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# Shouldered System

MAY 2022

**Structural | Tubular | Bar | Plate | Stainless | Sheet & Coil | Plate**
**Aluminium | Wear Products | Pipes & Fittings | Walkway Systems | Fencing**

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# Shouldered ERW Pipe

## Specifications

The following specifications describe the requirements for hot dip galvanised shouldered pipe suitable for use with either forged steel or cast iron couplings. Furthermore the pipe is suitable, depending on fluid type and service conditions, for service up to AS4041 Class 2 pipe work in underground applications.

## Size Range

| OD (mm) | t (mm) | Standard Lengths | Mass In Kg/m | Max Recommended Working Pressure | Max Recommended Test Pressure Ambient Temp. |
|---|---|---|---|---|---|
| 114.3 | 2.1 | 6.0m | 5.86 | 3.6MPa | 5.4MPa |
| 114.3 | 2.1 | 6.5m | 5.86 | | |
| 165.1 | 2.5 | 6.0m | 10.02 | 3.0MPa | 4.5MPa |
| 165.1 | 2.5 | 6.5m | 10.02 | | |
| 219.1 | 3.5 | 6.0m | 18.60 | 3.1MPa | 4.7MPa |
| 219.1 | 3.5 | 6.5m | 18.60 | | |
| 323.9 | 4.8 | 6.0m | 38.22 | 2.9MPa | 4.35MPa |
| 355.6 | 4.8 | 6.0m | 41.52 | 2.6MPa | 3.9MPa |
| 457.0 | 4.8 | 6.0m | 53.52 | 2.0MPa | 3.1MPa |
| 610.0 | 6.0 | 6.0m | 89.37 | 1.9MPa | 2.9MPa |

**Note:** The above maximum recommended test and working pressures are applicable only to the pipe and only if;

- The only applied stresses are those from the internal fluid pressure
- The pipeline is designed using the appropriate standard applicable to its use.

762mm and 914mm also available on application.

## Surface Finish

Hot dip galvanised minimum coating thickness at any location of the product is 34microns, and the minimum mass per square metre of the coating shall be 300 g. Each pipe is visually inspected to ensure the coating on each pipe is adherent, smooth and free from dross, bubbles, spikes, lumps, flaking or peeling.

## Bundling Data

| OD (mm) | t (mm) | Standard Lengths | Mass In Kg/m | Lengths per Bundle | Mass per Bundle kg |
|---|---|---|---|---|---|
| 114.3 | 2.1 | 6.0m | 5.86 | 10 | 351.60 |
| 114.3 | 2.1 | 6.5m | 5.86 | 10 | 380.90 |
| 165.1 | 2.5 | 6.0m | 10.02 | 10 | 601.20 |
| 165.1 | 2.5 | 6.5m | 10.02 | 10 | 651.30 |
| 219.1 | 3.5 | 6.0m | 18.60 | 5 | 558.00 |
| 219.1 | 3.5 | 6.5m | 18.60 | 5 | 604.50 |
| 323.9 | 4.8 | 6.0m | 38.22 | 1 | 229.32 |
| 355.6 | 4.6 | 6.0m | 51.52 | 1 | 309.12 |
| 457.0 | 4.8 | 6.0m | 53.52 | 1 | 321.12 |
| 610.0 | 6.0 | 6.0m | 89.37 | 1 | 536.22 |

**Note:** Sizes 114.3 through 219.1 shall be supplied bundled in accordance with the above table. A minimum of 4 straps per bundle shall be supplied.

# Shouldered ERW Pipe

## Chemical Composition

Coil feed material shall conform to API 5LB PSL1 chemical composition with special regard to Silicon content that ensures full adhesion of hot dipped galvanising.

## Mechanical Properties

- Minimum Yield Strength: 245 MPa
- Minimum Tensile Strength: 415 MPa
- Minimum Elongation: 15%

## Straightness and Length Tolerance

Pipes shall not deviate from a straight line by more than the length divided by 500 at the centre of the pipe length. Each pipe shall be the ordered length with a tolerance of –0.50mm, +20.0 mm.

