | 1991      | 5810      | 1996      | 14185        | 14226         |
| 1     | 1992      | 5811      | 1997      | -            | 14228         |
| 1 1/4 | 1993      | 14062     | 23708     | 14190        | 14229         |
| 1 1/2 | 1994      | 14063     | 23709     | 14193        | 14231         |
| 2     | 1995      | 14064     | 23710     | -            | 14233         |
| 2 1/2 | 14175     | 23711     | -         | -            | -             |
| 3     | 14177     | -         | -         | -            | -             |
| 4     | -         | -         | -         | -            | -             |



|       | 90° Union Elbow CXC | 90° Union Elbow CXM | 90° Union Elbow CXF | 90° Y CXCXC | 45° Y CXCXC |
|-------|---------------------|---------------------|---------------------|-------------|-------------|
| SIZE  | FIG. NO.            | FIG. NO.            | FIG. NO.            | FIG. NO.    | FIG. NO.    |
| 3/8   | 14089               | -                   | -                   | -           | -           |
| 1/2   | 14090               | 33518               | 33509               | -           | 14151       |
| 3/4   | 14091               | 33519               | 33511               | -           | 14152       |
| 1     | 14092               | 33520               | 33512               | -           | 14153       |
| 1 1/4 | 33525               | -                   | -                   | -           | 14154       |
| 1 1/2 | -                   | -                   | -                   | -           | -           |



|       | Coupling with Drain CXC | Elbow with Drain CXC | Bulkhead CXC | Bulkhead CXM | Bulkhead CXF |
|-------|-------------------------|----------------------|--------------|--------------|--------------|
| SIZE  | FIG. NO.                | FIG. NO.             | FIG. NO.     | FIG. NO.     | FIG. NO.     |
| 3/8   | -                       | -                    | -            | -            | 33374        |
| 1/2   | 14157                   | 14164                | 14083        | 14217        | 14209        |
| 3/4   | 14158                   | 14166                | 14084        | 14218        | 14212        |
| 1     | 14159                   | 14167                | 14085        | -            | 14214        |
| 1 1/4 | -                       | 22530                | -            | -            | -            |

## COPPER PRESS FITTINGS

Believe it or not, press connections are less expensive than soldering when you consider man hours, solder, flux, etc.--even when you factor in the upfront cost of tools. Plus, you don't need a burn permit. Moreover, when you're repairing with press fittings, water can still be in the line!



| Couplings With Stop |          |
|---------------------|----------|
| SIZE                | FIG. NO. |
| 1/2                 | 199218   |
| 3/4                 | 199219   |
| 1                   | 199221   |
| 1 1/4               | 199222   |
| 1 1/2               | 199223   |
| 2                   | 199225   |
| 2 1/2               | 245382   |
| 3                   | 245383   |
| 4                   | 245384   |
| 3/4 X 1/2           | 199227   |
| 1X1/2               | 199229   |
| 1X3/4               | 199230   |
| 1 1/4 X 3/4         | 199231   |
| 11/4X1              | 199232   |
| 1 1/2 X 3/4         | 199233   |
| 11/2X1              | 199234   |
| 11/2X1 1/4          | 199235   |
| 2X3/4               | 199236   |
| 2X1                 | 199237   |
| 2X11/2              | 199239   |
| 2 1/2X1             | -        |
| 2 1/2X1 1/4         | --       |
| 2 1/2X1 1/2         | -        |
| 2 1/2X2             | --       |
| 3X3/4               | --       |
| 3X11/2              | -        |
| 3X2                 | -        |
| 3X2 1/2             | -        |
| 4X2                 | -        |
| 4X2 1/2             | -        |
| 4X3                 | -        |

| Couplings Without Stop (Slip) |          |
|-------------------------------|----------|
| SIZE                          | FIG. NO. |
| 1/2                           | 199242   |
| 3/4                           | 199243   |
| 1                             | 199244   |
| 1 1/4                         | 199246   |
| 1 1/2                         | 199247   |
| 2                             | 199248   |
| 2 1/2                         | 245385   |
| 3                             | -        |
| 4                             | 245386   |
| Extended Length*              |          |
| 1/2                           | -        |
| 3/4                           | -        |
| 1                             | --       |

| Fitting Reducers |          |
|------------------|----------|
| SIZE             | FIG. NO. |
| 3/4 X 1/2        | 199195   |
| 1X1/2            | 199196   |
| 1X3/4            | 199197   |
| 1 1/4 X 3/4      | 199198   |
| 11/4X1           | 199199   |
| 1 1/2 X 1/2      | 199203   |
| 1 1/2 X 3/4      | 199204   |
| 1 1X2 X 1        | 199205   |
| 1 1/2 X 11/4     | 199208   |
| 2X1/2            | 199209   |
| 2X3/4            | 199211   |
| 2X1              | 199212   |
| 2X11/4           | 199216   |
| 2X11/2           | 199217   |
| 2 1/2X2          | -        |
| 3X2 1/2          | -        |
| 4X2 1/2          | -        |
| 4X3              | -        |

| Unions      |          |
|-------------|----------|
| SIZE        | FIG. NO. |
| UNION 1/2   | 199453   |
| UNION 3/4   | 199454   |
| UNION 1     | 199455   |
| UNION 1 1/4 | 199457   |
| UNION 1 1/2 | 199459   |
| UNION 2     | 199460   |



| Unions |          |
|--------|----------|
| SIZE   | FIG. NO. |
| 1/2    | 199462   |
| 3/4    | 199463   |
| 1      | 199464   |
| 1 1/4  | 199465   |
| 1 1/2  | 199466   |
| 2      | 199468   |



| Caps  |          |
|-------|----------|
| SIZE  | FIG. NO. |
| 1/2   | 199379   |
| 3/4   | 199383   |
| 1     | 199385   |
| 1 1/4 | 199386   |
| 1 1/2 | 199387   |
| 2     | 199388   |
| 2 1/2 | 245409   |
| 3     | 245410   |
| 4     | 245411   |

\*Excellent for repair work!



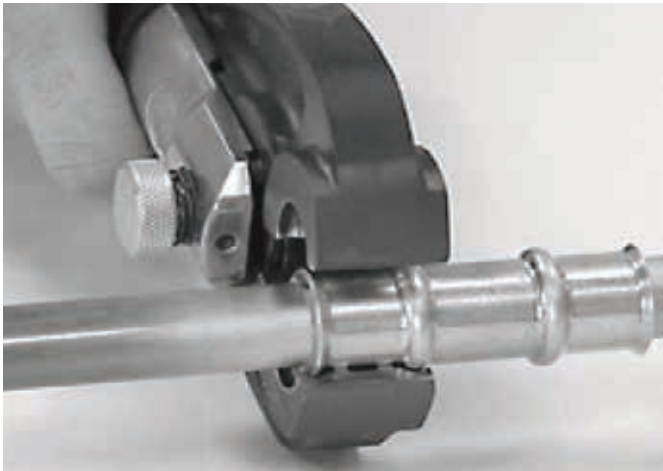
| Caps      |          |
|-----------|----------|
| SIZE      | FIG. NO. |
| 1/2 x 1/2 | 118769   |
| 3/4 x 3/4 | 118171   |



| CX Male Unions |          |
|----------------|----------|
| SIZE           | FIG. NO. |
| 1/2            | 199469   |
| 3/4            | 199470   |
| 1              | 199471   |
| 1 1/4          | 199472   |
| 1 1/2          | 199473   |
| 2              | 199474   |



| 90° Drop Ear Elbows (C X F) |          |
|-----------------------------|----------|
| SIZE                        | FIG. NO. |
| 1/2 X 3/8                   | —        |
| 1/2                         | 199412   |
| 3/4                         | 199413   |



# DUFFNOTE:

**Stainless Steel & Black Iron fittings available too!**



COPPER PRESS FITTINGS



| 90° Elbows |          |
|------------|----------|
| SIZE       | FIG. NO. |
| 1/2        | 199308   |
| 3/4        | 199309   |
| 1          | 199310   |
| 1 1/4      | 199313   |
| 1 1/2      | 199314   |
| 2          | 199316   |
| 2 1/2      | 245399   |
| 3          | 245400   |
| 4          | 245402   |



| 45° Elbows |          |
|------------|----------|
| SIZE       | FIG. NO. |
| 1/2        | 199294   |
| 3/4        | 199296   |
| 1          | 199297   |
| 1 1/4      | 199298   |
| 1 1/2      | 199299   |
| 2          | 199300   |
| 2 1/2      | 245392   |
| 3          | 245393   |
| 4          | 245394   |



| Tees  |          |
|-------|----------|
| SIZE  | FIG. NO. |
| 1/2   | 199329   |
| 3/4   | 199334   |
| 1     | 199339   |
| 1 1/4 | 199348   |
| 1 1/2 | 199358   |
| 2     | 199377   |
| 2 1/2 | 245406   |
| 3     | 245407   |
| 4     | 245408   |



| Male Adapters    |          |
|------------------|----------|
| SIZE             | FIG. NO. |
| CX M 1/2         | 199266   |
| CX M 3/4         | 199269   |
| CX M 1           | 199272   |
| CX M 1 1/4       | 199276   |
| CX M 1 1/2       | 199281   |
| CX M 2           | 199292   |
| CX M 2 1/2       | 245389   |
| CX M 3           | 245390   |
| CX M 4           | 245391   |
| CX M 1/2 X 3/8   | 199267   |
| CX M 1/2 X 3/4   | 199268   |
| CX M 3/4 X 1/2   | 199270   |
| CX M 1X3/4       | 199273   |
| CX M 1X1 1/4     | 199274   |
| CX M 1 1/4X1     | 199279   |
| CX M 1 1/4X1 1/2 | 199280   |
| CX M 1 1/2X1 1/4 | 199288   |

Reducing elbows, long-turn elbows and certain specialty items also available.



| 90° Street Elbows |          |
|-------------------|----------|
| SIZE              | FIG. NO. |
| 1/2               | 199318   |
| 3/4               | 199320   |
| 1                 | 199325   |
| 1 1/4             | 199326   |
| 1 1/2             | 199327   |
| 2                 | 199328   |
| 2 1/2             | 245403   |
| 3                 | 245404   |
| 4                 | 245405   |



| 45° Street Elbows |          |
|-------------------|----------|
| SIZE              | FIG. NO. |
| 1/2               | 199302   |
| 3/4               | 199303   |
| 1                 | 199304   |
| 1 1/4             | 199305   |
| 1 1/2             | 199306   |
| 2                 | 199307   |
| 2 1/2             | 245395   |
| 3                 | 245396   |
| 4                 | 245398   |

| Reducing Tees*      |          |
|---------------------|----------|
| SIZE                | FIG. NO. |
| 3/4 X 1/2 X 3/4     | 199336   |
| 3/4 X 3/4 X 1/2     | 199337   |
| 1 X 1/2 X 1         | 199340   |
| 1 X 3/4 X 1         | 199344   |
| 1 X 1 X 1/2         | 199345   |
| 1 X 1 X 3/4         | 199346   |
| 1 1/4 X 1 X 3/4     | 199349   |
| 1 1/4X1X1           | 199350   |
| 1 1/4X1 1/4 X 1/2   | 199355   |
| 1 1/4X1 1/4 X 3/4   | 199356   |
| 1 1/4X1 1/4 X 1     | 199357   |
| 1 1/2 X 1/2 X 1 1/2 | 199359   |
| 1 1/2 X 3/4 X 3/4   | 199364   |
| 1 1/2 X 1 X 3/4     | 199365   |
| 1 1/2X1X1           | 199366   |
| 1 1/2X1X1 1/2       | 199367   |
| 1 1/2X1 1/4X1       | 199368   |
| 1 1/2X1 1/4 X 1 1/4 | 199369   |
| 1 1/2X1 1/2 X 1/2   | 199370   |
| 1 1/2X1 1/2 X 3/4   | 199374   |
| 1 1/2X1 1/2 X 1     | 199375   |
| 1 1/2X1 1/2 X 1 1/4 | 199376   |
| 2X2X1               | 309969   |
| 2-1/2 X 2-1/2 X 1   | 319838   |
| 3 X 3 X 3/4         | 259066   |
| 3 X 3/4 X 3         | 307950   |



| Female Adapters  |          |
|------------------|----------|
| SIZE             | FIG. NO. |
| CX F 1/2         | 199249   |
| CX F 3/4         | 199252   |
| CX F 1           | 199254   |
| CX F 1 1/4       | 199258   |
| CX F 1 1/2       | 199260   |
| CX F 2           | 199263   |
| CX F 1/2 X 3/8   | 199250   |
| CX F 1/2 X 3/4   | 199251   |
| CX F 3/4 X 1/2   | 199253   |
| CX F 1X1/2       | 199255   |
| CX F 1X3/4       | 199256   |
| CX F 1X1 1/4     | 199257   |
| CX F 1 1/4 X 1/2 | -        |
| CX F 1 1/4X1     | 199259   |
| CX F 1 1/4X1 1/2 | 199261   |
| CX F 1 1/2 X 3/4 | -        |
| CX F 1 1/2X1 1/4 | 199262   |



Flanges are available 2" - 4", 125 lb. rating and 150 lb. rating.

Don't forget to order nuts & bolts and gaskets.

\*When calling a Tee, read the run first, large-to-small, and then the branch. Many other reducing Tees available through 4"

**DUFF DELIVERS**



## COPPER PRESS FITTINGS



| 90° Elbows (C X M) |          |
|--------------------|----------|
| SIZE               | FIG. NO. |
| 1/2                | 199418   |
| 3/4                | 199420   |
| 3/4 X 1/2          | 199426   |
| 1                  | 199427   |
| 1 1/4              | 199429   |
| 1 1/2              | 199430   |
| 2                  | 199431   |



| 90° Female Elbows (C X F) |          |
|---------------------------|----------|
| SIZE                      | FIG. NO. |
| 1/2                       | 199389   |
| 3/4                       | 199392   |
| 3/4 X 1/2                 | 199394   |
| 1                         | 199408   |
| 1 1/4                     | 199409   |
| 1 1/2                     | 199410   |
| 2                         | 199411   |



| Female Outlet Tees (C X C X F) |          |
|--------------------------------|----------|
| SIZE                           | FIG. NO. |
| 1/2                            | 199433   |
| 3/4                            | 305390   |
| 3/4 X 3/4 X 1/2                | 199436   |
| 1 X 1 X 1/2                    | 199437   |
| 1 X 1 X 3/4                    | 306182   |
| 1 1/4 X 1 1/4 X 1/2            | -        |
| 1 1/4 X 1 1/4 X 3/4            | -        |
| 1 1/2 X 1 1/2 X 1/2            | 199443   |
| 1 1/2 X 1 1/2 X 3/4            | -        |
| 2 X 2 X 1/2                    | 199451   |
| 2 X 2 X 3/4                    | -        |



| Bullhead Tees   |          |
|-----------------|----------|
| SIZE            | FIG. NO. |
| 1/2 x 1/2 X 3/4 | 199330   |
| 1/2 x 1/2 X 1   | 199483   |
| 3/4 x 3/4 X 1   | 199338   |
| 1X1x1/4         | 199347   |
| 1x1x2           | -        |
| 1 1/4x1 1/4 x 2 | -        |
| 1 1/2x1 1/2 x 2 | -        |
| 1 1/2x1 1/2 x 3 | --       |
| 2x2x3           | -        |
| 2 1/2x2 1/2 x 3 | -        |
| 2 1/2x2 1/2 x 4 | -        |

*Stainless Steel & Black Iron fittings available too!*

*These and many other specialty fittings are available:*



Female Street Elbow /  
Reducer Street Elbows



Female Street Adapters /  
Reducer Adapters



Reducer Run / Outlet Tees



90° Reducing Elbows



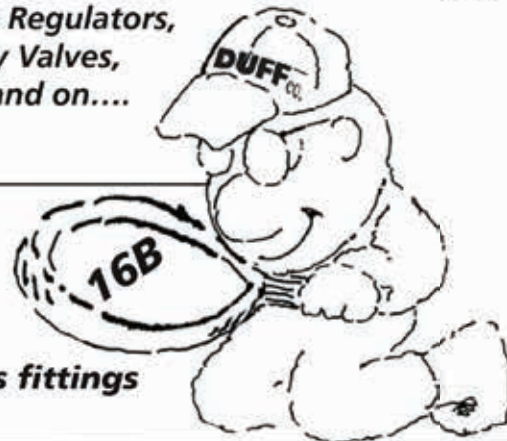
Male Street Adapters / Reducer Adapters



Reducer Outlet Tees

# DUFF TIP:

*New press fittings are always coming to market, including Backflow Preventers, Pressure Regulators, Specialty Valves, and on and on....*



