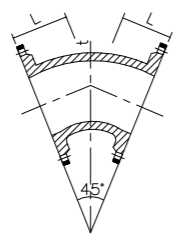
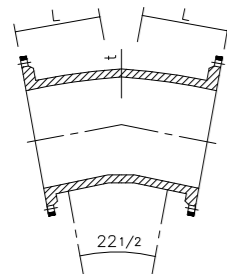


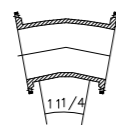
DOUBLE FLANGED  
90° BEND



DOUBLE FLANGED  
45° BEND



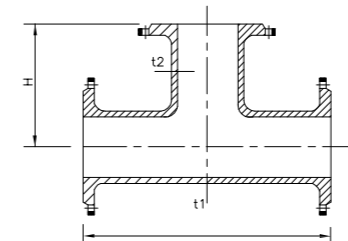
DOUBLE FLANGED  
22 1/2 BEND



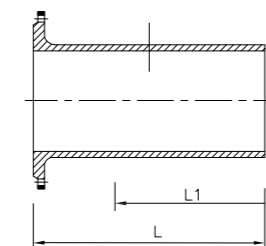
DOUBLE FLANGED  
11 1/4 BEND

| NORMAL DIAMETER ND(mm) | OUTER DIAMETER OD(mm) | t PLATE THK. (mm) | 90° L(mm) | 45° L(mm) | 22 1/2° L(mm) | 11 1/4° L(mm) |
|------------------------|-----------------------|-------------------|-----------|-----------|---------------|---------------|
| 100                    | 118                   | 7.2               | 180       | 140       | 140           | 140           |
| 150                    | 170                   | 7.8               | 220       | 150       | 160           | 160           |
| 200                    | 222                   | 8.4               | 260       | 180       | 180           | 180           |
| 250                    | 274                   | 9.0               | 350       | 350       | 350           | 350           |
| 300                    | 326                   | 9.5               | 400       | 400       | 400           | 400           |
| 350                    | 378                   | 10.2              | 450       | 298       | 298           | 298           |
| 400                    | 429                   | 10.8              | 500       | 324       | 324           | 324           |

| NORMAL DIAMETER NDxnd (mm) | OUTER DIAMETER ODxod (mm) | BARREL             |       | BRANCH             |       |
|----------------------------|---------------------------|--------------------|-------|--------------------|-------|
|                            |                           | t1 PLATE THK. (mm) | L(mm) | t2 PLATE THK. (mm) | H(mm) |
| 100x100                    | 118x118                   | 7.2                | 360   | 7.2                | 180   |
| 150x50                     | 170x65                    | 7.8                | 330   | 7.0                | 170   |
| 150x150                    | 170x170                   | 7.8                | 440   | 7.8                | 220   |
| 200x50                     | 222x65                    | 8.4                | 330   | 7.0                | 185   |
| 200x150                    | 222x170                   | 8.4                | 460   | 7.8                | 245   |
| 200x200                    | 222x222                   | 8.4                | 520   | 8.4                | 260   |
| 250x50                     | 274x65                    | 9.0                | 375   | 7.0                | 255   |
| 250x150                    | 274x170                   | 9.0                | 485   | 7.8                | 280   |
| 250x200                    | 274x222                   | 9.0                | 540   | 8.4                | 290   |
| 250x250                    | 274x274                   | 9.0                | 600   | 9.0                | 300   |
| 300x50                     | 326x65                    | 9.6                | 405   | 7.0                | 290   |
| 300x150                    | 326x170                   | 9.6                | 505   | 7.8                | 310   |
| 300x200                    | 326x222                   | 9.6                | 565   | 8.4                | 320   |
| 300x300                    | 326x326                   | 9.6                | 680   | 9.6                | 340   |
| 400x80                     | 429x98                    | 10.8               | 470   | 7.0                | 335   |
| 400x150                    | 429x170                   | 10.8               | 550   | 7.8                | 370   |
| 400x200                    | 429x222                   | 10.8               | 510   | 8.4                | 380   |
| 400x300                    | 429x326                   | 10.8               | 765   | 9.6                | 400   |
| 400x400                    | 429x429                   | 10.8               | 840   | 10.8               | 420   |

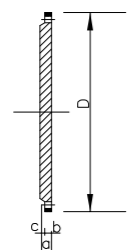


ALL FLANGED TEE

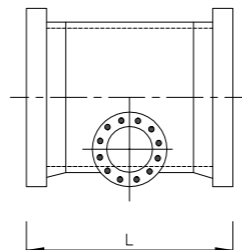


FLANGED SPIGOT

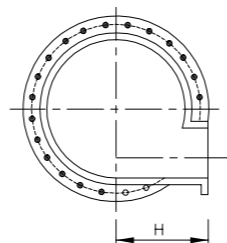
| NORMAL DIAMETER ND (mm) | (mm) | L (mm) | L <sup>1</sup> (mm) |
|-------------------------|------|--------|---------------------|
| 100                     | 7.2  | 380    | 215                 |
| 150                     | 7.8  | 380    | 225                 |
| 200                     | 8.4  | 400    | 230                 |
| 250                     | 9.0  | 420    | 240                 |
| 300                     | 9.6  | 440    | 250                 |
| 350                     | 10.2 | 460    | 260                 |
| 400                     | 10.8 | 480    | 270                 |