## End Squareness

Each pipe shall be cut with a squareness not exceeding 1.6mm.

## Weld Bead

The external weld bead shall be trimmed to an essentially flush condition. The maximum height of the internal weld bead shall not exceed 1.5mm.

## Mass

The mass of any mill length of pipe shall not be less than 98% of the nominal mass.

## Roundness

Each pipe shall meet or exceed the requirements for Out-of-roundness as defined in API5L Specifications:

| OD (mm) | Out-of-Roundness | |
|---|---|---|
| | Except Ends (mm) | Ends (mm) |
| 114.3 | 2.29 | 1.72 |
| 165.1 | 3.30 | 2.48 |
| 219.1 | 4.38 | 3.29 |
| 323.9 | 7.03 | 5.27 |
| 355.6 | 7.11 | 5.33 |
| 457.0 | 9.14 | 6.86 |
| 610.0 | 12.20 | 9.15 |

## Non-Destructive Testing

Traditional automated non-destructive examinations such as; Ultrasonic and Hydrostatic as outlined in API5L are completed on every length of pipe. Hydrostatic test pressures are calculated as follows and held for five (5) seconds.

$$P\ (MPa) = \frac{1.2 \times YS \times t}{D}$$

Where YS = minimum YS of pipe (MPa) = and t = nominal thickness (mm)

A second Hydrostatic Test, as outlined in API5L, is completed on every length of pipe after the shouldered ring has been welded to the pipe, prior to the galvanisation process.

## Identification and Documentation

The identity of each pipe is maintained though galvanising process to ensure that the correct Heat Number and Purchase Order Number is stencilled on each pipe. Each Pipe is marked with the following in permanent ink:

- Diameter (mm)
- Manufacturing specification and grade
- Heat Number

Each pipe is traceable to a Test Certificate which shall be supplied to the purchaser. SI units shall be used. For at least each heat of steel, the Test Certificate shall contain, at minimum:

- Details of the pipe section, specification and grade.
- Measured Chemical composition, for each element intentionally added and each element in the IIW CEq formula.
- Bare pipe measured Yield Strength, Tensile Strength & Elongation.
- A statement of compliance for welding to AS3992.
- A statement of compliance with regard to the non-destructive test method used.
- A statement of compliance for coating to the galvanising Standard.

## References


- AS/NZS 3679.1:1996 (Amd. 1 & 2) Structural steel Part 1: Hot-rolled bars & sections
- AS/NZS 3992:1998 (Amd. 1) Pressure equipment – Welding and brazing qualification
- AS 4041:2006 Pressure piping
- AS/NZS 4680:2006 Hot-dip galvanized (zinc) coatings on fabricated ferrous articles
- ISO 9001:2008 Quality management systems – Requirements
- ANSI/API Specification 5L 44th edition:2007 Specification for Line Pipe

# Shouldered Couplings

The shouldered flexible couplings and piping system is simple in design. It consists of a self-sealing rubber gasket embracing two pipe ends and a coupling which encloses the gasket while engaging shouldered on the pipe ends.

The shouldered flexible coupling is leakproof under pressure or vacuum even when the pipeline is only partly full or under vibration.

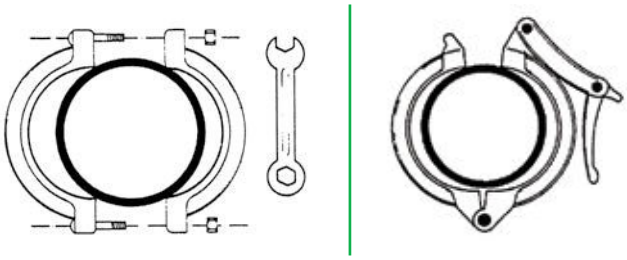
The small space occupied by the flexible coupling, the ease with which it can be fitted into confined spaces, together with the quick and easy coupling of pipe lengths make the shouldered flexible coupling and piping system uniquely versatile.