**See page 16B for PRESS BALL VALVES.**

**See page 96C for black pipe Mega Press fittings**

**COPPER FITTINGS - DWV**



|               | 90° Elbow CXC |       | 90° Elbow Ftg X C |       | 45° Elbw CXC |       | 45° Elbow FtgXC |       |
|---------------|---------------|-------|-------------------|-------|--------------|-------|-----------------|-------|
| SIZE          | Fig No        | Price | Fig No            | Price | Fig No       | Price | Fig No          | Price |
| 1 1/4         | 14388         |       | 14390             |       | 14392        |       | 14394           |       |
| 1 1/2         | 2058          |       | 2062              |       | 2066         |       | 2070            |       |
| 1 1/2 x 1 1/4 | 20259         |       | -                 |       | -            |       | -               |       |
| 2             | 2059          |       | 2063              |       | 2067         |       | 2071            |       |
| 2 x 1 1/2     | -             |       | -                 |       | -            |       | -               |       |
| 3             | 2060          |       | 2064              |       | 2068         |       | 2072            |       |
| 4             | 2061          |       | 2065              |       | 2069         |       | 14380           |       |



|       | 22 1/2° Elbow CXC |       | 11 1/4° Elbow CXC |       | 60° Elbow CXC |       | 90° Elbow C X F |       | 90° Elbow CXM |       |
|-------|-------------------|-------|-------------------|-------|---------------|-------|-----------------|-------|---------------|-------|
| SIZE  | Fig No            | Price | Fig No            | Price | Fig No        | Price | Fig No          | Price | Fig No        | Price |
| 1 1/4 | 33879             |       | -                 |       | -             |       | -               |       | -             |       |
| 1 1/2 | 2073              |       | -                 |       | 30654         |       | 2079            |       | 2081          |       |
| 2     | 2074              |       | -                 |       | 33881         |       | 2080            |       | -             |       |
| 3     | 2075              |       | -                 |       | 33883         |       | -               |       | -             |       |
| 4     | 28328             |       | -                 |       | -             |       | -               |       | -             |       |



|                       | 90° Elbow with Heel Inlet CXCXC |       | 90° Elbow with Side Inlet CXCXC |       | Double Elbow CXC |       |
|-----------------------|---------------------------------|-------|---------------------------------|-------|------------------|-------|
| SIZE                  | Fig No                          | Price | Fig No                          | Price | Fig No           | Price |
| 1 1/2                 | -                               |       | -                               |       | 26453            |       |
| 1 1/2 x 1 1/4 x 1 1/4 | -                               |       | -                               |       | -                |       |
| 2                     | -                               |       | -                               |       | 24241            |       |
| 2 x 1 1/2 x 1 1/2     | -                               |       | -                               |       | 33900            |       |
| 3 x 2                 | -                               |       | 5818                            |       | -                |       |
| 3 x 1 1/2             | -                               |       | -                               |       | -                |       |
| 4 x 2                 | -                               |       | -                               |       | -                |       |



## COPPER FITTINGS - DWV



| SIZE                  | TEE CXCXC |       | TEE CXCXC |       | TEE CXCXF |       | DOUBLE TEE CXCXCXC |       |
|-----------------------|-----------|-------|-----------|-------|-----------|-------|--------------------|-------|
|                       | Fig No    | Price | Fig No    | Price | Fig No    | Price | Fig No             | Price |
| 1 1/4                 | 14387     | -     | -         | -     | -         | -     | -                  | -     |
| 1 1/2                 | 23005     | -     | 33893     | -     | 2095      | -     | 2097               | -     |
| 1 1/2 x 1 1/4         | 14369     | -     | -         | -     | -         | -     | 33895              | -     |
| 1 1/2 x 1 1/4 x 1 1/2 | -         | -     | -         | -     | -         | -     | -                  | -     |
| 2                     | 2083      | -     | -         | -     | 2096      | -     | 2098               | -     |
| 2 X 1 1/4             | 33891     | -     | -         | -     | -         | -     | 33897              | -     |
| 2 X 1 1/2             | 2087      | -     | -         | -     | -         | -     | 2100               | -     |
| 2 X 1 1/2 X 1 1/4     | -         | -     | -         | -     | -         | -     | -                  | -     |
| 2 X 1 1/2 X 1 1/2     | 2088      | -     | -         | -     | -         | -     | -                  | -     |
| 2 X 1 1/2 X 2         | 2089      | -     | -         | -     | -         | -     | -                  | -     |
| 3                     | 2085      | -     | -         | -     | -         | -     | -                  | -     |
| 3 X 1 1/4             | -         | -     | -         | -     | -         | -     | -                  | -     |
| 3 X 1 1/2             | 2090      | -     | -         | -     | -         | -     | -                  | -     |
| 3 X 2                 | 2091      | -     | -         | -     | -         | -     | 2102               | -     |
| 4                     | 2086      | -     | -         | -     | -         | -     | -                  | -     |
| 4 X 1 1/2             | -         | -     | -         | -     | -         | -     | -                  | -     |
| 4 X 2                 | 2093      | -     | -         | -     | -         | -     | -                  | -     |
| 4 X 3                 | 2094      | -     | -         | -     | -         | -     | -                  | -     |



| Size              | WYE CXCXC |       | DOUBLE Y CXCXC |       |
|-------------------|-----------|-------|----------------|-------|
|                   | Fig No    | Price | Fig No         | Price |
| 1 1/4             | 14384     | -     | -              | -     |
| 1 1/2             | 2103      | -     | 2115           | -     |
| 1 1/2 X 1 1/4     | -         | -     | -              | -     |
| 2                 | 2104      | -     | -              | -     |
| 2 X 1 1/2         | 2107      | -     | -              | -     |
| 2 X 1 1/2 X 1 1/4 | -         | -     | -              | -     |
| 2 X 1 1/2 X 1 1/2 | 2108      | -     | -              | -     |
| 2 X 1 1/2 X 2     | 2109      | -     | -              | -     |
| 3                 | 2105      | -     | -              | -     |
| 3 X 1 1/2         | 2110      | -     | -              | -     |
| 3 X 2             | 2111      | -     | -              | -     |
| 4                 | 2106      | -     | -              | -     |
| 4 X 1 1/2         | -         | -     | -              | -     |
| 4 X 2             | 2113      | -     | -              | -     |
| 4 X 3             | 2114      | -     | -              | -     |

**ALSO READILY AVAILABLE FOR YOUR CONVENIENCE!**



45° Wye CXCXF



45° Wye CXCXC

COPPER FITTINGS - DWV



Flush Cleanout w/ Plug  
FigXF w/ Plug

Cleanout w/ Plug  
FigXF w/ Plug

| Size        | Fig No | Price | Fig No | Price |
|-------------|--------|-------|--------|-------|
| 1 1/4       | -      | -     | 14395  | -     |
| 1 1/4 X 3/4 | 33925  | -     | -      | -     |
| 1 1/2       | -      | -     | 2121   | -     |
| 1 1/2 X 1   | 33926  | -     | -      | -     |
| 2           | -      | -     | 2122   | -     |
| 2X1 1/2     | 33927  | -     | -      | -     |
| 3           | -      | -     | 2123   | -     |
| 3X2 1/2     | 33928  | -     | -      | -     |
| 4           | -      | -     | 14371  | -     |
| 4X3         | 33929  | -     | -      | -     |



DWV COUPLING CXC



DWV REPAIR COUPLING CXC



FLUSH BUSHING FTGXC

| Size          | Fig No | Price | Fig No | Price | Fig No | Price |
|---------------|--------|-------|--------|-------|--------|-------|
| 1 1/4         | 14400  | -     | -      | -     | -      | -     |
| 1 1/2         | 2127   | -     | 2135   | -     | -      | -     |
| 1 1/2 X 1 1/4 | 22459  | -     | -      | -     | -      | -     |
| 2             | 2128   | -     | 2136   | -     | -      | -     |
| 2 X 1 1/4     | 20341  | -     | -      | -     | 33874  | -     |
| 2 X 1 1/2     | 2131   | -     | -      | -     | 33931  | -     |
| 3             | 2129   | -     | 2137   | -     | -      | -     |
| 3 X 1 1/2     | 2132   | -     | -      | -     | -      | -     |
| 3 X 2         | 2133   | -     | -      | -     | -      | -     |
| 4             | 2130   | -     | 33875  | -     | 33875  | -     |
| 4X3           | 2134   | -     | -      | -     | -      | -     |



Soil Pipe Adapter C X Spigot



Adapter C X F



Adapter C X M

| Size          | Fig No | Price | Fig No | Price | Fig No | Price |
|---------------|--------|-------|--------|-------|--------|-------|
| 1 1/4         | -      | -     | 14403  | -     | 14406  | -     |
| 1 1/4 x 1 1/2 | -      | -     | -      | -     | 23777  | -     |
| 1 1/4 x 2     | 33909  | -     | -      | -     | -      | -     |
| 1 1/2         | -      | -     | 2151   | -     | 2158   | -     |
| 1 1/2 x 1 1/4 | -      | -     | -      | -     | 21639  | -     |
| 1 1/2 x 2     | 2149   | -     | -      | -     | 23778  | -     |
| 1 1/2 x 3     | 22735  | -     | -      | -     | -      | -     |
| 1 1/2 x 4     | -      | -     | -      | -     | -      | -     |
| 2             | -      | -     | 2152   | -     | 2159   | -     |
| 2 x 1 1/4     | -      | -     | -      | -     | -      | -     |
| 2 x 1 1/2     | -      | -     | -      | -     | 23779  | -     |
| 2 x 2         | 2146   | -     | -      | -     | -      | -     |
| 2 x 3         | -      | -     | -      | -     | -      | -     |
| 2 x 4         | 21391  | -     | -      | -     | -      | -     |
| 3             | -      | -     | 2153   | -     | 2160   | -     |
| 3 x 3         | 2147   | -     | -      | -     | -      | -     |
| 3 x 4         | 33912  | -     | -      | -     | -      | -     |
| 4             | -      | -     | 5851   | -     | 2161   | -     |
| 4 x 2         | -      | -     | -      | -     | -      | -     |
| 4 x 3         | -      | -     | -      | -     | -      | -     |
| 4 x 4         | -      | -     | -      | -     | -      | -     |

## COPPER FITTINGS - DWV



P-Trap CXC







P-Trap w/ Union Joint (LA Style) CXSJ

# DUFF

# TIP:

*When ordering any DWV copper fitting, don't forget to order solder and flux*

| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE |
|-------|----------|-------|----------|-------|
| 1 1/4 | 64864    | -     | -        | -     |
| 1 1/2 | 64866    | -     | 5828     | -     |
| 2     | 64867    | -     | -        | -     |

|  |  |  |  |       |          |       |          |       |
|---|---|--|---|-------|----------|-------|----------|-------|
| Drum Trap   | Return Bend CXC   | Test cap   | Test Tee CXC Cleanout w/ plug   |       |          |       |          |       |
| SIZE  | FIG. NO.  | PRICE  | FIG. NO.  | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 1 1/4   | -   | -  | 14378   | -     | 14415    | -     | -        | -     |
| 1 1/2   | -   | -  | 5831  | -     | 10900    | -     | -        | -     |
| 1 1/2x3x5   | -   | -  | -   | -     | -        | -     | -        | -     |
| 1 1/2x3x6   | -   | -  | -   | -     | -        | -     | -        | -     |
| 2   | -   | -  | 5832  | -     | 10901    | -     | 10904    | -     |
| 3   | -   | -  | 14377   | -     | 10902    | -     | -        | -     |
| 4   | -   | -  | -   | -     | -        | -     | -        | -     |

**ALSO READILY  
AVAILABLE FOR YOUR  
CONVENIENCE!**



Offset Closet Fitting  
Ftg X C



Fitting Plug



COPPER FITTINGS - DWV



| SIZE          | Trap Adapter Ftg X SJ |       | Trap Adapter C X SJ |       | Trap Adapter M X SJ |       | Trap Adapter F X SJ |       |
|---------------|-----------------------|-------|---------------------|-------|---------------------|-------|---------------------|-------|
|               | Fig No                | Price | Fig No              | Price | Fig No              | Price | Fig No              | Price |
| 1 1/4         | 14406                 |       | 14411               |       | -                   |       | 33916               |       |
| 1 1/2         | 5821                  |       | 5822                |       | -                   |       | 5820                |       |
| 1 1/2 x 1 1/4 | 33913                 |       | 33914               |       | -                   |       | 33917               |       |
| 2 x 1 1/2     | -                     |       | -                   |       | -                   |       | -                   |       |



CLOSET FLANGE

DEEP CLOSET FLANGE

| Size  | Fig No | Price | Fig No | Price |
|-------|--------|-------|--------|-------|
| 3 x 4 | -      |       | 2165   |       |
| 4     | 14330  |       | -      |       |



Adapter Ftg X F

Adapter Ftg X M

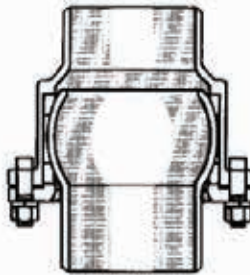
| Size  | Fig No | Price | Fig No | Price |
|-------|--------|-------|--------|-------|
| 1 1/4 | 14404  |       | -      |       |
| 1 1/2 | 2154   |       | 5850   |       |
| 2     | 2155   |       | 2162   |       |
| 3     | 2156   |       | -      |       |

ROTARY BALL & SWIVEL JOINTS

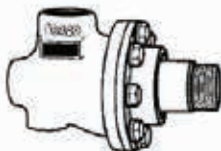
BARCO

Barco offers the steel industry an important combination of special benefits: (a) a wide variety of top quality products for steelmaking applications, (b) single source efficiency, (c) local availability through a national network of Barco distributors.

Barco Ball Joints (many in service for more than 40 years with no maintenance) handle thermal expansion, vibration, shock and settling. They offer many advantages over slip joints, bellows or pipe loops...much less space is required, the need for guides and anchors is drastically reduced, and installation is faster and easier. Steelmaking applications include: steam decarburizing lines, hot process piping, distribution piping, hood cooling systems, flux chute and hood doors, trunion rings, spray headers, de-scaling, furnace and test piping.



Barco Ball Joint



**Barco Rotary Joints** handle single flow or syphon flow applications using steam, hot oil, air, gas or chemicals. Steelmaking applications include: trunion rings, pinch roll cooling and straightener rolls on continuous casting machines, scrubbing lines and run out table roll cooling.



**Barco Swivel Joints** with positive, long-lasting Tri-Ring seal allow free swiveling under pressure. Efficient dust seals protect seal area against dirt and other foreign particles. Wide-spaced bearing area permits heavier end loads, smooth turning. Low torque is assured throughout entire pressure range.

PERFECTING Duff-Numeron

Rotary Union® Joints

The Perfecting Rotary Union® joint is the finest rotating sealing mechanism.



**COPPER FITTINGS  
FLARED FOR WATER SERVICE  
MAC PAC STYLE FITTING ALSO STOCKED  
See page 610 for Macpac water service fittings.**



| Coupling<br>CXC |        | Adapter<br>CXF |        | Adapter<br>CXM |        |       |
|-----------------|--------|----------------|--------|----------------|--------|-------|
| Size            | Fig No | Price          | Fig No | Price          | Fig No | Price |
| 3/8             | —      | —              | —      | —              | 14313  | —     |
| 1/2             | 14285  | —              | 14301  | —              | 14316  | —     |
| 3/4             | 14287  | —              | 14303  | —              | 14318  | —     |
| 1               | 14290  | —              | 14305  | —              | 14320  | —     |
| 1 1/4           | 14291  | —              | —      | —              | —      | —     |
| 1 1/2           | 14292  | —              | 14310  | —              | 14324  | —     |
| 2               | 14295  | —              | 14311  | —              | 14327  | —     |

| 90° Elbow<br>CXC |        |       | 90° Elbow<br>CXM |       |        | Tee<br>CXCXC |  |
|------------------|--------|-------|------------------|-------|--------|--------------|--|
| Size             | Fig No | Price | Fig No           | Price | Fig No | Price        |  |
| 3/8              | —      | —     | —                | —     | —      | —            |  |
| 1/2              | 14332  | —     | 33698            | —     | 14345  | —            |  |
| 3/4              | 14334  | —     | 33699            | —     | 14349  | —            |  |
| 1                | 14335  | —     | 33700            | —     | 14352  | —            |  |
| 1 1/4            | —      | —     | —                | —     | —      | —            |  |
| 1 1/2            | 14339  | —     | 33702            | —     | 14357  | —            |  |
| 2                | 14341  | —     | —                | —     | —      | —            |  |

## COPPER FITTINGS

### CAST FLANGED FITTINGS FOR COPPER TUBING OR BRASS PIPE



**COMPANION  
FLANGE**



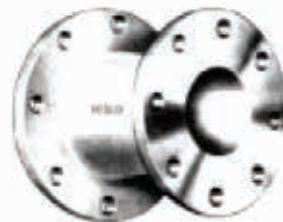
90° Elbow



45° Elbow

| Size  | Fig No | Price |
|-------|--------|-------|
| 1/2   | 14239  | —     |
| 3/4   | 14241  | —     |
| 1     | 14244  | —     |
| 1 1/4 | 14249  | —     |
| 1 1/2 | 14255  | —     |
| 2     | 14257  | —     |
| 2 1/2 | 14259  | —     |
| 3     | 14261  | —     |
| 4     | 14264  | —     |
| 5     | 14266  | —     |
| 6     | 14267  | —     |
| 8     | —      | —     |

\* Class 125 provided unless class 150 specified.