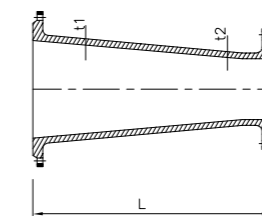
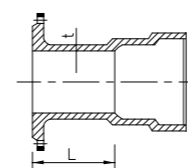
BLANK FLANGED



ALL FLANGED LEVEL INVERT TEE



FLANGED SOCKET



DOUBLE FLANGED TAPER

| NORMAL DIA. NDxnd (mm) | OUTER DIA. ODxod (mm) | PN10   |        |        |        | PN18   |        |        |        |
|------------------------|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|
|                        |                       | D (mm) | a (mm) | b (mm) | c (mm) | D (mm) | a (mm) | b (mm) | c (mm) |
| 100                    | 118                   | 220    | 19.0   | 16.0   | 3      | 220    | 19.0   | 16.0   | 3      |
| 150                    | 174                   | 285    | 19.0   | 16.0   | 3      | 285    | 19.0   | 16.0   | 3      |
| 200                    | 222                   | 340    | 20.0   | 17.0   | 3      | 340    | 20.0   | 17.0   | 3      |
| 250                    | 274                   | 400    | 22.0   | 19.0   | 3      | 400    | 22.0   | 19.0   | 3      |
| 300                    | 326                   | 455    | 24.5   | 20.5   | 4      | 455    | 24.5   | 20.5   | 4      |
| 350                    | 378                   | 505    | 24.5   | 20.5   | 4      | 520    | 26.5   | 22.5   | 4      |
| 400                    | 429                   | 565    | 24.5   | 20.5   | 4      | 580    | 28.0   | 24.0   | 4      |

| NORMAL DIAMETER |                | OUTER DIAMETER |                | L (mm) | H (mm) |
|-----------------|----------------|----------------|----------------|--------|--------|
| BARREL ND (mm)  | BRANCH nd (mm) | BARREL OD (mm) | BRANCH od (mm) |        |        |
| 150             | 100            | 170            | 118            | 400    | 215    |
| 200             | 100            | 222            | 118            | 400    | 235    |
| 250             | 100            | 274            | 118            | 490    | 275    |
| 300             | 100            | 326            | 118            | 480    | 305    |
| 350             | 100            | 378            | 118            | 480    | 330    |
| 400             | 100            | 429            | 118            | 500    | 365    |

| NORMAL DIA. ND(mm) | OUTER DIA. OD(mm) | t PLATE THK. (mm) | L (mm) |
|--------------------|-------------------|-------------------|--------|
| 100                | 118               | 7.2               | 130    |
| 150                | 170               | 7.8               | 135    |
| 200                | 222               | 8.4               | 140    |
| 250                | 274               | 9.0               | 145    |
| 300                | 326               | 9.6               | 150    |
| 350                | 278               | 10.5              | 155    |
| 400                | 429               | 10.8              | 180    |

| NORMAL DIA. NDxnd (mm) | OUTER DIA. ODxod (mm) | t1 PLATE THK. (mm) | t2 PLATE THK. (mm) | L(mm) |
|------------------------|-----------------------|--------------------|--------------------|-------|
| 100x80                 | 118x98                | 7.2                | 7.0                | 200   |
| 200x150                | 222x170               | 8.4                | 1.8                | 300   |
| 300x250                | 326x274               | 9.6                | 9.0                | 300   |
| 400x350                | 429x274               | 10.8               | 10.2               | 300   |

NOTE:  
1. ALL DIMENSIONS ARE IN MILLIMETER UNLESS OTHERWISE STATED.  
2. ALL FLANGES SHALL BE SUITABLE FOR A PRESSURE RATING OF 16 BARS UNLESS OTHERWISE STATED.

| REV. | REVISED BY | DESCRIPTION | DATE     |
|------|------------|-------------|----------|
| 01   | NORAZLIN   | CHANGE LOGO | JAN 2018 |



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PROJECT :  
DRAWING TITLE :

DETAILS AND SCHEDULE OF D.I PIPES SPECIALS

DRAWN BY : MAZZ      DESIGNED : W.C  
CHECKED : MFB      APPROVED : T.C  
SCALE : NOT TO SCALE      DATE : JAN 2018  
DRAWING NO : SAJ/STD/DPS/02 (01)