The system provides for limited expansion and contraction and accommodates some longitudinal and angular movement.

## Operating Features

### Speed and Efficiency

Shouldered joints have two basic parts – two shouldered ends on pipes (or fittings) and a complete coupling.



The toggle coupling is hinged and requires no bolts. It has two components:

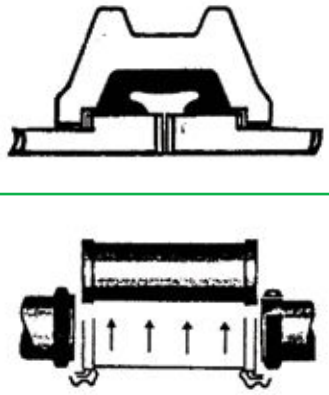
- a rubber ring
- the hinged coupling

### Flexiblity

The shouldered system permits limited angular deflection in any direction without leakage so that uneven ground may be followed using straight pipes. Transmission of vibration from machines to pipelines can be minimised by using at least two adjacent shouldered joints.

### Expansion and Contraction

Every shouldered joint in a straight pipeline allows for some contraction and expansion of the pipe length it connects.



### System Simplicity

Just as shouldered joints are easy to connect so they are easy to disconnect.

Dismantle two shouldered joints in a line and any individual pipe length, fitting or valve requiring maintenance, cleaning or repair can be quickly removed or replaced. Adjoining sections are undisturbed; pipe ends and joints are unharmed. This feature also permits easy rotation of pipes.

# Shouldered Couplings

## Locked Joint

1. Shouldered couplings mechanically lock the shouldered pipe ends rtogether securely and safely. The joints cannot blow off under pressure nor can they pull out under vibration or sag, because the shoulder sections of the couplings engage the circumference of the pipe shoulders.
2. The shouldered coupling, when applied, automatically centralises the sealing ring and seats it on the pipe ends firmly.
3. Line pressure automatically strengthens the seal by acting internally on the ring lips. The higher the pressure the tighter the seal.
4. Suction or vacuum also automatically strengthens the seal. The higher outside atmospheric pressure acts to compress the walls of the shouldered ring.

1


2


3


4


**Assembly:**
**Important**:

1. **Pipe End Must be Smooth**
   The shoulder must be smooth and any lumps of galvanising behind the shoulder or on the pipe ends removed.
2. **Lubrication**
   Lubrication prevents the coupling nipping the ring and facilitates assembly. Smear lubricant over back of gasket (which comes in contact with the pipe ends). It is also helpful to smear the inside of the coupling. For water quality rings use soapy water. For oil quality rings use mineral oil or dip rings in the fluid to be conveyed before fitting.

## Gaskets

| Standard Gaskets | | | |
|---|---|---|---|
| **Grade** | **Temp Range** | **Compound** | **General Service Recommendations** |
| R | -50° to +65° | Natural Rubber | Typically used for hot water service within the specified temperature range, sewage plus a variety of dilute acids, oil free air, many chemical services and compressed air. Not advised for petroleum services. |
| N | -30° to +80° | Nitrile | Typically used for petroleum, oil or gas products, air with oil vapours, vegetable and mineral oils within the specified tempaterature range, except hot dry air over 60°C and water over 66°C. Not advised for hot water services. |

## Coatings

Couplings

1. All galvanised couplings are hot dipped galvanised to AS 1650.
2. All painted couplings are black painted to ASTM B117 (other colours subject to enquiry).

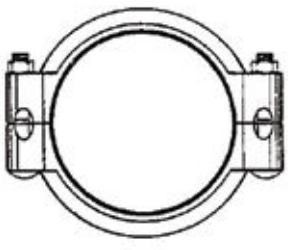
Bolts and Nuts – all bolts and nuts hot dipped galvanised to AS 1214.