Reducer



Cross



Tee



Threaded Companion  
Flange

**ALL AVAILABLE FOR QUICK DELIVERY!**



CHROME PLATED BRASS FITTINGS

CHROME PLATED BRASS NIPPLES



| SIZE        | FIG. NO. | PRICE |
|-------------|----------|-------|
| 3/8 X Close | 2551     |       |
| 3/8 x 1 1/2 | 2552     |       |
| 3/8 x 2     | 34737    |       |
| 3/8 x 2 1/2 | 2554     |       |
| 3/8 x 3     | 2555     |       |
| 3/8 x 3 1/2 | 2556     |       |
| 3/8 x 4     | 2557     |       |
| 3/8 x 4 1/2 | 2558     |       |
| 3/8 x 5     | 2559     |       |
| 3/8 x 5 1/2 | 2560     |       |
| 3/8 x 6     | 2561     |       |
| 3/8 x 12    | 12628    |       |
| 3/8 x 18    | 12631    |       |
| 3/8 x 24    | 12636    |       |
| <hr/>       |          |       |
| 1/2 x Close | 2569     |       |
| 1/2 x 1 1/2 | 2570     |       |
| 1/2 x 2     | 2571     |       |
| 1/2 x 2 1/2 | 2572     |       |
| 1/2 x 3     | 2573     |       |
| 1/2 x 3 1/2 | 2574     |       |
| 1/2 x 4     | 2575     |       |
| 1/2 x 4 1/2 | 2576     |       |
| 1/2 x 5     | 2577     |       |
| 1/2 x 5 1/2 | 2578     |       |
| 1/2 x 6     | 2579     |       |
| 1/2 x 12    | 33961    |       |
| 1/2 x 15    | —        |       |
| 1/2 x 18    | —        |       |
| <hr/>       |          |       |
| 3/4 x Close | 2580     |       |
| 3/4 x 2     | —        |       |
| 3/4 x 4     | —        |       |
| 3/4 x 5     | 2588     |       |
| 3/4 x 6     | 2590     |       |

CHROME PLATED BRASS PIPE



| SIZE       | FIG. NO. | PRICE |
|------------|----------|-------|
| 3/8 X 6 FT | 12657    |       |
| 1/2 X 6 FT | 12659    |       |

A complete line of chrome plated valves and fittings are available up to 2"

CHROME PLATED



BRASS 90° ELBOW

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8" | 12704    |       |
| 1/2" | 2546     |       |
| 3/4" | 2547     |       |



CHROME PLATED BRASS 45° ELBOW

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8  | 2548     |       |
| 1/2  | 2549     |       |
| 3/4  | 2550     |       |

CHROME PLATED

BRASS STREET 90° ELBOW



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 1/2" | 2533     |       |
| 3/8" | 2532     |       |

CHROME PLATED

BRASS STREET 45° ELBOW



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8  | 2530     |       |
| 1/2  | 2531     |       |

CHROME PLATED

BRASS TEE



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8  | 2534     |       |
| 1/2  | 2535     |       |

CHROME PLATED

BRASS UNION



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8  | —        |       |
| 1/2  | 2541     |       |

CHROME PLATED BRASS

BUSHING



| SIZE      | FIG. NO. | PRICE |
|-----------|----------|-------|
| 1/2 X 3/8 | 12645    |       |
| 3/4 X 1/2 | 12647    |       |
| 3/8 X 1/4 | 40030    |       |

CHROME PLATED BRASS

COUPLING



| SIZE      | FIG. NO. | PRICE |
|-----------|----------|-------|
| 3/8       | 2542     |       |
| 1/2       | 2543     |       |
| 3/4       | 2544     |       |
| 1/2 X 3/8 | 5901     |       |
| 3/4 X 1/2 | 5902     |       |

CHROME PLATED

BRASS CAP



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 1/2  | 2539     |       |

CHROME PLATED


BRASS PLUG



| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3/8  | 2536     |       |



## PEX PIPE & FITTINGS

| 3/8" PEX TUBING |          |          | 1/2" PEX TUBING |          |          | 3/4" PEX TUBING |          |          | 1" PEX TUBING   |       |          |  |  |  |
|-----------------|----------|----------|-----------------|----------|----------|-----------------|----------|----------|---|-------|----------|--|--|--|
| Length          | Color    | FIG. NO. | Length          | Color    | FIG. NO. | Length          | Color    | FIG. NO. | Length  | Color | FIG. NO. |  |  |  |
| 100'            | RED      | 172755   | 100'            | RED      | 172748   | 100'            | RED      | 172750   | 100'  | RED   | 20842    |  |  |  |
| 100'            | BLUE     | 172747   | 100'            | BLUE     | 172756   | 100'            | BLUE     | 172757   | 100'  | BLUE  | 20841    |  |  |  |
| 100'            | WHITE    | 219884   | 100'            | WHITE    | 172743   | 100'            | WHITE    | 172744   | 100'  | WHITE | 17271    |  |  |  |
|                 |          |          | 300'            | RED      | 178654   |                 |          |          |  |       |          |  |  |  |
|                 |          |          | 300'            | BLUE     | 178653   |                 |          |          |   |       |          |  |  |  |
| 500'            | RED      | 185496   |                 |          |          | 500'            | RED      | 172749   |   |       |          |  |  |  |
| 500'            | BLUE     | 185495   |                 |          |          | 500'            | RED      | 172749   |   |       |          |  |  |  |
| 500'            | RED/BLUE | 172746   | 300'            | RED/BLUE | 172754   | 20'             | RED      | 207672   | 20'   | RED   | 176663   |  |  |  |
|                 |          |          | 20'             | RED      | 50231    | 20'             | BLUE     | 176663   | 20'   | BLUE  | 190937   |  |  |  |
|                 |          |          | 20'             | BLUE     | 130825   | 20'             | WHITE    | 190937   |   |       |          |  |  |  |
|                 |          |          | 20'             | WHITE    | 226736   | 20'             | WHITE    | 190937   |   |       |          |  |  |  |
|                 |          |          | 20'             | RED HEAT | 258821   | 20'             | RED HEAT | 210355   |   |       |          |  |  |  |
|                 |          |          | 300'            | RED HEAT | 111466   | 300'            | RED HEAT | 187799   |   |       |          |  |  |  |

| 90°          |        | COUPLING     |        | TEE          |        | REDUCERS    |        | PLUGS |        | MALE ADAPTERS |        | FEMALE ADAPTERS |        |
|--------------|--------|--------------|--------|--------------|--------|-------------|--------|-------|--------|---------------|--------|-----------------|--------|
| SIZE         | FIG NO | SIZE         | FIG NO | SIZE         | FIG NO | SIZE        | FIG NO | SIZE  | FIG NO | SIZE          | FIG NO | SIZE            | FIG NO |
| 3/8"         | 183549 | 3/8"         | 172773 | 3/8"         | 172761 | —           | —      | 3/8"  | 172805 | 3/8" X 1/2"   | 172782 |                 |        |
| 1/2"         | 172770 | 1/2"         | 172774 | 1/2"         | 172773 | 1/2" X 3/8" | 172296 | 1/2"  | 172810 | 3/8"          | 177781 | 1/2"            | 172792 |
| 3/4"         | 172771 | 3/4"         | 172775 | 3/4"         | 172767 | 3/4" x 1/2" | 192001 | 3/4"  | 172807 | 1/2"          | 172802 | 3/4"            | 172795 |
| 1"           | 172772 | 1"           | 172776 | 1"           | 172769 | 1" x 3/4"   | 266341 | 3/4"  | 172803 | 1"            | 172804 | 1"              | 172793 |
| 3/4" plastic | 246836 | 3/4" plastic | 246840 | 3/4" plastic | 246838 | —           | —      | —     | —      | 3/4" x 1"     | 180719 | 3/4" Pex        | 246836 |
| 1" plastic   | 246836 | 1" plastic   | 246841 | 1" plastic   | 246839 | —           | —      | —     | —      |               |        | 1" Pex          | 172795 |


## SHARK BITE FITTINGS

SharkBite Push-Fit fittings are perfect when you can't solder a joint — and, they're easier to use! They work with PEX, CPVC and copper tubing. Available in sizes up to 2"!

| 90° ELBOW   |         | A           |        | COUPLINGS B         |         | FEMALE ADAPTERS C          |        | CTS MALE ADAPTERS D                              |        |
|-------------|---------|-------------|--------|---------------------|---------|----------------------------|--------|--|--------|
| SIZE        | FIG NO  | SIZE        | FIG NO | SIZE                | FIG NO  | SIZE                       | FIG NO | SIZE   | FIG NO |
| 1/2"        | 173436  | 1/2"        | 171062 | 1/2"                | 171065  | 1/2"                       | 171065 | 1/2"   | 171067 |
| 3/4"        | 173437  | 3/4"        | 171063 | 1/2" CTS x 3/4" FPT | 212772  | 1/2" CTS x 3/4" MPT        | 212773 | 1/2"   | 171068 |
| 1/2" x 3/4" | 212774  | 3/4" x 1/2" | 171064 | 3/4"                | 171066  | 3/4"                       | 171066 | 3/4"   | 339111 |
| 1"          | 182518  | 1"          | 182511 | 1"                  | 182514  | 1"                         | 182514 | 3/4" x 1"  | 182516 |
|             |         | 1" x 3/4"   | 182513 |                     |         |                            |        | 1"   | 182516 |
| TEES E      |         | CAPS F      |        | BALL VALVES G       |         | SPECIALTY ITEMS H          |        |  |        |
| SIZE        | FIG NO. | SIZE        | FIG NO | SIZE                | FIG NO. | SIZE                       | FIG NO | SIZE   | FIG NO |
| 1/2"        | 173433  | 1/2"        | 172677 | 1/2"                | 197275  | 1/2" CTS x FPT 90 EL       | 212775 | 1/2" CTS x FPT 90 EL                             | 212775 |
| 3/4"        | 173434  | 3/4"        | 127678 | 3/4"                | 197276  | 1/2" CTS x FPT Drop ear El | 212779 | 1/2" CTS x FPT Drop ear El                       | 212779 |
| 1/2" x 3/4" | 173435  | 1"          | 182523 | 1"                  | 220616  | 3/4" CTS x FPT Drop ear EL | 212782 | 1/2" CTS x FPT 90 EL                             | 212782 |
| 1"          | 182520  | 1 1/2"      | —      | 1 1/2"              | —       | 1/2" CTS x MPT 90 EL       | 212776 | 1/2" disconnect tool                             | 171072 |
| 1" x 3/4"   | 182522  | 2"          | —      | 2"                  | —       | 3/4" disconnect tool       | 171073 | 1/2" SB x 3/4" FPT (2X) water heater connec. kit | 277049 |
|             |         |             |        |                     |         |                            |        | 3/4" SB x 3/4" FPT (2X) water heater connec. kit | 171069 |

| FLEXIBLE S/S SHARKBITE WATER HEATER CONECTORS |        |
|---|--------|
| SIZE  | FIG NO |
| 1/2" SB X 3/4" FPT X 12"                      | 212783 |
| 1/2" SB X 3/4" FPT X 24"                      | 277056 |
| 1/2" SB X 3/4" FPT X 15"                      | 274634 |
| 1/2" SB X 3/4" FPT X 18"                      | 260344 |
| 1/2" SB Ball Valve X 3/4" FPT X 18"           | 32833  |
| 3/4" SB X 3/4" FPT X 12"                      | 307810 |
| 3/4" SB X 3/4" FPT X 15"                      | 225104 |
| 3/4" SB X 3/4" FPT X 18"                      | 260346 |
| 3/4" SB X 3/4" FPT X 24"                      | 307811 |

PEX PIPE & FITTINGS

| SWEAT MALE |        | SWEAT FEMALE |        | REDUCING TEES      |        | LAVATORY CONNECTORS |        | TOILET CONNECTORS |        | SHOWER CONNECTORS |        |
|------------|--------|--------------|--------|--------------------|--------|---------------------|--------|-------------------|--------|-------------------|--------|
| SIZE       | FIG NO | SIZE         | FIG NO | SIZE               | FIG NO | SIZE                | FIG NO | SIZE              | FIG NO | SIZE              | FIG NO |
| —          | —      | —            | —      | 1/2" X 3/4"        | 172764 | 3/8"(x1/2" Lav)     | 172817 | 3/8"              | 211617 | 1/2"              | 172789 |
| 1/2"       | 172784 | 1/2"         | 181311 | 3/4" X 1/2" X 1/2" | 196794 | 1/8"(x1/2" Lav)     | —      |                   |        |                   |        |
| 3/4"       | 172785 | 3/4"         | 172787 | 3/4" X 1/2" X 3/4" | 172765 |                     |        |                   |        |                   |        |
| 1"         | 172787 | 1"           | 172788 | 3/4" X 1/2"        | 172766 |                     |        |                   |        |                   |        |
|            |        |              |        | 1" X 3/4"          | 172768 |                     |        |                   |        |                   |        |



\*\*Stainless Oetinger ear clamp

| STUBOUT     |        | STUBOUT W/FLG |        | BALL VALVES |        | SHUTOFF VALVES   |        | CRIMP RINGS* |        | J CLAMPS |        | CINCH CLAMP S/S** |        | FLAT SUSP CLAMPS |        |
|-------------|--------|---------------|--------|-------------|--------|------------------|--------|--------------|--------|----------|--------|-------------------|--------|------------------|--------|
| SIZE        | FIG NO | SIZE          | FIG NO | SIZE        | FIG NO | SIZE             | FIG NO | SIZE         | FIG NO | SIZE     | FIG NO | SIZE              | FIG NO | SIZE             | FIG NO |
| 3/8" X 1/2" | 172808 | 3/8" X 1/2"   | 207563 | 3/8"        | 172824 | 3/8" STRT        | 188492 | 3/8"         | 172777 | 3/8"     | 172836 | —                 | —      | —                | —      |
| 1/2"        | 172814 | 1/2"          | 207561 | 1/2"        | 172827 | 3/8" ANG         | 188494 | 1/2"         | 172778 | 1/2"     | 172837 | 1/2"              | 224562 | 1/2"             | 255540 |
|             |        |               |        | 3/4"        | 172828 | 1/2" X 3/8" STRT | 188493 | 3/4"         | 172779 | 3/4"     | 172838 | 3/4"              | 224563 | —                | —      |
|             |        |               |        | 1"          | 172829 | 1/2" X 3/8" ANG  | 188495 | 1"           | 172780 | 1"       | 172840 | 1"                | 224564 | —                | —      |

| SUSP CLAMP |        | SNAP CLIP |        | PEX MALE 90s |        | DROP EAR 90 |        | PEX MALE SWEAT 90 |        | PEX FEMALE SWEAT 90 |        | ESCUTCHEON SLEEVES |        |
|------------|--------|-----------|--------|--------------|--------|-------------|--------|-------------------|--------|---------------------|--------|--------------------|--------|
| SIZE       | FIG NO | SIZE      | FIG NO | SIZE         | FIG NO | SIZE        | FIG NO | SIZE              | FIG NO | SIZE                | FIG NO | SIZE               | FIG NO |
| —          | —      | —         | —      | 3/8"         | 221695 | —           | —      | 3/8" x 1/2"       | 182755 | 3/8" x 1/2"         | —      | 3" Sleeve 3/8"     | 173351 |
| 1/2"       | 63625  | 1/2"      | 224569 | 1/2"         | 43335  | 1/2"        | 172790 | 1/2"              | 182789 | 1/2"                | 209167 | 3/8" Esc White     | 172844 |
| 3/4"       | 47131  | 3/4"      | 224570 | 1/2" x 3/8"  | 43334  | 3/4"        | 261120 | 3/4" x 1/2"       | 165282 | 3/4"                | 201766 | —                  | —      |
| —          | —      | 1"        | 224571 | 1/2" x 3/4"  | 43336  | —           | —      | 3/4" x 1/2"       | 165281 |                     |        |                    |        |

|           |       |
|-----------|-------|
| 3/4"      | 43337 |
| 3/4" x 1" | 43338 |

\*Copper crimp ring



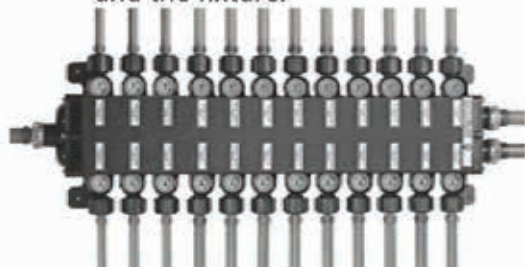
**WHY PEX?**

PEX is easier to install than copper; it's like running a garden hose. PEX won't corrode like copper in acidic environments. Even if you install PEX in a conventional main line and branch system, the connections are quicker to make than soldering copper.



| PEX CRIMPER TOOLS                               |        | MANIFOLDS                    |        | MANIFOLD ADAPTERS        |        |
|---|--------|------------------------------|--------|--------------------------|--------|
| TOOL  | FIG NO | SIZE                         | FIG NO | SIZE                     | FIG NO |
| 3/8"  | 172831 | 14 PORT 3/8"                 | 172715 | 3/8" PORT X 1/2" INSERT  | 172729 |
| 1/2"  | 130015 | 18 PORT 3/8"                 | 172718 | 1/2" PORT X 3/8" INSERT  | 172728 |
| 3/4"  | 130016 | 24 PORT (18)3/8" - (6)1/2"   | 172720 | 3/8" PORT CAP            | 172730 |
| 1"  | 172830 | 30 PORT (22) 3/8" - (8)1/2"  | 172726 | 1/2" PORT CAP            | 172731 |
| 1/2"-3/4" Combo                                 | 172834 | 36 PORT (26) 3/8" - (10)1/2" | 172723 | 1/2" PORT X 1/2" INSERT  | 206504 |
| 1/2" Compact Angle                              | 210004 | 18 PORT 1/2"                 | 229014 | 3/4" BLOCK X 3/4" INSERT | 172734 |
| PEX Cinch Tool for up to 1" S/S Oetinger clamps | 224566 | 24PORT 1/2"                  | 207675 | 3/4" BLOCK X 3/4" MIP    | 172735 |
|   |        | 30 PORT 1/2"                 | 229013 | 1" BLOCK CAP             | 172736 |
|   |        | 36 PORT 1/2"                 | 184431 | —                        | —      |

Manifolds simplify plumbing runs and reduce leaks by eliminating the need for many tees and fittings between the main supply line and the fixture.





## BLACK PIPE MEGA PRESS FITTINGS

### Viega MegaPress - the only press systems for black iron pipe approved for water and gas



The first carbon steel press fitting systems approved for both water and gas applications, Viega MegaPress helps save time and labor on the job site. Viega MegaPress fittings can reduce installation time by as much as 60%, with no need for heavy equipment or messy cutting oils. Make easy, secure, consistent black iron pipe connections in less than seven seconds with Viega MegaPress systems.

#### ***Viega MegaPress features and benefits***

- Carbon steel press fittings with corrosion-resistant coating
- Makes secure connections in less than seven seconds on sizes ½" to 2"
- Compatible with existing Viega ProPress® press tools
- Backed by written warranty
- Helps reduce installation time up to 60%
- Provides consistent reliability
- Reduces cleanup - no oil or metal shavings
- Provides safety - no fire watches or burn permits





## GAS PIPE AND FITTINGS

### POLYETHYLENE GAS PIPE



Design pressure may not exceed 100 psig for plastic pipe used in distribution systems. May not be used where operating temperatures of the pipe will be below minus 20° F or above 140° F.