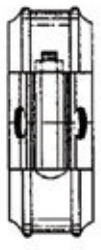
## Standard Two Part Couplings

| Nominal Pipe Size mm | Pipe O.D. mm | Maximum recommended | | | | Mass each complete Kg |
|---|---|---|---|---|---|---|
| | | Test Pressure | | Working Pressure | | |
| | | kPa | PSI | kPa | PSI | |
| 50 | 60.3 | 22000 | 3190 | 4150 | 600 | 1.2 |
| 80 | 88.9 | 18000 | 2610 | 4150 | 600 | 1.5 |
| 100 | 114.3 | 12500 | 1810 | 4150 | 600 | 2 |
| 125 | 139.7 | 9000 | 1305 | 3000 | 435 | 3 |
| 150 | 165.1 | 9000 | 1305 | 3000 | 435 | 3.5 |
| 150 | 168.3 | 9000 | 1305 | 3000 | 435 | 3.8 |
| 200 | 219.1 | 8000 | 1160 | 2660 | 385 | 5.9 |
| 250 | 273.0 | 8000 | 1160 | 2660 | 385 | 9.1 |
| 300 | 323.9 | 8000 | 1160 | 2660 | 385 | 11.8 |
| 350 | 355.6 | 8000 | 1160 | 2660 | 385 | 15.4 |

## Standard Two Part Couplings

Galvanised or black painted. 50 - 350mm.

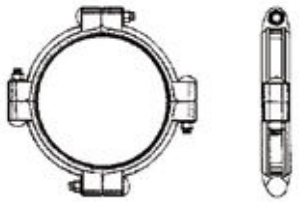




# Shouldered Couplings

## Standard Four Part Couplings

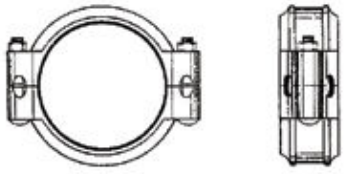
Galvanised or black painted 400 - 750mm nominal pipe size.



| Nominal Pipe Size mm | Pipe O.D. mm | Maximum recommended | | | | Mass each complete Kg |
|---|---|---|---|---|---|---|
| | | Test Pressure | | Working Pressure | | |
| | | kPa | PSI | kPa | PSI | |
| 400 | 406.4 | 8000 | 1160 | 2660 | 385 | 25.4 |
| 450 | 457.0 | 8000 | 1160 | 2660 | 385 | 29.1 |
| 500 | 508.0 | 6000 | 870 | 2000 | 290 | 33.8 |
| 600 | 610.0 | 6000 | 870 | 2000 | 290 | 27.8 |

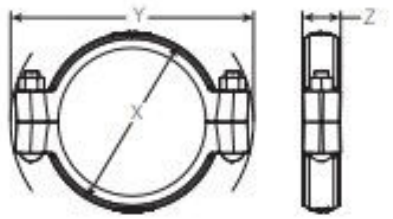
## Heavy duty Couplings

Galvanised or black painted.



| Nominal Pipe Size mm | Pipe O.D. mm | Maximum recommended | | | | Mass each complete Kg |
|---|---|---|---|---|---|---|
| | | Test Pressure | | Working Pressure | | |
| | | kPa | PSI | kPa | PSI | |
| 100 | 114.3 | 22000 | 3190 | 6900 | 1000 | 4.7 |
| 150 | 165.1 | 18000 | 2755 | 6900 | 1000 | 6.2 |
| 150 | 168.3 | 18000 | 2755 | 6900 | 1000 | 6.8 |
| 200 | 219.1 | 18000 | 2755 | 6900 | 1000 | 14.2 |

## Victaulic SC85 Couplings

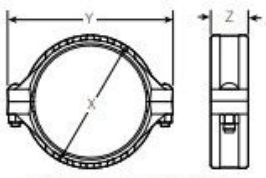



Style SC85 Joint Assembled
2 - 8°/DN50 - DN200

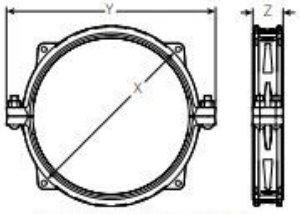
| Pipe Sizes | | Coupling Dimensions | | | Weight |
|---|---|---|---|---|---|
| Nominal Size mm | Pipe O.D. mm | X mm | Y mm | Z mm | |
| 50 | 60.3 | 92 | 143 | 48 | 1.1 |
| 80 | 88.9 | 127 | 181 | 48 | 1.6 |
| 100 | 114.3 | 152 | 218 | 51 | 2.2 |
| 150 | 165.1 | 207 | 286 | 51 | 3.5 |
| 200 | 219.1 | 273 | 375 | 61 | 6.5 |
| 250 | 273.0 | 330 | 452 | 71 | 12.0 |
| 300 | 323.9 | 381 | 5021 | 71 | 14.0 |
| 350 | 355.6 | 413 | 530 | 76 | 17.3 |
| 400 | 457.00 | 537 | 641 | 86 | 26.6 |

Maximum Working Pressure – Up to 4200 kPa dependent on size of pipe.

## Victaulic W77 Flexible AGS Couplings




Typical 12 - 24°/300 - 600mm




Typical 26 - 60°/660 - 1500mm

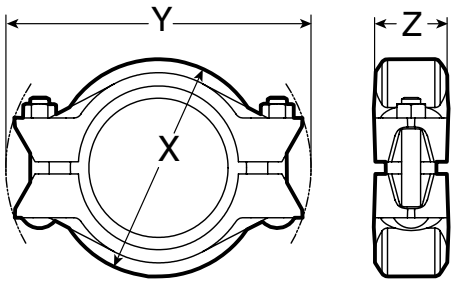
| Pipe Sizes | | Coupling Dimensions | | | Weight |
|---|---|---|---|---|---|
| Nominal Size mm | Pipe O.D. mm | X mm | Y mm | Z mm | |
| 300 | 355.6 | 406 | 524 | 114 | 21.8 |
| 350 | 406.4 | 464 | 597 | 114 | 26.8 |
| 400 | 457.2 | 517 | 647 | 114 | 295 |
| 450 | 508.0 | 575 | 689 | 114 | 37.2 |
| 500 | 558.8 | 628.7 | 743 | 114 | 44.5 |
| 550 | 609.6 | 683 | 822 | 114 | 48.5 |
| 600 | 660.4 | 765 | 895 | 146 | 93.0 |
| 650 | 711.2 | 829 | 945 | 146 | 99.8 |
| 700 | 812.8 | 863 | 1007 | 146 | 103 |
| 750 | 865.8 | 916 | 1060 | 146 | 109.8 |
| 800 | 914.4 | 972 | 1111 | 146 | 115.7 |
| 850 | 865.2 | 1022 | 1161 | 146 | 121.6 |
| 900 | 865.4 | 1048 | | 146 | 135 |

Maximum Working Pressure – Up to 2413 kPa dependent on size of pipe.

# Shouldered Couplings

## Victaulic SC77 Couplings

The Victaulic SC77 Shouldered Coupling utilizes patented Installation-Ready quick fit technology allowing the coupling to be installed without completely removing the bolts. .




| Pipe Sizes | | Coupling Dimensions | | | Weight |
|---|---|---|---|---|---|
| Nominal Size mm | Pipe O.D. mm | X mm | Y mm | Z mm | |
| 50 | 60.3 | 102 | 152 | 52 | 1 |
| 80 | 88.9 | 159 | 197 | 52 | 1.5 |
| 100 | 114.3 | 159 | 222 | 57 | 1.9 |
| 150 | 165.1 | 216 | 194 | 57 | 3.1 |
| 200 | 219.1 | 279 | 362 | 73 | 5.6 |

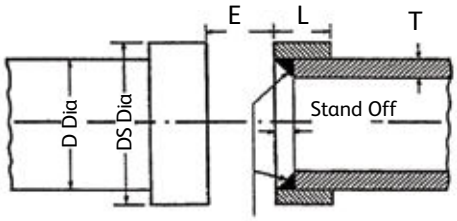
Maximum Working Pressure – Up to 4000 kPa dependent on size of pipe.