Plastic Polyethylene pipe has a mirror smooth interior. Excellent flow properties is maintained throughout its service life due to its excellent chemical and abrasion resistance.

| SIZE  | NOMINAL OD | SDR  | MIN WALL | WT PER 100' | LENTGTH | FIG. NO. | PRICE |
|-------|------------|------|----------|-------------|---------|----------|-------|
| 3/4   | 1.050      | 11.0 | .095     | 11.6        | 150FT   | 15446    |       |
| 1     | 1.315      | 11.0 | .119     | 18.3        | 150FT   | 15448    |       |
| 1     | 1.315      | 11.0 | .119     | 18.3        | 500FT   | 15450    |       |
| 1 1/4 | 1.660      | 11.0 | .151     | 27.9        | 150FT   | 15451    |       |
| 1 1/2 | 1.660      | 11.0 | .173     | 38.3        | 150FT   | 15454    |       |
| 1 1/2 | 1.660      | 11.0 | .173     | 38.3        | 500FT   | 15455    |       |
| 2     | 2.375      | 11.0 | .216     | 59.7        | 100FT   | 15456    |       |
| 2     | 2.375      | 11.0 | .216     | 59.7        | 200FT   | 15457    |       |
| 2     | 2.375      | 11.0 | .216     | 59.7        | 500FT   | 15458    |       |

### METAL DETECTION LOCATOR TAPE

Bury locator tape 6" below grade directly above polyethelene pipe. The mettalic tape allows easy location of pipe with a detector.

*Perfection Corp. Push-Style Gas Fittings Also Available*



| SIZE           | FIG NO |
|----------------|--------|
| 2" X 1000'     | 50281  |
| 3" X 1000'     | 63671  |
| 2" BY THE FOOT | 50283  |
| 3" BY THE FOOT | 138598 |



### GAS DRESSER COUPLING



| SIZE  | FIG. NO. | PRICE |
|-------|----------|-------|
| 3/4   | 38824    |       |
| 1     | 38825    |       |
| 1 1/4 | 38826    |       |
| 1 1/2 | 38827    |       |
| 2     | 38828    |       |

### WRAPPING TAPE FOR GAS LINES



To wrap pipe & fittings

| SIZE | FIG NO |
|------|--------|
| 2"   | 82344  |
| 4"   | 267195 |

### GAS ADAPTER



| SIZE  | FIG. NO. | PRICE |
|-------|----------|-------|
| 3/4   | 48431    |       |
| 1     | 44582    |       |
| 1 1/4 | 41009    |       |
| 1 1/2 | 41009    |       |
| 2     | 44548    |       |

### GAS VALVES



| SIZE  | FIG. NO. | PRICE |
|-------|----------|-------|
| 1/2   | 50802    |       |
| 3/4   | 50803    |       |
| 1     | 47873    |       |
| 1 1/4 | 6349     |       |
| 1 1/2 | 6352     |       |
| 2     | 49737    |       |
| 2 1/2 | 50788    |       |
| 3     | 50789    |       |

### GAS TAPE PRIMER



| FIG. NO. | PRICE |
|----------|-------|
| 45481    |       |

### YELLOW GAS LINE TEFロン THREAD SEAL TAPE



| FIG. NO. | PRICE |
|----------|-------|
| 61358    |       |

Designed for gas lines of all types...natural gas, propane and butane lines. Meets gas company standards world wide. Full density (1.6) and also 4 mils thick, makes this the heaviest tape available. Seals threads easily and quickly with confidence. Has a temperature range of -450F to +550F. Exceeds Mil Spec. T-27730A. UL listed.

## TracPipe CounterStrike

*Flexible Gas Piping by OmegaFlex.*

There are no additional bonding requirements for TracPipe® CounterStrike® imposed by the manufacturer's installation instructions.

TracPipe® CounterStrike® is listed by CSA to ANSI LC 1. TracPipe® CounterStrike® meets building code requirements (ASTM E84) with respect to flame spread and smoke density. This permits installation in drop ceilings used as return air plenums, and is UL Listed for 1, 2, and 4 hour through penetration firestop systems without removal of the jacket. TracPipe® CounterStrike® is also approved by Factory Mutual as a flexible piping system for flammable gases, based upon its ability to withstand stresses caused by earthquakes.



## TRACPIPE

| TRACPIPE CounterStrike Tubing |        | MALE ADAPTERS |        | FEMALE ADAPTERS |        | OTHER TRACPIPE FITTINGS |        | TERMINATION FITTINGS |        |
|-------------------------------|--------|---------------|--------|-----------------|--------|-------------------------|--------|----------------------|--------|
| SIZE                          | FIG NO | SIZE          | FIG NO | SIZE            | FIG NO | SIZE                    | FIG NO | SIZE                 | FIG NO |
| 3/8" X 100'                   | 247216 | 3/8" X 1/2"   | 190248 | 3/8" X 1/2"     | 190252 | 1/2" COUPLING           | 178731 | 3/8"                 | 190255 |
| 3/8" X 250'                   | 247217 | 1/2"          | 19878  | 1/2"            | 190254 | —                       | —      | 1/2"                 | 190256 |
| 1/2" X 50'                    | 247218 | 1/2" X 3/4"   | 190250 | —               | —      | 1/2" TEE                | 179880 | 3/4"                 | 190833 |
| 1/2" X 100'                   | 247219 | 3/4"          | 190832 | —               | —      | 3/4" X 1/2" MANIFOLD    | 199610 | 1"                   | 279860 |
| 1/2" X 250'                   | 247220 | 1"            | 215401 | —               | —      | —                       | —      | —                    | —      |
| 1/2" X 500'                   | 247221 | —             | —      | —               | —      | —                       | —      | —                    | —      |
| 3/4" X 50'                    | 247222 | —             | —      | —               | —      | —                       | —      | —                    | —      |
| 3/4" X 100'                   | 247223 | —             | —      | —               | —      | —                       | —      | —                    | —      |
| 3/4" X 250'                   | 247224 | —             | —      | —               | —      | —                       | —      | —                    | —      |
| 1" X 100'                     | 247226 | —             | —      | —               | —      | —                       | —      | —                    | —      |

**We also sell TracPipe by the foot!**



3/4" X 1/2" MANIFOLD

# DUFF TIP:

CounterStrike® gas piping can be run directly to the shut off valves of most fixed appliances without installing an appliance connector. For moveable appliances such as ranges or dryers, the use of an approved flexible appliance connector is required in most jurisdictions.

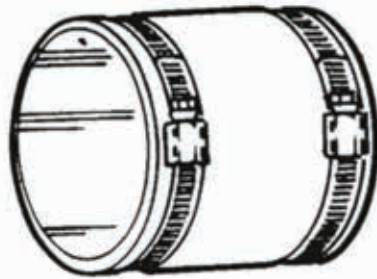
## DUFF DELIVERS







## FLEXIBLE COUPLINGS



### FOR SEWER OR DRAIN WASTE AND VENT PIPE

Used to connect all type of in-house and sewer connections, drain waste vent, house to main, roof drains, repairs and increaser or reducer connection. Made of tough elastomeric polyvinyl chorlide (PVC). Strong resilient and unaffected by soil conditions. Resistant to chemicals, ultra violet rays, fungus growth and normal sewer gas. Leak proof, rust proof.

Couplings are made to connect plastic, cast iron, service, extra heavy, no-hub, asbestos cement, clay, concrete, steel, fibre and ductile iron or tubular pipe. Only takes minutes to make connection!  
SBCC, BOCA, UPC AND CSA CODES

### FOR CORRUGATED PIPE

| OEM #   | SIZE | FIG. NO. | PRICE |
|---------|------|----------|-------|
| 1070-33 | 3X3  | 73495    |       |
| 1070-44 | 4X4  | 44555    |       |
| 1070-66 | 6X6  | 44556    |       |
| 1070-88 | 8X8  | 73496    |       |

### 1056 SERIES - C.I., Plastic to C.I., Plastic

| OEM #     | SIZE          | FIG. NO. | PRICE |
|-----------|---------------|----------|-------|
| 1056-125  | 1 1/4 x 1 1/4 | 7795     |       |
| 1056-150  | 1 1/2 x 1 1/4 | 7800     |       |
| 1056-150  | 1 1/2 x 1 1/2 | 7802     |       |
| 1056-215  | 2 x 1 1/2     | 7804     |       |
| 1056-22   | 2 x 2         | 7805     |       |
| 1056-315  | 3 x 1 1/2     | 21324    |       |
| 1056-32   | 3 x 2         | 7807     |       |
| 1056-33   | 3 x 3         | 7809     |       |
| 1056-415  | 4 x 1 1/2     | 36041    |       |
| 1056-42   | 4 x 2         | 19821    |       |
| 1056-43   | 4 x 3         | 7811     |       |
| 1056-44   | 4 x 4         | 7813     |       |
| 1056-53   | 5 x 3         | 36040    |       |
| 1056-54   | 5 x 4         | 36042    |       |
| 1056-55   | 5 x 5         | 7816     |       |
| 1056-63   | 6 x 3         | 36043    |       |
| 1056-64   | 6 x 4         | 7820     |       |
| 1056-65   | 6 x 5         | 36044    |       |
| 1056-66   | 6 x 6         | 7832     |       |
| 1056-84   | 8 x 4         | 36045    |       |
| 1056-86   | 8 x 6         | 7836     |       |
| 1056-88   | 8 x 8         | 18039    |       |
| 1056-10-8 | 10 x 8        | 36046    |       |
| 1056-1010 | 10 x 10       | 7838     |       |
| 1056-1210 | 12 x 10       | 36047    |       |
| 1056-1212 | 12 x 12       | 7841     |       |
| 1056-1512 | 15 x 12       | 36048    |       |
| 1056-1515 | 15 x 15       | 36049    |       |
| 1056-1815 | 18 x 15       |          |       |
| 1056-1818 | 18 x 18       |          |       |
| 1056-2121 | 21 x 21       |          |       |
| 1056-2424 | 24 x 24       |          |       |
| 1056-2727 | 27 x 27       |          |       |



### 1002 SERIES - Clay to C.I. or Plastic

| OEM #     | SIZE  | FIG. NO. | PRICE |
|-----------|-------|----------|-------|
| 1002-43   | 4x3   | 36026    |       |
| 1002-44   | 4x4   | 7770     |       |
| 1002-54   | 5x4   | 36027    |       |
| 1002-55   | 5x5   | 36028    |       |
| 1002-64   | 6x4   | 7787     |       |
| 1002-65   | 6x5   | 36029    |       |
| 1002-66   | 6x6   | 7790     |       |
| 1002-86   | 8x6   | 7792     |       |
| 1002-88   | 8x8   | 36030    |       |
| 1002-10-8 | 10x8  | 36031    |       |
| 1002-1010 | 10x10 | 36032    |       |
| 1002-1212 | 12x12 | 36034    |       |

### SHIELDED COPPER X C.I., PLASTIC CK

Designed for Resistance to Earth Loads and Shear Forces

| SIZE        | FIG NO. |
|-------------|---------|
| 1-1/2"      | 51187   |
| 2" x 1-1/2" | 51186   |
| 2"          | 51188   |
| 3"          | 74402   |
| 4" X 3"     | 73124   |
| 4"          | 113962  |



### MISSION ARC UNDERGROUND COUPLINGS



| OEM #                    | FIG NO. |
|--------------------------|---------|
| MR5644 ARC 4" CI X 4" CI | 271848  |
| MR5655 ARC 5" CI X 5" CI | 278794  |
| MR5644 ARC 4" CL X 4" CI | 272154  |
| MR5644 ARC 5" CL X 4" CI | 278798  |
| MR5644 ARC 5" CL X 5" CI | 272156  |
| MR5644 ARC 6" CL X 4" CI | 272157  |
| MR5644 ARC 6" CL X 6" CI | 278808  |

For Shielded Flexible Couplings, see page 109



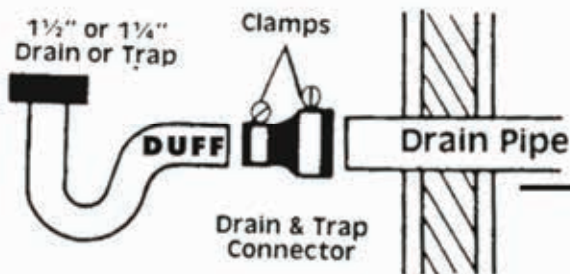
For HUSKY Couplings, see page 109



SPECIAL RUBBER FLEX FITTINGS

DRAIN CONNECTION

Trap to drain



DRAIN CONNECTION  
TRAP TO TUBE DRAIN

1 1/4 or 1 1/2 trap  
to  
1 1/4 or 1 1/2 tube  
or pipe

| FIG. NO. | PRICE |
|----------|-------|
| 49598    |       |



FLEXIBLE RUBBER J BEND  
1 1/4 or 1 1/2 drain pipe  
to 1 1/2 drain pipe or  
tubular trap

| FIG. NO. | PRICE |
|----------|-------|
| 51185    |       |

| DESCR  | FIG. NO. | PRICE |
|--|----------|-------|
| Connects 1 1/4 or 1 1/2 trap to 2" IPS or PVC pipe     | 25205    |       |
| Connects 1 1/4" or 1 1/2" IPS or PVC or 2" Copper tube | 36051    |       |



FLEX TEE

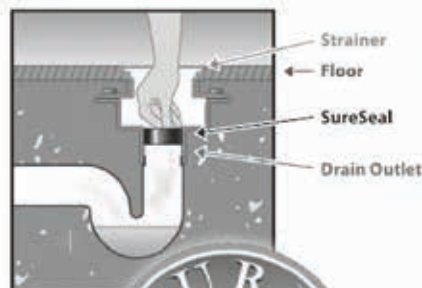
| SIZE   | FIG. NO. | PRICE |
|--------|----------|-------|
| 1 1/2" | 47731    |       |
| 2"     | 47732    |       |
| 3"     | 47733    |       |
| 4"     | 47734    |       |



FLEX 90

| SIZE   | FIG. NO. | PRICE |
|--------|----------|-------|
| 1 1/2" | 47735    |       |
| 2"     | 47736    |       |
| 3"     | 47737    |       |
| 4"     | 47738    |       |

**WATERLESS TRAP PRIMERS**



| FLOOR DRAIN |          |
|-------------|----------|
| OUTLET SIZE | FIG. NO. |
| 2"          | 309762   |
| 3"          | 309763   |
| 3-1/2"      | 309765   |
| 4"          | 309764   |



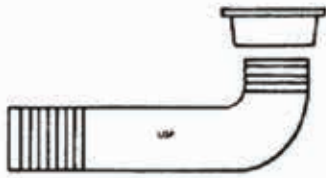
**DUFFNOTE:**

**SureSeal** waterless trap primers **eliminate expensive trap primers** yet **block out noxious sewer gases** from backing up into living or work areas. **SureSeals are a more cost-effective, and simpler, solution** than traditional water trap primers — and they provide the ultimate flexibility in design, placement, and maintenance of floor drains in nearly all applications.

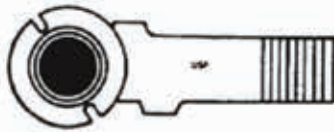
- ✓ No more sewer gases or odors!
- ✓ Easy install: Eliminates complex, time consuming and expensive installations.
- ✓ Maintenance-free: No walls or floors to tear up to access the problem — and no more headaches or problems associated with traditional trap primers.
- ✓ Forget buckets of water! No need to waste time manually priming a trap.
- ✓ Goodbye, cockroaches! Also works for keeping away pesky bugs!



**CAST IRON SPECIALTIES**  
**CLOSET BENDS (IDEAL BENDS)**



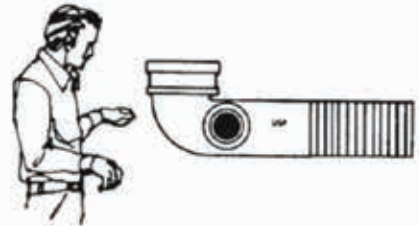
PLAIN



TAPPED

**TO DETERMINE RIGHT OR LEFT HAND:**

**TRAPS and CLOSET BENDS:**  
 Place in regular position with hub or inlet end nearest you.



Right Hand Shown

| SIZE - 4" X 6" X 16" |        |       |
|----------------------|--------|-------|
| Tapping              | Fig No | Price |
| NONE                 | 7133   |       |
| SINGLE               | 7135   |       |
| DOUBLE               | 7136   |       |

\*Please specify number of tappings and side for tapping.

CLOSET FLANGES



CAST IRON STRAIGHT FLANGE

| Size      | Fig No | Price |
|-----------|--------|-------|
| Shallow   | 7362   |       |
| 4 x 2     | 7355   |       |
| 4 x 2 1/2 | 7357   |       |
| 4 x 4     | 7358   |       |
| 4 x 6     | 7360   |       |



CAST IRON OFFSET FLANGE

| Size | Fig No | Price |
|------|--------|-------|
| 4    | 7364   |       |



No Caulk Closet Flange

| Size  | Fig No | Price |
|-------|--------|-------|
| 4 x 2 | 7443   |       |
| 4 x 4 | 7445   |       |

**INSTALLS IN SECONDS**  
**TWO SIMPLE STEPS:**

1. Place instant set ring over closet bend.
2. Position ring & tighten bolts securely.



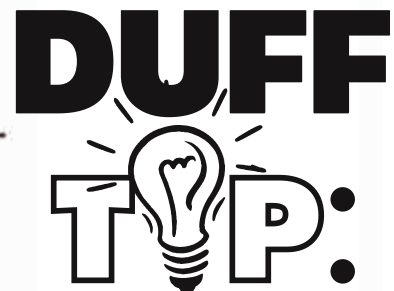
No Caulk Fitting Closet Flange

| Size  | Fig No | Price |
|-------|--------|-------|
| 4 x 4 | 75662  |       |
| 4 x 2 | 75663  |       |

Before you're flooded with problems call



**610-275-4453**



When ordering the No Caulk Closet Flange, don't forget to order grease!