# Shoulder Rings

Weld-on steel shoulder rings provide an interference fit with the outside of the pipe ends and therefore must be a neat tight fit. Care is required when fitting shoulder rings to ensure that ring distortion does not occur. It is equally important that the distance between the edge of the steel shoulder ring and the pipe end be accurately maintained. If this “Stand Off” is exceeded, distortion will occur.

## Stand Off

5mm for pipe 88.9mm outside diameter and below. 6.5mm for pipe 114.3mm outside diameter up to and including 762mm outside diameter.



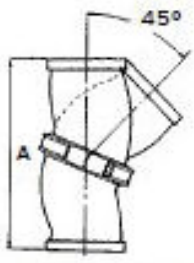

Full fillet. Circumferential weld here

| Nominal Pipe Size mm | Outside Diameter mm | Shoulder Dimensions | | | | |
|---|---|---|---|---|---|---|
| | | "D" Diameter mm | "DS" Diameter mm | Tolerance | | "L" Dimension mm |
| | | | | Plus mm | Minus mm | |
| 50 | 60.3 | 60.3 | 66.5 | 0.8 | 0.8 | 16 |
| 80 | 88.9 | 88.9 | 97 | 0.8 | 0.8 | 16 |
| 100 | 114.3 | 114.3 | 122 | 0.8 | 0.8 | 17.5 |
| 125 | 139.7 | 139.7 | 149 | 0.8 | 0.8 | 17.5 |
| 150 | 165.1 | 165.1 | 174.5 | 0.8 | 0.8 | 17.5 |
| 150 | 168.3 | 168.3 | 178 | 0.8 | 0.8 | 17.5 |
| 200 | 219.1 | 219.1 | 232 | 0.8 | 1.4 | 20.5 |
| 250 | 273.0 | 273.0 | 286 | 0.8 | 1.9 | 20.5 |
| 300 | 323.9 | 323.9 | 336.5 | 0.8 | 2.4 | 20.5 |
| 350 | 355.6 | 355.6 | 368.5 | 0.8 | 2.4 | 24 |
| 400 | 406.4 | 406.4 | 419 | 0.8 | 2.4 | 25.5 |
| 450 | 457 | 457 | 470 | 0.8 | 2.4 | 25.5 |
| 500 | 508 | 508 | 520.5 | 0.8 | 2.4 | 25.5 |
| 550 | 559 | 559 | 571.5 | 0.8 | 2.4 | 25.5 |
| 600 | 610 | 610 | 622.5 | 0.8 | 2.4 | 25.5 |
| 650 | 660 | 660 | 673.1 | 0.8 | 2.4 | 25.5 |
| 700 | 711 | 711 | 723.9 | 0.8 | 2.4 | 25.5 |
| 750 | 762 | 762 | 774.7 | 0.8 | 2.4 | 25.5 |

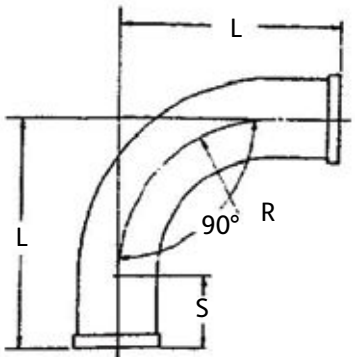
# Shouldered Fittings

## Adjustable Bends

The adjustable Bend consists of two special goosenecked setting pieces (united by a standard flexible coupling) which normally can be used for any angle from 0 to 45° and can be set at any angle in this range in two or three minutes. By the addition of a 45° elbow, any angle up to 90° can be obtained..




## Bends




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'A' Minimum Length End to End mm |
|---|---|---|
| 50 | 60.3 | 197 |
| 80 | 88.9 | 229 |
| 100 | 114.3 | 264 |
| 150 | 165.1 | 333 |
| 150 | 168.3 | 333 |
| 200 | 219.1 | 394 |
| 250 | 273.0 | 445 |
| 300 | 323.9 | 495 |

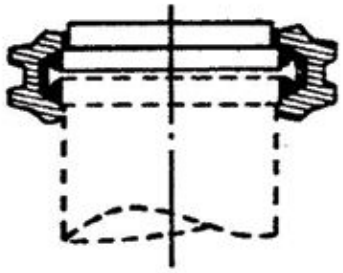
| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'L' Centre to Face mm | 'R' Bend Radius mm | 'S' Minimum Length of Straight mm |
|---|---|---|---|---|
| 50 | 60.3 | 222 | 146 | 76 |
| 80 | 88.9 | 305 | 238 | 67 |
| 100 | 114.3 | 425 | 308 | 117 |
| 150 | 165.1 | 610 | 457 | 152 |
| 150 | 168.3 | 610 | 457 | 152 |
| 200 | 219.1 | 914 | 711 | 203 |
| 250 | 273.0 | 1575 | 1270 | 305 |
| 300 | 323.9 | 1880 | 1524 | 356 |

**Note:** Larger sizes available on enquiry

# Shoulder Fittings

## Blank Ends

Blank Ends for fitting into the standard coupling can be supplied either plain, or tapped for testing purposes. They are of the same diameter as the shouldered pipe end, and are capable of carrying the full end pressure in the pipe.

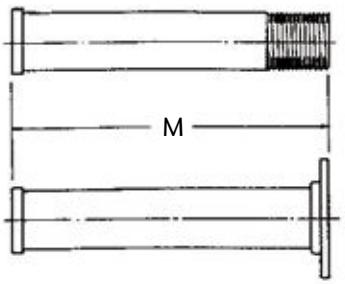


| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm |
|---|---|
| 50 | 60.3 |
| 80 | 88.9 |
| 100 | 114.3 |
| 150 | 165.1 |
| 150 | 168.3 |
| 200 | 219.1 |
| 250 | 273.0 |
| 300 | 323.9 |

**Note:** Larger sizes available on enquiry

## Adaptors

Shouldered to screwed B.S.P. male thread adaptor. Shouldered to flanged adaptor..



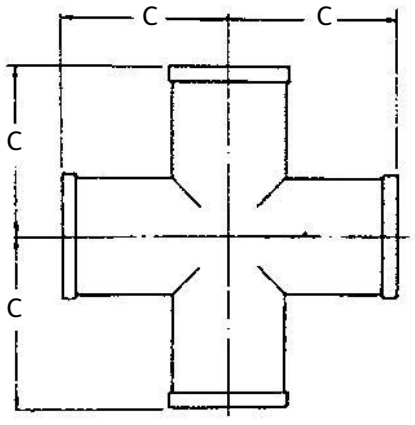

| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'M' Minimum Over all Length | |
|---|---|---|---|
| | | Standard mm | Short Pattern mm |
| 50 | 60.3 | 318 | 100 |
| 80 | 88.9 | 423 | 100 |
| 100 | 114.3 | 470 | 100 |
| 150 Flanged | 165.1/ 168.3 | 507 | 100 |
| 150 Screwed | 165.1 | 507 | 150 |
| 200 | 219.1 | 605 | 100 |
| 250 | 273 | 757 | 100 |
| 300 | 323.9 | 909 | 100 |

**Note:** (i) Larger sizes available on enquiry
(ii) Flanged pieces are normally supplied with Table 'D' flanges drilled. Other flange tables are available on enquiry.
(iii) Screwed adaptors available 50 - 150mm only.