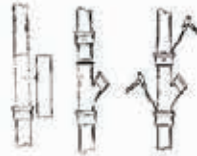
**CAST IRON SPECIALTIES**

**DUFF SCREWED HUB INSERTABLE FITTINGS**

**KAFER FITTINGS**

Eliminate the need for extra fittings. Easily installed. The ideal fittings for installations in an existing stack or line.

SAMPLE INSTALLATION:



Sisson Joint



| Size | Fig No | Price |
|------|--------|-------|
| 4"   | 7386   |       |

Kafer Wye



| Size  | Fig No | Price |
|-------|--------|-------|
| 4 x 3 | 7373   |       |
| 4     | 7377   |       |

Kafer Tee



| Size | Fig No | Price |
|------|--------|-------|
| 4"   | 7382   |       |

Straight Kafer



| Size | Fig No | Price |
|------|--------|-------|
| 2"   | 7365   |       |
| 3"   | 7367   |       |
| 4"   | 7368   |       |

**REPAIR PLATE**



**To repair holes, cracks, etc. in soil pipe. Complete with 'U'**

| Size | Fig No | Price |
|------|--------|-------|
| 2    | 7392   |       |
| 3    | 7393   |       |
| 4    | 7394   |       |
| 5    | 7395   |       |
| 6    | 7396   |       |

**GASKET FOR SADDLES & PLATES**



| Size                 | Fig No |
|----------------------|--------|
| Single Sheet (6"x6") | 44323  |
| 1/8" - per sq. Foot  | 8261   |
| 1/4" - per sq. Foot  | 8266   |

**SADDLE FITTINGS**

To make corrections to existing lines without cutting off the pipe. Complete with "U" bolt.

HUB SADDLE TEE



| Size  | Fig No | Price |
|-------|--------|-------|
| 4 X 2 | -      |       |
| 4 X 3 | -      |       |
| 4 X 4 | -      |       |

HUB SADDLE WYE



| Size  | Fig No | Price |
|-------|--------|-------|
| 4 X 4 | 7413   |       |
| 6x4   | 7414   |       |
| 8x4   | 51668  |       |

TAPPED SADDLE TEE



| Size      | Fig No | Price |
|-----------|--------|-------|
| 2 x 1 1/2 | 7415   |       |
| 3 x 1 1/2 | 38848  |       |
| 3 x 2     | 7416   |       |
| 4 x 1 1/2 | 20882  |       |
| 4 x 2     | 7417   |       |
| 5 x 2     | -      |       |
| 6 x 2     | 41844  |       |

## CAST IRON SPECIALTIES



6X6 WATER BOX

| Fig No | Price |
|--------|-------|
| 7313   |       |

6X6 WATER BOX LID

| Fig No | Price |
|--------|-------|
| 7314   |       |



6X6 CAST IRON VENT BOX

| Fig No | Price |
|--------|-------|
| 7315   |       |



CI MUSHROOM VENT CAP

| Size | Fig No | Price |
|------|--------|-------|
| 4"   | 7323   |       |
| 6"   | 7324   |       |



CI BELL TRAP

| Size  | Fig No | Price |
|-------|--------|-------|
| 6X6   | 7325   |       |
| 9X9   | 7326   |       |
| 12X12 | 7327   |       |



PHILADELPHIA VENT BOX  
INSIDE CAULK

| Size | Fig No | Price |
|------|--------|-------|
| 4    | 7316   |       |
| 6    | 7320   |       |



PHILADELPHIA VENT BOX  
OUTSIDE CAULK

| Fig No | Price |
|--------|-------|
| 7318   |       |

4" VENT BOX LID ONLY

| Fig No | Price |
|--------|-------|
| 7319   |       |

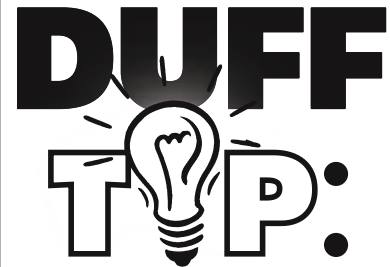
PHILA VENT BOX LID SCREW (EA)

| Fig No | Price |
|--------|-------|
| 49250  |       |



2" GALVANIZED  
CATCH BASIN

| Fig No | Price |
|--------|-------|
| 7419   |       |



**When ordering vent boxes or catch basins,  
don't forget to order  
lead, oakum and/or T/S gaskets.**



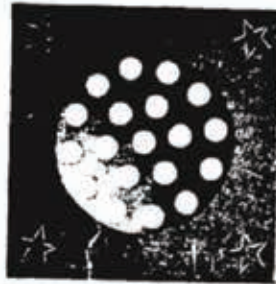
CAST IRON SPECIALTIES

CUSTOM GRATES AND COVER PLATES, ALL SIZES AND SHAPES AVAILABLE



2" SHOWER TRAP WITH STRAINER

| Fig No | Price |
|--------|-------|
| 7450   |       |



CI SQUARE CESSPOOL PLATE

| Size  | Fig No | Price |
|-------|--------|-------|
| 6X6   | 7329   |       |
| 8X8   | 7332   |       |
| 10X10 | 7333   |       |
| 12X12 | 7336   |       |



CI ROUND CESSPOOL PLATE

| Size | Fig No | Price |
|------|--------|-------|
| 5    | 7337   |       |
| 6    | 7339   |       |
| 7    | 7343   |       |
| 8    | 7344   |       |
| 10   | 7345   |       |



Frame and Grate



Bar Grates for Soil Pipe

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 3"   | 7527     |       |
| 4"   | 7530     |       |
| 5"   | 7532     |       |
| 6"   | 7533     |       |
| 8"   | 7537     |       |



MANHOLE (Bolt-Down)

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 12"  | 17591    |       |

Call 610-275-4453  
or  
Email Us at  
info@duffco.com  
for  
Available Sizes



2" Floor & Shower Drain

| FIG. NO. | PRICE |
|----------|-------|
| 7449     |       |



Round Manhole Cover

| SIZE | FIG. NO. | PRICE |
|------|----------|-------|
| 18   | 60562    |       |
| 24   | 60563    |       |

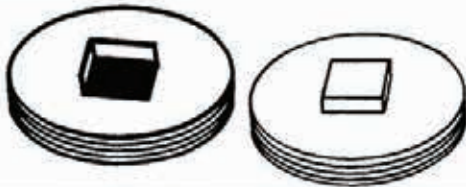


Chrome Plated Snap-in Drain  
- fits soil pipe!

| SIZE   | FIG. NO. | PRICE |
|--------|----------|-------|
| 1 1/2" | 40940    |       |
| 2"     | 40941    |       |
| 3"     | 40942    |       |
| 4"     | 40943    |       |

## CAST IRON SPECIALTIES

### BRASS CLEANOUT PLUGS



COUNTERSUNK      RAISED HEAD

| Size  | Fig No | Price | Fig No | Price |
|-------|--------|-------|--------|-------|
| 1 1/4 | -      |       | 7458   |       |
| 1 1/2 | 7466   |       | 7465   |       |
| 2     | 7468   |       | 7467   |       |
| 2 1/2 | 7471   |       | 7469   |       |
| 3     | 7473   |       | 7472   |       |
| 3 1/2 | 7475   |       | 7474   |       |
| 4     | 7477   |       | 7476   |       |
| 4 1/2 | 7479   |       | 7478   |       |
| 5     | 7481   |       | 7480   |       |
| 5 1/2 | 7483   |       | 7482   |       |
| 6     | 7485   |       | 7484   |       |

### CLEANOUT

IBTS or Iron Body Tap Screw



| Size | Fig No | Price |
|------|--------|-------|
| 2    | 7348   |       |
| 3    | 7349   |       |
| 4    | 7351   |       |
| 5    | 7353   |       |
| 6    | 7354   |       |

### LEAD FIT ALL PLUG



| Size  | Fig No | Price |
|-------|--------|-------|
| 1 1/2 | -      |       |
| 2     | 17593  |       |
| 2 1/2 | 17594  |       |
| 3     | 17595  |       |
| 3 1/2 | 17596  |       |
| 4     | 17597  |       |
| 4 1/2 | 17598  |       |
| 5     | 17599  |       |
| 5 1/2 | 17600  |       |
| 6     | 38907  |       |

### BRASS CLEANOUT PLUGS

All Duff brass plugs are machined to close tolerances to assure a perfect fit. Plugs are listed according to standard pipe sizes. To determine the proper size plug for a "cleanout", check the tapping size indicated on our catalog page for cleanouts, and order the corresponding size plug. Note: A 4" standard cleanout is tapped 3". A 4" extra heavy or full opening cleanout is tapped 3 1/2". Be sure to distinguish types when ordering.

## SCALE TO DETERMINE PIPE SIZE OF CLEANOUT PLUGS





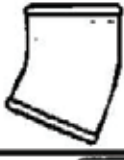





Upper scale is in inches  
Lower scale is for diameter in pipe size





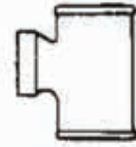
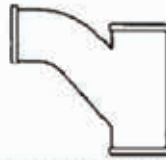
NO HUB CAST IRON SOIL PIPE AND FITTINGS

SERVICE WEIGHT NO-HUB PIPE AND FITTINGS

|   |                       | 1 1/2" |       | 2"     |       | 3"     |       | 4"                     |       |
|---|-----------------------|--------|-------|--------|-------|--------|-------|------------------------|-------|
|   |                       | Fig No | Price | Fig No | Price | Fig No | Price | Fig No                 | Price |
|    | No Hub x 10' Length   | 31235  |       | 31236  |       | 31237  |       | 31704                  |       |
|    | 1/4 Bend              | 31239  |       | 31240  |       | 31241  |       | 31242                  |       |
|    | 1/6 Bend              | -      |       | -      |       | -      |       | -                      |       |
|    | 1/8 Bend              | 31245  |       | 31246  |       | 31247  |       | 31249                  |       |
|   | 1/16 Bend             | -      |       | 30976  |       | 31243  |       | 31244                  |       |
|  | Short Sweep           | -      |       | 30977  |       | 31250  |       | 30978                  |       |
|  | Long Sweep            | 30979  |       | 30980  |       | 31251  |       | 30981                  |       |
|  | P-Trap                | 31018  |       | 31272  |       | 31273  |       | 31019                  |       |
|  | Single Vent Curb Trap | -      |       | -      |       | -      |       | 7132<br>4" x 5" 252190 |       |
|  | Plug                  | 31016  |       | 31270  |       | 31017  |       | 31271                  |       |

## CAST IRON SOIL PIPE AND FITTINGS

SERVICE WEIGHT NO-HUB AND FITTINGS



SANITARY TEE

COMBINATION  
WYE & 1/8 BEND

WYE

SINGLE TAPPED TEE

| SIZE      | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price |
|-----------|--------|-------|--------|-------|--------|-------|--------|-------|
| 1 1/2     | 30982  |       | 30999  |       | 30997  |       | 31255  |       |
| 2         | 30984  |       | 31001  |       | 31256  |       | -      |       |
| 3         | 30987  |       | 31264  |       | 31258  |       | -      |       |
| 4         | 30989  |       | 31004  |       | 27192  |       | -      |       |
| 2 X 1 1/2 | -      |       | -      |       | -      |       | 30990  |       |
| 3 X 1 1/2 | 30985  |       | -      |       | -      |       | -      |       |
| 3 X 2     | 30986  |       | 31002  |       | 31257  |       | 30969  |       |
| 4 X 1 1/2 | -      |       | -      |       | -      |       | 30991  |       |
| 4 X 2     | 30988  |       | 31003  |       | 31259  |       | 30992  |       |
| 4 X 3     | 31253  |       | 31265  |       | 31260  |       | -      |       |

### RIDGID HUB & SPIGOT JOINING TOOLS

NO HUB TORQUE WRENCH



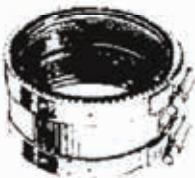
| Fig No | Price |
|--------|-------|
| 13134  |       |

### HUSKY COUPLINGS



| SIZE | FIG NO. |
|------|---------|
| 2"   | 272192  |
| 3"   | 214971  |
| 4"   | 177960  |
| 5"   | 229272  |

### NO HUB COUPLING



| Size      | Fig No | Price |
|-----------|--------|-------|
| 1 1/2     | 28318  |       |
| 2         | 7498   |       |
| 3         | 7499   |       |
| 4         | 7501   |       |
| 5         | 7503   |       |
| 6         | 7506   |       |
| 8         | 7508   |       |
| 10        | 28322  |       |
| 2 X 1 1/2 | 28319  |       |
| 3 X 2     | 28320  |       |
| 4 X 3     | 28321  |       |

# DUFFGUIDE:

1. Look for Tite Seal Gaskets on Page 111.
2. For below-ground applications, use MISSION ARC Couplings on page 101.

and remember ...

**DUFF**  
ALWAYS  
DELIVERS





**CAST IRON SOIL PIPE AND FITTINGS**  
**SERVICE WEIGHT HUB & SPIGOT**

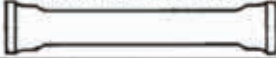
**PIPE**

SINGLE HUB PIPE



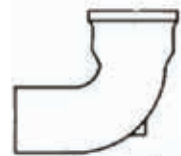
|            | 2"     |       | 3"     |       | 4"     |       | 6"     |       |
|------------|--------|-------|--------|-------|--------|-------|--------|-------|
|            | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price |
| 42" LENGTH | 7011   |       | 7012   |       | 7013   |       | 7014   |       |
| 10' LENGTH | 7007   |       | 7008   |       | 7009   |       | 7010   |       |
| 5' LENGTH  | 6999   |       | 7000   |       | 7001   |       | 7002   |       |

DOUBLE HUB PIPE



|           |       |  |       |  |      |  |   |  |
|-----------|-------|--|-------|--|------|--|---|--|
| 5' LENGTH | 79903 |  | 79904 |  | 7005 |  | - |  |
|-----------|-------|--|-------|--|------|--|---|--|

**FITTINGS**



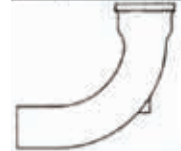
1/4 BEND



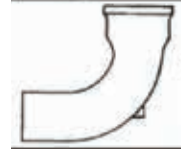
1/8 BEND



1/16 BEND



LONG SWEEP



SHORT SWEEP



SINGLE VENT CURB TRAP



DOUBLE VENT CURB TRAP



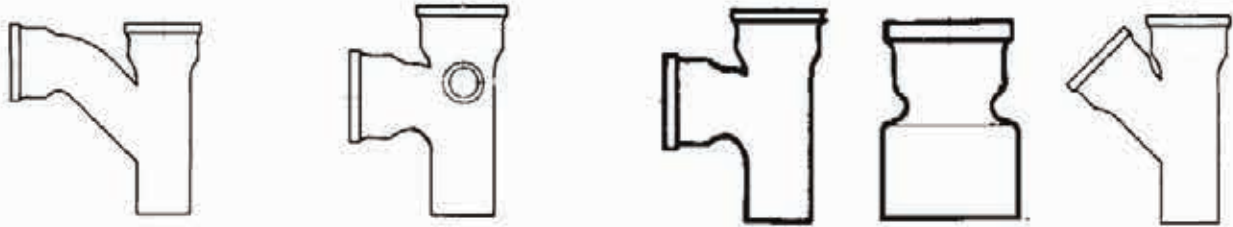
RUNNING TRAP



P-TRAP

|                       | 2"     |       | 3"     |       | 4"     |       | 6"     |       | 8"     |       |
|-----------------------|--------|-------|--------|-------|--------|-------|--------|-------|--------|-------|
|                       | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price | Fig No | Price |
| 1/4 BEND              | 7015   |       | 7016   |       | 7017   |       | -      |       | -      |       |
| 1/8 BEND              | 7019   |       | 7020   |       | 7021   |       | 7022   |       | 7023   |       |
| 1/16 BEND             | 7024   |       | 7026   |       | 7028   |       | -      |       | 7033   |       |
| LONG SWEEP            | -      |       | 7125   |       | 7126   |       | 7127   |       | -      |       |
| SHORT SWEEP           | -      |       | 7129   |       | 7130   |       | 7131   |       | -      |       |
| SINGLE VENT CURB TRAP | -      |       | -      |       | 7132   |       | -      |       | -      |       |
| DOUBLE VENT CURB TRAP | -      |       | -      |       | -      |       | -      |       | -      |       |
| RUNNING TRAP          | -      |       | -      |       | 7107   |       | -      |       | -      |       |
| P-TRAP                | 7110   |       | 7111   |       | 7112   |       | -      |       | -      |       |

## CAST IRON SOIL PIPE & FITTINGS SERVICE WEIGHT HUB & SPIGOT PIPE AND FITTINGS



| SIZE  | Combination Y & Eighth Bend |       | Single Tapped Tee |       | Double Tapped Tee |       | Sanitary Tee |       | Reducer  |       | Wye      |       |
|-------|-----------------------------|-------|-------------------|-------|-------------------|-------|--------------|-------|----------|-------|----------|-------|
|       | FIG. NO.                    | PRICE | FIG. NO.          | PRICE | FIG. NO.          | PRICE | FIG. NO.     | PRICE | FIG. NO. | PRICE | FIG. NO. | PRICE |
| 2     | 7036                        | -     | -                 | -     | -                 | -     | 31021        | -     | -        | -     | 7113     | -     |
| 3     | 7041                        | -     | -                 | -     | -                 | -     | 31022        | -     | -        | -     | 7116     | -     |
| 4     | 7043                        | -     | -                 | -     | -                 | -     | 31026        | -     | -        | -     | 7117     | -     |
| 6     | 7050                        | -     | -                 | -     | -                 | -     | -            | -     | -        | -     | 7118     | -     |
| 3 x 2 | 7042                        | -     | -                 | -     | -                 | -     | 7077         | -     | 7085     | -     | 7119     | -     |
| 4 x 2 | 7048                        | -     | -                 | -     | -                 | -     | 7078         | -     | 7087     | -     | 7120     | -     |
| 4 x 3 | 7046                        | -     | -                 | -     | -                 | -     | 7079         | -     | 7090     | -     | 7121     | -     |
| 6 x 2 | -                           | -     | -                 | -     | -                 | -     | -            | -     | -        | -     | -        | -     |
| 6 x 3 | -                           | -     | -                 | -     | -                 | -     | -            | -     | 7097     | -     | -        | -     |
| 6 x 4 | -                           | -     | -                 | -     | -                 | -     | -            | -     | 7100     | -     | -        | -     |

### TITE SEAL GASKETS

(For use with Hub & Spigot Pipe)



| Size | Fig No | Price |
|------|--------|-------|
| 2    | 7486   |       |
| 3    | 7488   |       |
| 4    | 7489   |       |
| 5    | 7490   |       |
| 6    | 7491   |       |
| 8    | 7492   |       |

### TITE SEAL LUBRICANT

(QUART SIZE)



| Fig No | Price |
|--------|-------|
| 7496   |       |

### OAKUM



5 LB. BROWN OAKUM

| Fig No | Type                |
|--------|---------------------|
| 7511   | 5# BOX of OAKUM     |
| 18159  | SINGLE STRAND OAKUM |
| 7514   | 10LB. WHITE OAKUM   |

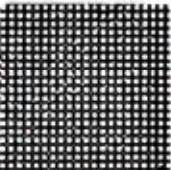
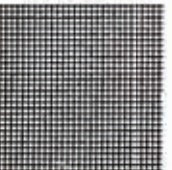
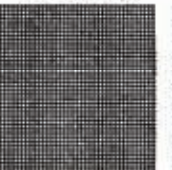
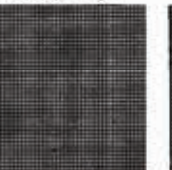


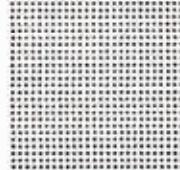
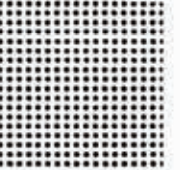
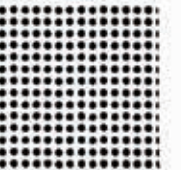

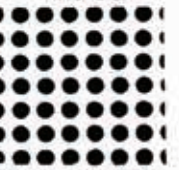

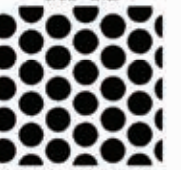
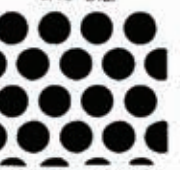



STRAINERS

SPECIAL BASKETS SCREENS AND MESH ALWAYS AVAILABLE

# Perforated Metal and Mesh

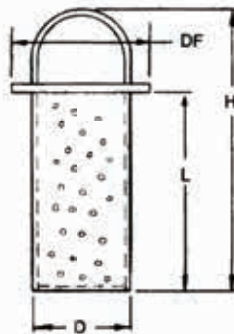
AVAILABLE IN ALL MATERIALS

|   |  |  |  |   |  |
|---|--|--|--|---|--|
| 1/32" Openings<br> | 1/50" Openings<br>    | 1/64" Openings<br>    | .009 Openings<br>       | .007 Openings<br> | .005 Openings<br> |
| 20 MESH<br>(52% Open Area)  | 30 MESH<br>(41% Open Area)   | 40 MESH<br>(36% Open Area)   | 60 MESH<br>(31% Open Area)   | 80 MESH<br>(31% Open Area)  | 100 MESH<br>(30% Open Area)  |
| MESH SIZES OTHER THAN SHOWN—AVAILABLE ON APPLICATION  |  |  |  |   |  |
| .027 Dia.<br>      | .033 Dia. (1/32")<br> | .045 Dia. (3/64")<br> | .057 Dia. (1/16")<br> |   |  |
| 400 HOLES/SQ. IN.<br>(23% Open Area)  | 324 HOLES/SQ. IN.<br>(28% Open Area)   | 225 HOLES/SQ. IN.<br>(36% Open Area)   | 144 HOLES/SQ. IN.<br>(37% Open Area)   |   |  |
| 1/10" Dia.<br>   | 1/8" Dia.<br>       | 5/32" Dia.<br>      | 3/16" Dia.<br>       | 1/4" Dia.<br>  |  |
| 49 HOLES/SQ. IN.<br>(39% Open Area)   | 32 HOLES/SQ. IN.<br>(40% Open Area)  | 33 HOLES/SQ. IN.<br>(62% Open Area)  | 18 HOLES/SQ. IN.<br>(50% Open Area)  | 8 HOLES/SQ. IN.<br>(40% Open Area)  |  |
| PERFORATIONS OTHER THAN THOSE SHOWN AVAILABLE—ALL OPEN AREAS APPROX.                                |  |  |  |   |  |

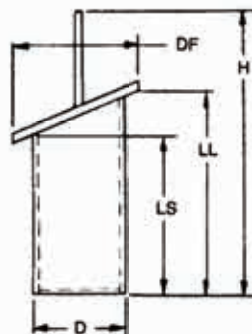
## Replacement Screens & Baskets For all Makes of "Y" & Basket Type Strainers



Style "D"



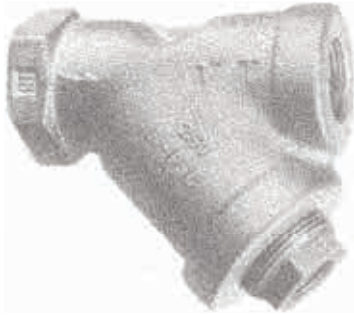
Style "E"



Style "F"

**SPECIFY**

1. Style
2. Material
3. Perforation & Mesh if Liner is Required
4. All Lettered Dimensions Shown



## STRAINERS

**CAST IRON OR BRONZE Y STRAINER** - Offer complete protection to pumps, meters, traps, valves and similar expensive automatic equipment. Installation of a strainer before any automatic equipment will ensure trouble free service and avoid costly repairs of replacement so often caused by the introduction of foreign matter in pipe lines.

### CAST IRON

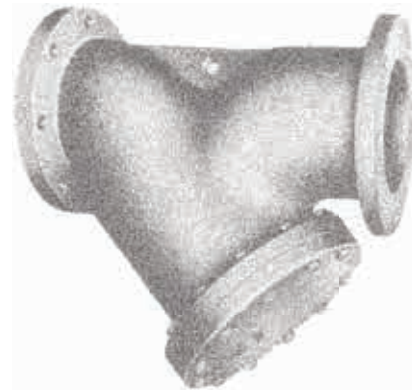
### BRONZE

| SIZE  | FIG. NO. | PRICE | FIG. NO. | PRICE |
|-------|----------|-------|----------|-------|
| 1/4   | 17731    |       | 5734     |       |
| 3/8   | 17732    |       | 5736     |       |
| 1/2   | 17733    |       | 17632    |       |
| 3/4   | 17734    |       | 17633    |       |
| 1     | 17735    |       | 17634    |       |
| 1 1/4 | 17736    |       | 17635    |       |
| 1 1/2 | 17737    |       | 17636    |       |
| 2     | 17738    |       | 17637    |       |
| 2 1/2 | 17739    |       | 5749     |       |
| 3     | 17740    |       | 5751     |       |



**For maximum efficiency, always use blow down valves to clean strainers.**

**CAST IRON FLANGED Y STRAINERS** - Offer complete protection to pumps, meters, traps, valves and similar expensive automatic equipment. Installation of a strainer before any automatic equipment will ensure trouble free service and avoid the costly repairs of replacement so often caused by the introduction of foreign matter in pipe lines.

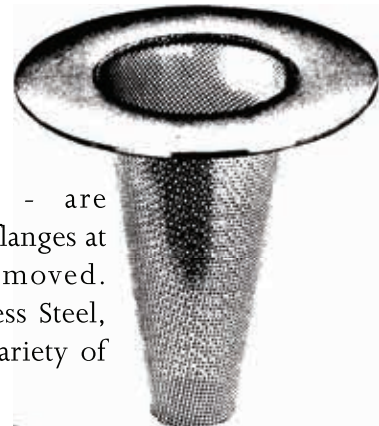


| SIZE  | FIG. NO. | PRICE |
|-------|----------|-------|
| 2     | 44921    |       |
| 2 1/2 | 17741    |       |
| 3     | 17742    |       |
| 4     | 17743    |       |
| 6     | 17744    |       |
| 8     | 50622    |       |
| 10    | 50623    |       |
| 12    | 50624    |       |



**ALL STRAINERS AVAILABLE IN STAINLESS STEEL, CAST STEEL OR PLASTIC!**

**TEMPORARY STRAINERS** - are installed between companion flanges at startup time and later removed. Usually constructed in Stainless Steel, they are available in a large variety of perforations or mesh lining.



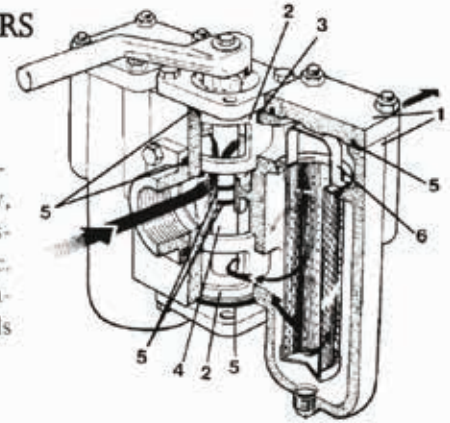


**STRAINERS**

**DUPLEX AND SIMPLEX STRAINERS**

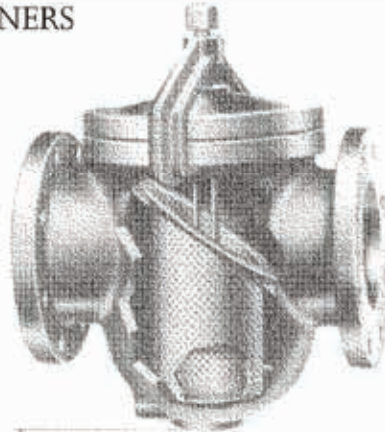
**DUPLEX BASKET STRAINERS**

DUPLEX STRAINER (PLUG TYPE) - For sizes up to 8". It is the simplest, most economical and trouble-free design for a Duplex Strainer in smaller sizes. High quality, pressure rated plug valve with integral straining baskets. Switching flow from one basket to another is accomplished by moving the handle through a 90 degree arc. Because of the unique port design in the diverter plug, it is impossible for this operation to stop the flow. The entire switch operation takes less than 30 seconds. No tools required. Available in Iron, Bronze, Stainless Steel and Carbon Steel.

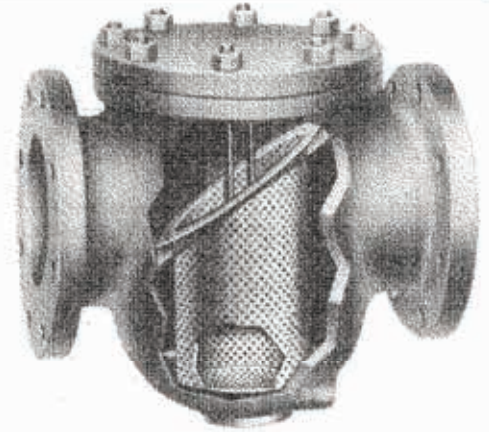


**ALWAYS SPECIFY SERVICE, PRESSURE AND TEMPERATURE**

**SIMPLEX BASKET STRAINERS**



**CLAMP TOP**



**BOLT TOP**

SIMPLEX STRAINER - For industrial use where temporary shutdown for cleaning is possible. Large basket capacity. The free straining area is at least 6 times the cross-sectional pipe area (even more in some sizes). No tools require to open cover. The quick opening, swinging yoke can be disassembled and the basket removed in seconds. This can be used as a backwash connection, if desired. Many styles available, including bolt top and clamp top








**ALL STRAINERS  
AVAILABLE IN  
STAINLESS STEEL, CAST  
STEEL  
OR PLASTIC!**



HAYWARD









## BRASS FLARE FITTINGS

| SIZE  | FIG. NO. | SIZE  | FIG. NO. |       |
|---|----------|---|----------|-------|
|  <p><b>No. 39<br/>Swivel Nut</b></p>         |          |  <p><b>No. 42<br/>Full Flare Union</b></p>          |          |       |
| O.D. TUBE   |          | O.D. TUBE   |          |       |
| 3/16"   |          | 1/8   | 3807     |       |
| 1/4"  | 37580    | 3/16  | 4158     |       |
| 5/16"   | 37562    | 1/4   | 3814     |       |
| 3/8"  | 7535     | 5/16  | 3818     |       |
| 1/2"  | 18780    | 3/8   | 3821     |       |
|  <p><b>No. 40<br/>Forged Flare Nut</b></p>   |          | <p>1/2</p>  |          | 17584 |
| O.D. TUBE   |          | 5/8   |          | 3832  |
| 1/4"  | 3701     | 3/4   |          | 3841  |
| 5/16"   |          | 7/8   |          | 3845  |
| 3/8"  | 4155     | 5/16x1/4  |          | 4160  |
| 1/2"  | 3722     | 5/16x3/8  |          |       |
| 5/8"  | 3728     | 3/8x1/4   |          | 3951  |
| 3/4"  | 3732     |   |          |       |
|  <p><b>No. 41<br/>Flare Nut</b></p>        |          |  <p><b>No. 43<br/>Flare X Male X Flare Tee</b></p> |          |       |
| O.D. TUBE   |          | O.D. TUBE X IPS   |          |       |
| 1/8   | 3745     | 3/16x1/8  | 36094    |       |
| 3/16  | 3750     | 1/4x1/8   | 4073     |       |
| 1/4   | 3755     | 1/4x1/4   | 4077     |       |
| 5/16  | 3758     | 5/16x1/8  |          |       |
| 3/8   | 3759     | 5/16x1/4  |          |       |
| 7/16  | 36090    | 3/8x1/4   |          |       |
| 1/2   | 3762     | 3/8x3/8   |          |       |
| 5/8   | 3766     | 1/2x3/8   |          |       |
|   |          | 1/2x1/2   |          |       |
|  <p><b>No. 41-L<br/>Long Flare Nut</b></p> |          |  <p><b>No. 44<br/>Full Flare Tee</b></p>           |          |       |
| O.D. TUBE   |          | O.D. TUBE   |          |       |
| 1/8   | 3778     | 1/8   | 4165     |       |
| 3/16  | 3781     | 3/16  | 4166     |       |
| 1/4   | 248683   | 1/4   | 4107     |       |
| 5/16  | 17583    | 5/16  | 4108     |       |
| 3/8   | 3790     | 3/8   | 4190     |       |
| 1/2   | 3794     | 1/2   | 4191     |       |
|   |          | 5/8   | 4192     |       |



BRASS FLARE FITTINGS

| SIZE  | FIG. NO. | PRICE | SIZE   | FIG. NO. | PRICE           |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
|---|----------|-------|--|----------|-----------------|-------|-----------------|-------|-----------------|-------|---------------|-------|---|-------|-----------|-----------|-----------|------------|-----------|-----------|-----------|-----------|---|------------|-------|------------|-------|------------|-------|-----------|------|-----------|------|-----------|------|-----------|-------|------------|-------|------------|------|------------|------|-----------|------|-----------|------|-----------|------|-----------|------|-----------|-------|-----------|------|-----------|------|-----------|------|
|  <p><b>No. 44</b><br/>Full Flare Tee</p>   |          |       |  <p><b>No. 46</b><br/>Flare X Female IPT</p>         |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| <p>O.D. TUBE</p> <table border="1"> <tr><td>3/8 x 3/8 x 1/4</td><td>36101</td></tr> <tr><td>3/8 x 3/8 x 1/2</td><td>36102</td></tr> <tr><td>1/2 x 1/2 x 1/4</td><td>36107</td></tr> <tr><td>1/2 x 1/2 x 3/8</td><td>36109</td></tr> <tr><td>1/2 x 1/2 5/8</td><td>36108</td></tr> </table>  |          |       | 3/8 x 3/8 x 1/4  | 36101    | 3/8 x 3/8 x 1/2 | 36102 | 1/2 x 1/2 x 1/4 | 36107 | 1/2 x 1/2 x 3/8 | 36109 | 1/2 x 1/2 5/8 | 36108 | <p>O.D. TUBE X IPS</p> <table border="1"> <tr><td>1/8 x 1/8</td><td>4235</td></tr> <tr><td>3/16 x 1/8</td><td>36140</td></tr> <tr><td>1/4 x 1/8</td><td>4236</td></tr> <tr><td>1/4 x 1/4</td><td>4237</td></tr> <tr><td>5/16 x 1/8</td><td>36143</td></tr> <tr><td>5/16 x 1/4</td><td>36145</td></tr> <tr><td>3/8 x 1/8</td><td>36146</td></tr> <tr><td>3/8 x 1/4</td><td>4238</td></tr> <tr><td>3/8 x 3/8</td><td>4239</td></tr> <tr><td>3/8 x 1/2</td><td>4240</td></tr> <tr><td>3/8 x 3/4</td><td>36147</td></tr> <tr><td>1/2 x 1/4</td><td>4241</td></tr> <tr><td>1/2 x 3/8</td><td>4242</td></tr> <tr><td>1/2 x 1/2</td><td>4243</td></tr> <tr><td>1/2 x 3/4</td><td>4244</td></tr> </table> |       |           | 1/8 x 1/8 | 4235      | 3/16 x 1/8 | 36140     | 1/4 x 1/8 | 4236      | 1/4 x 1/4 | 4237  | 5/16 x 1/8 | 36143 | 5/16 x 1/4 | 36145 | 3/8 x 1/8  | 36146 | 3/8 x 1/4 | 4238 | 3/8 x 3/8 | 4239 | 3/8 x 1/2 | 4240 | 3/8 x 3/4 | 36147 | 1/2 x 1/4  | 4241  | 1/2 x 3/8  | 4242 | 1/2 x 1/2  | 4243 | 1/2 x 3/4 | 4244 |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/8 x 1/4   | 36101    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/8 x 1/2   | 36102    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/2 x 1/4   | 36107    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/2 x 3/8   | 36109    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/2 5/8   | 36108    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/8 x 1/8   | 4235     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/16 x 1/8  | 36140    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/8   | 4236     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/4   | 4237     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/8  | 36143    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/4  | 36145    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/8   | 36146    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/4   | 4238     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/8   | 4239     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/2   | 4240     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/4   | 36147    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/4   | 4241     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 3/8   | 4242     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/2   | 4243     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 3/4   | 4244     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
|  <p><b>No. 44-A</b><br/>Full Flare Cross</p>   |          |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| <p>O.D. TUBE</p> <table border="1"> <tr><td>1/4</td><td>36120</td></tr> <tr><td>5/16</td><td>36121</td></tr> <tr><td>3/8</td><td>36122</td></tr> </table>   |          |       |  |          |                 | 1/4   | 36120           | 5/16  | 36121           | 3/8   | 36122         |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4   | 36120    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16  | 36121    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8   | 36122    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
|  <p><b>No. 45</b><br/>Flare X Male IPT<br/>on Branch Tee</p>   |          |       |  <p><b>No. 48</b><br/>Flare X Male IPT Adapter</p> |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| <p>O.D. TUBE X IPS</p> <table border="1"> <tr><td>1/8 x 1/8</td><td>36125</td></tr> <tr><td>3/16 x 1/8</td><td>36126</td></tr> <tr><td>1/4 x 1/8</td><td>4201</td></tr> <tr><td>1/4 x 1/4</td><td>4203</td></tr> <tr><td>5/16 x 1/8</td><td>36127</td></tr> <tr><td>5/16 x 1/4</td><td>36128</td></tr> <tr><td>3/8 x 1/4</td><td>4207</td></tr> <tr><td>3/8 x 3/8</td><td>4210</td></tr> <tr><td>3/8 x 1/2</td><td>4213</td></tr> <tr><td>1/2 x 3/8</td><td>4216</td></tr> </table> |          |       | 1/8 x 1/8  | 36125    | 3/16 x 1/8      | 36126 | 1/4 x 1/8       | 4201  | 1/4 x 1/4       | 4203  | 5/16 x 1/8    | 36127 | 5/16 x 1/4  | 36128 | 3/8 x 1/4 | 4207      | 3/8 x 3/8 | 4210       | 3/8 x 1/2 | 4213      | 1/2 x 3/8 | 4216      | <p>O.D. TUBE X IPS</p> <table border="1"> <tr><td>1/8 x 1/8</td><td>4251</td></tr> <tr><td>3/16 x 1/8</td><td>4252</td></tr> <tr><td>1/4 x 1/8</td><td>4253</td></tr> <tr><td>1/4 x 1/4</td><td>4254</td></tr> <tr><td>1/4 x 3/8</td><td>4255</td></tr> <tr><td>1/4 x 1/2</td><td>4256</td></tr> <tr><td>5/16 x 1/8</td><td>36150</td></tr> <tr><td>5/16 x 1/4</td><td>4257</td></tr> <tr><td>5/16 x 3/8</td><td>4258</td></tr> <tr><td>3/8 x 1/8</td><td>4259</td></tr> <tr><td>3/8 x 1/4</td><td>4263</td></tr> <tr><td>3/8 x 3/8</td><td>4266</td></tr> <tr><td>3/8 x 1/2</td><td>4270</td></tr> <tr><td>3/8 x 3/4</td><td>36152</td></tr> <tr><td>1/2 x 1/4</td><td>4273</td></tr> <tr><td>1/2 x 3/8</td><td>4276</td></tr> <tr><td>1/2 x 1/2</td><td>4280</td></tr> </table> |            |       | 1/8 x 1/8  | 4251  | 3/16 x 1/8 | 4252  | 1/4 x 1/8 | 4253 | 1/4 x 1/4 | 4254 | 1/4 x 3/8 | 4255 | 1/4 x 1/2 | 4256  | 5/16 x 1/8 | 36150 | 5/16 x 1/4 | 4257 | 5/16 x 3/8 | 4258 | 3/8 x 1/8 | 4259 | 3/8 x 1/4 | 4263 | 3/8 x 3/8 | 4266 | 3/8 x 1/2 | 4270 | 3/8 x 3/4 | 36152 | 1/2 x 1/4 | 4273 | 1/2 x 3/8 | 4276 | 1/2 x 1/2 | 4280 |
| 1/8 x 1/8   | 36125    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/16 x 1/8  | 36126    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/8   | 4201     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/4   | 4203     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/8  | 36127    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/4  | 36128    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/4   | 4207     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/8   | 4210     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/2   | 4213     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 3/8   | 4216     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/8 x 1/8   | 4251     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/16 x 1/8  | 4252     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/8   | 4253     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/4   | 4254     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 3/8   | 4255     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4 x 1/2   | 4256     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/8  | 36150    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 1/4  | 4257     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 5/16 x 3/8  | 4258     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/8   | 4259     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/4   | 4263     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/8   | 4266     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 1/2   | 4270     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8 x 3/4   | 36152    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/4   | 4273     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 3/8   | 4276     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2 x 1/2   | 4280     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
|  <p><b>No. 37</b><br/>Flare Cap</p>  |          |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| <p>O.D. TUBE</p> <table border="1"> <tr><td>3/16</td><td>36087</td></tr> <tr><td>1/4</td><td>3672</td></tr> <tr><td>3/8</td><td>3680</td></tr> <tr><td>1/2</td><td>3687</td></tr> </table>  |          |       |  |          |                 | 3/16  | 36087           | 1/4   | 3672            | 3/8   | 3680          | 1/2   | 3687  |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/16  | 36087    |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/4   | 3672     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 3/8   | 3680     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |
| 1/2   | 3687     |       |  |          |                 |       |                 |       |                 |       |               |       |   |       |           |           |           |            |           |           |           |           |   |            |       |            |       |            |       |           |      |           |      |           |      |           |       |            |       |            |      |            |      |           |      |           |      |           |      |           |      |           |       |           |      |           |      |           |      |

## BRASS FLARE FITTINGS

| SIZE | FIG. NO. | PRICE | SIZE | FIG. NO. | PRICE |
|------|----------|-------|------|----------|-------|
|------|----------|-------|------|----------|-------|



No. 49  
Flare X Male

O.D. TUBE X IPS

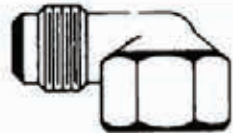
|            |       |
|------------|-------|
| 1/8 x 1/8  | 4300  |
| 3/16 x 1/8 | 4301  |
| 3/16 x 1/4 | 36156 |
| 1/4 x 1/8  | 4305  |
| 1/4 x 1/4  | 4306  |
| 1/4 x 3/8  | 4307  |
| 1/4 x 1/2  | 4309  |
| 5/16 x 1/8 | 4311  |
| 5/16 x 1/4 | 4313  |
| 5/16 x 3/8 | 4332  |
| 3/8 x 1/8  | 4335  |
| 3/8 x 1/4  | 4338  |
| 3/8 x 3/8  | 4339  |
| 3/8 x 1/2  | 4341  |
| 3/8 x 3/4  | 4344  |
| 1/2 x 1/4  | 4345  |
| 1/2 x 3/8  | 4347  |
| 1/2 x 1/2  | 4349  |
| 1/2 x 3/4  | 4351  |
| 5/8 x 1/4  | 36157 |



No. 55

O.D. TUBE

|            |       |
|------------|-------|
| 1/8        | 4380  |
| 3/16       | 4382  |
| 1/4        | 4383  |
| 5/16       | 4384  |
| 3/8        | 4386  |
| 1/2        | 4388  |
| 5/8        | 4389  |
| 3/4        | 4391  |
| 7/8        | 4393  |
| 3/8 X 1/4  | 4397  |
| 3/8 X 5/16 | 36169 |
| 1/2 X 3/8  | 4400  |



No. 50  
Flare X Female

O.D. TUBE X IPS

|            |       |
|------------|-------|
| 3/16 X 1/8 | 4363  |
| 1/4 X 1/8  | 4364  |
| 1/4 X 1/4  | 4365  |
| 5/16 X 1/8 | 36163 |
| 5/16 X 1/4 | 4366  |
| 3/8 X 1/8  | 36164 |
| 1/8 X 1/4  | 4367  |
| 3/8 X 3/8  | 4368  |
| 3/8 X 1/2  | 4369  |
| 3/8 X 3/4  | 36165 |
| 1/2 X 1/4  | 4370  |
| 1/2 X 3/8  | 4371  |
| 1/2 X 1/2  | 4372  |
| 1/2 X 3/4  | 4373  |



No. 57

O.D. TUBE

|      |       |
|------|-------|
| 3/16 | 36173 |
| 1/4  | 4404  |
| 5/16 | 36174 |
| 3/8  | 4406  |








# DUFF TIP:

Don't forget to order  
Flare Nuts  
for every Flare Fitting.





BRASS COMPRESSION FITTINGS


| SIZE   | FIG. NO. | PRICE | SIZE  | FIG. NO. | PRICE |
|--|----------|-------|---|----------|-------|
| <br>No. 60<br>Compression Sleeve                  |          |       | <br>No. 62<br>Full Compression Union              |          |       |
| O.D. TUBE  |          |       | O.D. TUBE   |          |       |
| 1/8  | 4414     |       | 1/8   | 4476     |       |
| 3/16   | 4416     |       | 3/16  | 4477     |       |
| 1/4  | 4419     |       | 1/4   | 4481     |       |
| 5/16   | 4421     |       | 5/16  | 4487     |       |
| 3/8  | 4422     |       | 3/8   | 4489     |       |
| 7/16   | 4425     |       | 5/8   | 4495     |       |
| 1/2  | 4427     |       | 3/4   | 4496     |       |
|  |          |       | 7/8   | 4497     |       |
|  |          |       | 1/4 x 3/16  | 36177    |       |
|  |          |       | 3/8 x 1/4   | 4498     |       |
|  |          |       | 3/8 x 5/16  | 36178    |       |
| <br>No. 60PT<br>Delrin Sleeve<br>For Plastic Tube |          |       | <br>No. 63PT<br>Brass Insert<br>For Plastic Tube |          |       |
| O.D. TUBE  |          |       | O.D. TUBE   |          |       |
| 1/4  | 4440     |       | 1/8   | 4519     |       |
| 5/16   | 4441     |       | 3/16  | 4522     |       |
| 3/8  | 4443     |       | 1/4   | 4523     |       |
| 1/2  | 4444     |       | 5/16  | 4524     |       |
|  |          |       | 3/8   | 4525     |       |
|  |          |       | 1/2   | 4527     |       |
|  |          |       | 5/8   | 4528     |       |
| <br>No. 61<br>Compression Nut                   |          |       | <br>No. 65<br>Full Compression Elbow            |          |       |
| O.D. TUBE  |          |       | O.D. TUBE   |          |       |
| 1/8  | 4457     |       | 1/8   | 4531     |       |
| 3/16   | 4459     |       | 3/16  | 4532     |       |
| 1/4  | 4462     |       | 1/4   | 4533     |       |
| 5/16   | 4464     |       | 5/16  | 17586    |       |
| 3/8  | 4465     |       | 3/8   | 4536     |       |
| 7/16   | 4468     |       | 1/2   | 4537     |       |
| 1/2  | 4470     |       |   |          |       |
| <br>No. 62 CBH<br>Compression Bulkhead          |          |       |   |          |       |
| O.D. TUBE  |          |       |   |          |       |
| 1/4  | 4508     |       |   |          |       |
| 3/8  | -        |       |   |          |       |



## BRASS COMPRESSION FITTINGS


| SIZE | FIG. NO. | PRICE | SIZE | FIG. NO. | PRICE |
|------|----------|-------|------|----------|-------|
|------|----------|-------|------|----------|-------|

**No. 66**  
Compression X Female Adapter  
O.D. TUBE X IPS



|            |       |
|------------|-------|
| 1/8 x 1/8  | 4542  |
| 3/16 x 1/8 | 36180 |
| 3/16 x 1/4 | 4543  |
| 1/4 x 1/8  | 4550  |
| 1/4 x 1/2  | 4558  |
| 5/16 x 1/8 | 20851 |
| 5/16 x 1/4 | 4561  |
| 3/8 x 1/8  | 4563  |
| 3/8 x 1/4  | 4567  |
| 3/8 x 3/8  | 4569  |
| 3/8 x 1/2  | 4571  |
| 1/2 x 1/4  | 4573  |
| 1/2 x 3/8  | 4576  |
| 1/2 x 1/2  | 4578  |
| 5/8 x 3/8  | 4581  |
| 5/8 x 1/2  | 4583  |


**No. 68TF**  
Compression X Male IPT  
Adapter Tank Fitting  
(Tapped Straight Through)



O.D. TUBE X IPS

|           |   |
|-----------|---|
| 3/8 x 3/8 | — |
| 3/8 x 1/2 | — |
| 1/2 x 3/8 | — |


**No. 68**  
Compression X Male IPT Adapter



O.D. TUBE

|            |      |
|------------|------|
| 1/8 x 1/8  | 4615 |
| 3/16 x 1/8 | 4619 |
| 3/16 x 1/4 | 4620 |
| 1/4 x 1/8  | 4623 |
| 1/4 x 1/4  | 4625 |
| 1/4 x 3/8  | 4626 |
| 1/4 x 1/2  | 4628 |
| 5/16 x 1/8 | 4631 |
| 5/16 x 1/4 | 4633 |
| 5/16 x 3/8 | 4634 |
| 3/8 x 1/8  | 4635 |
| 3/8 x 1/4  | 4638 |
| 3/8 x 3/8  | 4639 |
| 3/8 x 1/2  | 4641 |
| 3/8 x 3/4  | 4642 |
| 7/16 x 1/4 | 4644 |
| 1/2 x 1/4  | 4647 |
| 1/2 x 3/8  | 4648 |
| 1/2 x 1/2  | 4650 |
| 1/2 x 3/4  | 4651 |

**No. 69**  
Compression X Male  
IPT Elbow



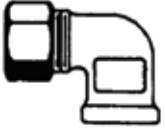

O.D. TUBE


|            |       |
|------------|-------|
| 1/8 x 1/8  | 4741  |
| 3/16 x 1/8 | 22582 |
| 3/16 x 1/4 | 23681 |
| 1/4 x 1/8  | 4743  |
| 1/4 x 1/4  | 4745  |
| 1/4 x 3/8  | 4746  |
| 5/16 x 1/8 | 20261 |
| 5/16 x 1/4 | 4748  |
| 5/16 x 3/8 | 23682 |
| 3/8 x 1/8  | 4750  |
| 3/8 x 1/4  | 4751  |
| 3/8 x 3/8  | 4752  |
| 3/8 x 1/2  | 4754  |
| 3/8 x 3/4  | 36184 |
| 7/16 x 1/4 | 36185 |
| 7/16 x 3/8 | 36186 |
| 1/2 x 1/4  | 4755  |
| 1/2 x 3/8  | 4757  |
| 1/2 x 1/2  | 4759  |
| 5/8 x 3/8  | 4761  |


**Call  
DUFF  
first**




BRASS COMPRESSION FITTINGS

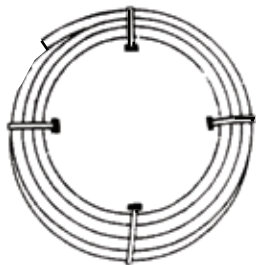
| SIZE  | FIG. NO. | PRICE | SIZE  | FIG. NO. | PRICE |
|---|----------|-------|---|----------|-------|
|  <p><b>No. 70</b><br/>Compression X Female</p> |          |       |  <p><b>No. 72</b><br/>Compression X Male Tee</p> |          |       |
| O.D. TUBE X IPS   |          |       | O.D. TUBE   |          |       |
| 1/8 X 1/8   | 4787     |       | 1/8 X 1/8   | 4850     |       |
| 3/16 X 1/8  | 36187    |       | 3/16 X 1/8  | 36200    |       |
| 1/4 X 1/8   | 4789     |       | 1/4 X 1/8   | 4853     |       |
| 1/4 X 1/4   | 4791     |       | 1/4 X 1/4   | 4854     |       |
| 5/16 X 1/8  | 36188    |       | 5/16 X 1/8  | 36201    |       |
| 5/16 X 1/4  | 36189    |       | 5/16 X 1/4  | 36202    |       |
| 3/8 X 1/8   | 36190    |       | 3/8 X 1/8   | 4856     |       |
| 3/8 X 1/4   | 4794     |       | 3/8 X 1/4   | 4857     |       |
| 3/8 X 3/8   | 4797     |       | 3/8 X 3/8   | 4862     |       |
| 3/8 X 1/2   | 4801     |       | 1/2 X 3/8   | 4863     |       |
| 1/2 X 3/8   | 4803     |       | 1/2 X 1/2   | 4866     |       |
| 1/2 X 1/2   | 4806     |       |   |          |       |

|  |       |
|--|-------|
|  <p><b>No. 71</b><br/>Compression X Male X<br/>Compression Tee</p> |       |
| O.D. TUBE  |       |
| 1/8 x 1/8  | 4815  |
| 3/16 x 1/8   | 36193 |
| 1/4 x 1/8  | 4825  |
| 1/4 x 1/4  | 4827  |
| 5/16 x 1/8   | 36194 |
| 5/16 x 1/4   | 36195 |
| 3/8 x 1/4  | 4833  |
| 3/8 x 3/8  |       |
| 1/2 x 3/8  | 4841  |
| 1/2 x 1/2  | 4844  |
| 5/8 x 1/2  | 4848  |

|  |      |
|--|------|
|  <p><b>No. 74</b><br/>Full Compression Tee</p> |      |
| O.D. TUBE  |      |
| 1/8  | 4871 |
| 3/16   | 4872 |
| 1/4  | 4873 |
| 5/16   | 4875 |
| 3/8  | 4877 |
| 1/2  | 4878 |

|   |       |
|---|-------|
|  <p>Compression by Sweat<br/>(DELTA Fitting)</p> |       |
| O.D. TUBE   |       |
| 3/8" ODX 1/2"   | 11022 |
| NOM COPPER  |       |

ALUMINUM TUBING



| 50' COIL |          |       |
|----------|----------|-------|
| SIZE     | FIG. NO. | PRICE |
| 1/8      | 16303    |       |
| 3/16     | 16306    |       |
| 1/4      |          |       |
| 5/16     | 16315    |       |
| 3/8      | 16317    |       |
| 7/16     | 16325    |       |
| 1/2      | 16329    |       |
| 5/8      | 16332    |       |
| 3/4      | 16335    |       |

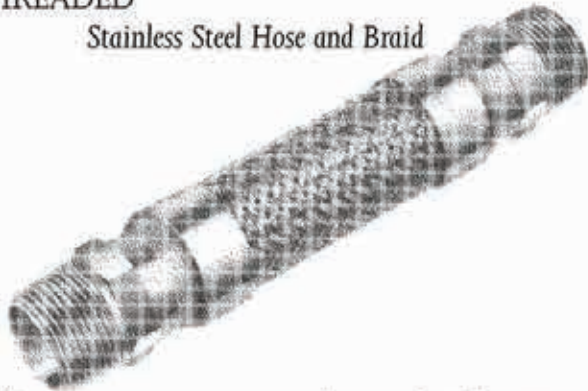




## FLEXIBLE CONNECTORS

THREADED

Stainless Steel Hose and Braid



SWEAT

Brass Hose and Braid



Duff pump connectors are a perfect match of hose type, wall thickness and braid design to minimize forces and stress within piping systems. These connectors are factory engineered, manufactured and tested to effectively minimize the stress of pump and compression housings, and to isolate vibrations transmitted by mechanical equipment. And today, Duff can help you comply with noise level requirements by reducing pipe vibration throughout a structure. Duff protection means longer service life, lower overall operating costs and years of trouble-free service.

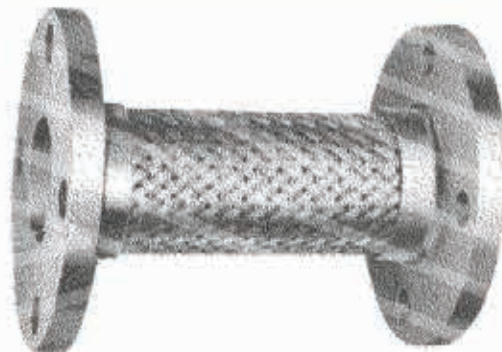
Minimize compressor vibration right at the source with Duff's flex connectors - the standard of the industry. Sweat end flex connectors are made in tube sizes 1/4" to 61/18". UL recognized in sizes to 4". Flexible corrugated tube of special grade phosphorous bronze for high strength and stability under continuous flexing and vibration, and for resistance to the corrosive action of freon and methyl chloride. The flexible tube is covered with a balanced bronze braid, engineered for a combination of strength and flexibility. Female solder end fittings and braid sleeves are skillfully attached.

| SIZE         | FIG NO |
|--------------|--------|
| 1/2" X 12"   | 15292  |
| 3/4" X 12"   | 15293  |
| 1" X 12"     | 15294  |
| 1-1/4" X 12" | 15295  |
| 1-1/2" X 12" | 15296  |
| 2" X 12"     | 15297  |
| 2-1/2" X 16" | 17671  |
| 3" X 16"     | 17670  |

| SIZE             | FIG NO |
|------------------|--------|
| 1/8" X 7-1/2"    | 49307  |
| 1/4" X 8-1/4"    | 15243  |
| 3/8" X 9"        | 15250  |
| 1/2" X 12"       | 15262  |
| 5/8" X 11-1/4"   | 17553  |
| 3/4" X 11-1/2"   | 15279  |
| 1" X 13"         | 17554  |
| 1-1/4" X 14-3/4" | 15285  |
| 1-1/2" X 12"     | 15287  |
| 2" X 20"         | —      |
| 2-1/2" X 24"     | 15290  |
| 3" X 27"         | 15291  |

**DUFF TIP:**

Flexible connectors can be made in any length and end configuration. For example, we can make a 2" x 23" with acarbon steel male on one end and a stainless steel flange on the other.



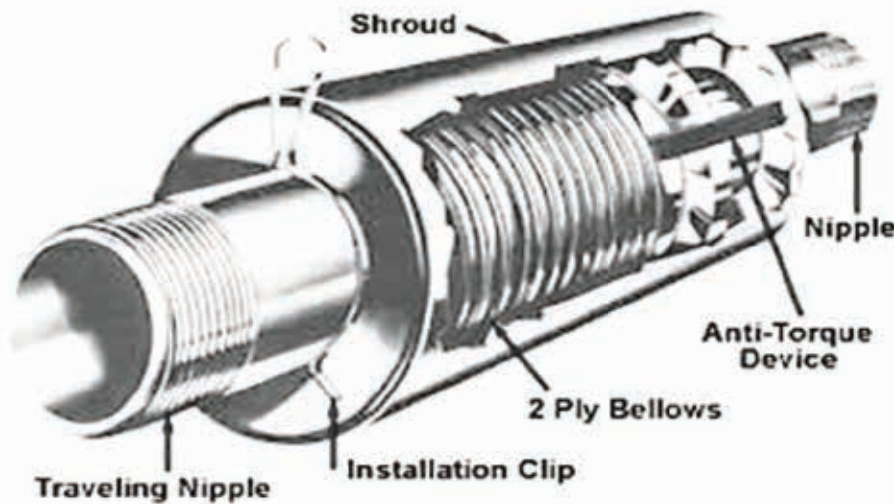
Duff flanged flex connectors are a perfect match of hose type, wall thickness and braid design to minimize the forces and stress within piping systems. These connectors are factory engineered, manufactured and tested to effectively minimize the stress of pump and compression housings, and to isolate vibrations transmitted by mechanical equipment. And today, Duff can help you comply with noise level requirements by reducing pipe vibration through a structure. Duff protection means longer service life, lower overall operating costs and years of trouble-free service.

| Size  | Fig No | Price |
|-------|--------|-------|
| 3 x 9 | 17672  |       |
| 4 x 9 | 17673  |       |

**MANY OTHER SIZES AND LENGTHS ARE AVAILABLE FROM STOCK OR CAN BE CUSTOM FABRICATED!**



EXPANSION COMPENSATORS



EXPANSION COMPENSATORS - the perfect way to absorb pipe motion in small diameter systems. High pressure types permit 2" pipe motion - 1 3/4" compression and 1/4" in extension. Duff's expansion compensators provide the lowest cost method to take up thermal growth.

AVAILABLE FOR QUICK DELIVERY!



HIGH AND LOW PRESSURE EXPANSION JOINTS



LOW PRESSURE

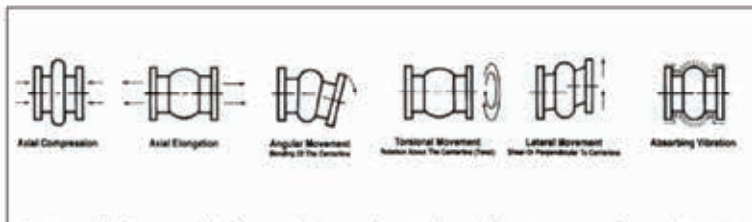
| Available for Immediate Delivery                      | LOW PRESSURE   |   | HIGH PRESSURE   |   |
|---|--|---|---|---|
|   | SINGLE   | DUAL  | SINGLE  | DUAL  |
| SIZE RANGE  | 3" TO 4" NPS   | 3" TO 48" NPS   | 3" TO 24" NPS   | 3" TO 24" NPS   |
| ALLOWABLE PRESSURE (Stainless Steel Pressure Carrier) | Vacuum to 50 PSI   | Vacuum to 50 PSI  | Vacuum To 300 PSI   | Vacuum to 300 PSI   |
| TEMPERATURE LIMITS (Stainless Steel Pressure Carrier) | -20 to 850 Deg F   | -20 to 850 Deg F  | Flange: -20 F to 800 Deg F<br>Welding Flange: -20 F to 85 Deg F | -20 F to 800 Deg F<br>-20 Deg F to 850 Deg F                    |
| AXIAL TRAVERSE  | To 6 1/4" (depending on size)                            | To 12 1/2"  | To 7 1/2" (Depending on size)                                   | To 18" (Depending on size)                                      |
| LATERAL MOTION  | Variable amount depending of size and certain conditions | Virtually unlimited, depending on length of intermediate nipple | Limited amount under certain conditions                         | Virtually unlimited, depending on length of intermediate nipple |



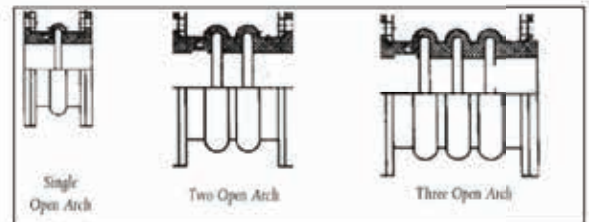
HIGH PRESSURE

RUBBER EXPANSION JOINTS

APPLICATIONS



TYPES



Designed for tough demanding industrial applications, as found in: Air-conditioning-heating and ventilating systems, chemical retrochemical and industrial process piping systems, power generating plants, steel mills, marines services. Pulp/paper systems, water-wastewater-sewage and pollution control systems. Installed net to mechanical equipment or between the anchor points of a piping system. Absorb pipe movement/stress; reduce system noise; isolate mechanical vibration; compensate alignment/offset; eliminate electrolysis; protect against start-up forces.



**BASE SLIDE EXPANSION COUPLERS** Triples the expansion movement of most bellows-type joints in baseboard radiation and supply piping and main. Trouble-free, piston-slide design provides smooth operation and elimination of expansion and pipe traveling noises. Copper piston tube. Simplified installation. No maintenance when properly installed. Available in 3 sizes to fit any diameter pipe or tube from 3/4" to 1 1/4"

|        | SWEAT  | IPS    |
|--------|--------|--------|
| SIZE   | FIG NO | FIG NO |
| 3/4"   | 150789 | 150795 |
| 1"     | 150792 | 150796 |
| 1-1/4" | 150793 | 150797 |
| 1-1/2" | 150794 | —      |

# How to Order

Submit your order online

or

email [info@duffco.com](mailto:info@duffco.com)

**Be sure to include**

product numbers

descriptions

quantities

**Don't forget to include your name!**



# DUFF SUPPLY COMPANY

WATER TREATMENT EQUIPMENT - PUMPS - PLUMBING - HEATING - INDUSTRIAL SUPPLIES - PUMPS  
STEAM SPECIALTIES - PIPE - VALVES - FITTINGS - SOFTENERS - FILTERS

201 EAST LAFAYETTE STREET, P.O. BOX 618, NORRISTOWN, PA 19401

PHONE: 610-275-4453 FAX: 610-279-6299



SOLD TO:

SHIP TO:

|  |  |
|--|--|
|  |  |
|  |  |
|  |  |

YOUR NAME: \_\_\_\_\_ PURCHASE ORDER NO. \_\_\_\_\_

TODAY'S DATE: \_\_\_\_\_ REQUIRED DATE: \_\_\_\_\_

| QTY | FIG. NO. | DESCRIPTION | PRICE/EA | TOTAL |
|-----|----------|-------------|----------|-------|
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
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|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |



TERMS: NET - 10<sup>TH</sup> OF MONTH FOLLOWING PURCHASE  
WE WILL PREPAY AND ADD FREIGHT FOR ALL ORDERS SHIPPED UPS OR COMMON CARRIER

*All accounts are to be paid in full to Duff Supply Company monthly by the tenth (10<sup>th</sup>) day of the month following invoice date, a 1% service charge and a 1% interest charge will be made on any balance open at the end of the month following invoice, and in the event that legal action or lien be undertaken, or the service of a collection agency are used to collect this account, the customer shall pay all expenses incurred by Duff Supply Company, such as, but not limited to, costs and collection, legal and lien fees.*

| QTY | FIG. NO. | DESCRIPTION | PRICE/EA | TOTAL |
|-----|----------|-------------|----------|-------|
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
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|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |
|     |          |             |          |       |



*Thank You  
for your business!*



Contact name \_\_\_\_\_ Contact Date \_\_\_\_\_



# DUFF COMPANY

201 East Lafayette Street  
Norristown, PA 19401



Phone: **610-275-4453** Fax: **610-279-6761**

Legal Name \_\_\_\_\_

Name in which business is conducted \_\_\_\_\_

Billing Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Purchasing Phone \_\_\_\_\_ A/P Phone \_\_\_\_\_ Fax \_\_\_\_\_



Principal's Name \_\_\_\_\_

Principal's Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone (Office) \_\_\_\_\_ (Cell) \_\_\_\_\_ E-mail address \_\_\_\_\_

Website address (If applicable) \_\_\_\_\_

Primary Contact \_\_\_\_\_ Title \_\_\_\_\_



### SHIPPING ADDRESS - IF DIFFERENT

Shipping Address \_\_\_\_\_ Phone \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Tax Exempt Number \_\_\_\_\_ Provide a copy of Certificate. We CAN NOT set up a Tax Exempt Account without certification.



### TYPE OF BUSINESS

Plumbing \_\_\_\_\_ Pumps \_\_\_\_\_ Heating \_\_\_\_\_ Municipality \_\_\_\_\_ Hotel or Apts. \_\_\_\_\_ Well Drilling \_\_\_\_\_  
Hospital \_\_\_\_\_ Factory (OEM) \_\_\_\_\_ Factory (Mtn) \_\_\_\_\_ Office Building \_\_\_\_\_ Shopping Center \_\_\_\_\_  
Golf Course \_\_\_\_\_ Water Treatment \_\_\_\_\_ Environmental \_\_\_\_\_ Other (Please name) \_\_\_\_\_

Have you been contacted by one of our salesman? \_\_\_\_\_ Name \_\_\_\_\_

If YES, please explain \_\_\_\_\_

Name of person authorized to pick up \_\_\_\_\_

D&B Rating \_\_\_\_\_ Check one: Corporation \_\_\_\_\_ Partnership \_\_\_\_\_ Individual Proprietor \_\_\_\_\_

If division of another company, name parent company and relationship \_\_\_\_\_



# DUFF COMPANY

201 East Lafayette Street, Norristown, PA 19401

## TRADE REFERENCES

Name \_\_\_\_\_ Type of business \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_



Name \_\_\_\_\_ Type of business \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_



Name \_\_\_\_\_ Type of business \_\_\_\_\_

Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Phone \_\_\_\_\_ Fax \_\_\_\_\_



Bank reference \_\_\_\_\_

Branch Address \_\_\_\_\_

City \_\_\_\_\_ State \_\_\_\_\_ Zip \_\_\_\_\_

Branch officer who handles account \_\_\_\_\_

In consideration of your opening the above account and/or extended credit, the undersigned hereby agrees that all information supplied in this application is correct, that all accounts are to be paid in full to Duff Company monthly by the tenth day of the month following the invoice date, that a 1% service charge and a 1% interest charge will be made on any balance open at the end of the month following invoice date, and that in the event that legal action or lien be taken, or the service of a collection agency are used to collect this account, the undersigned shall pay all expenses incurred by the Duff company, such as, but not limited to, collection fees, costs and legal fees.

Applicant (Name of Account) \_\_\_\_\_

By \_\_\_\_\_ Title \_\_\_\_\_

The undersigned \_\_\_\_\_ and \_\_\_\_\_ for good and valuable consideration, hereby jointly, severally and personally unconditionally guarantee, warrant and promise the full and prompt (within terms) payments of all bills and other obligations (as set forth above) of the applicant in connection with any credit extended to the applicant by Duff Company.\*

Principal \_\_\_\_\_ Witness \_\_\_\_\_ Principal's Spouse \_\_\_\_\_ Witness \_\_\_\_\_

Principal \_\_\_\_\_ Witness \_\_\_\_\_ Principal's Spouse \_\_\_\_\_ Witness \_\_\_\_\_

We routinely fax invoices to our customers. Please provide a fax number where we can send invoices \_\_\_\_\_

**PLEASE FAX FORM TO 610-275-6761**

\*As appropriate, we may also require the guarantee of a principal and, in some cases, the principal's spouse.

### For Duff Company Use Only

|                         |                       |                         |
|-------------------------|-----------------------|-------------------------|
| Credit Limit: _____     | Contact: _____        | Certificate Recd: _____ |
| Tax Jurisdiction: _____ | General Manager _____ | Type: _____             |
| Salesman: _____         | Class: _____          | Controller: _____       |
|                         | Date Approved: _____  |                         |