## Crosses

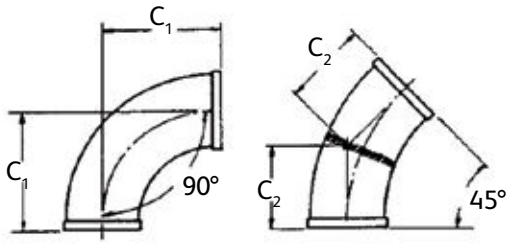
| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'C' Centre to Face mm |
|---|---|---|
| 50 | 60.3 | 152 |
| 80 | 88.9 | 203 |
| 100 | 114.3 | 229 |
| 150 | 165.1 | 254 |
| 150 | 168.3 | 254 |
| 200 | 219.1 | 305 |
| 250 | 273.0 | 381 |
| 300 | 323.9 | 457 |

**Note:** Larger sizes available on enquiry



# Shouldered Fittings

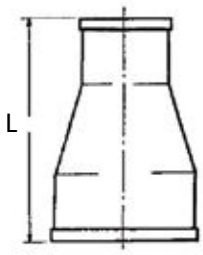
## Elbows 90° and 45°




| Nominal Pipe Size mm | To Suit Pipe Out-side Diameter mm | 'C' Centre to Face | | 'C' Centre to Face 45°Elbows mm |
|---|---|---|---|---|
| | | Standard mm | Short Pattern mm | |
| 50 | 60.3 | 152 | 69 | 78 |
| 80 | 88.9 | 203 | 91 | 109 |
| 100 | 114.3 | 229 | 110 | 135 |
| 150 | 165.1 | 254 | 148 | 173 |
| 150 | 188.3 | 254 | 148 | 173 |
| 200 | 219.1 | 305 | 183 | 235 |
| 250 | 273.0 | 381 | | |
| 300 | 323.9 | 457 | | |

**Note:** Larger sizes available on enquiry

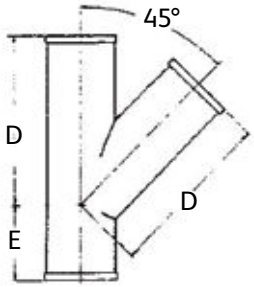
## Reducers




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'L' Minimum Length End to End | |
|---|---|---|---|
| | | Standard mm | Short Pattern mm |
| 50 | 60.3 | | |
| 80 | 88.9 | 203 | 90 |
| 100 | 114.3 | 229 | 112 |
| 150 | 165.1 | 305 | 150 |
| 150 | 168.3 | 305 | 150 |
| 200 | 219.1 | 330 | 162 |
| 250 | 273.0 | 381 | |
| 300 | 323.9 | 457 | |

**Note:** Larger sizes available on enquiry

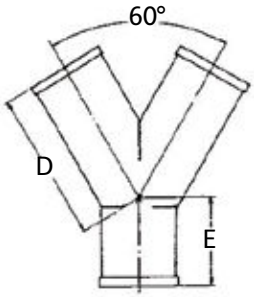
## Offset Tees




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'D' Centre to Face mm | 'E' Centre to Face mm |
|---|---|---|---|
| 50 | 60.3 | 215 | 89 |
| 80 | 88.9 | 279 | 127 |
| 100 | 114.3 | 343 | 115 |
| 150 | 165.1 | 394 | 114 |
| 150 | 168.3 | 394 | 114 |
| 200 | 219.1 | 470 | 140 |

**Note:** Larger sizes available on enquiry

## Y-Pieces

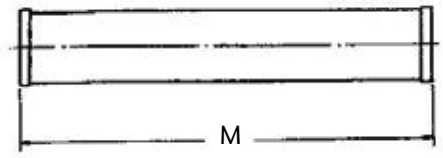



| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'D' Centre to Face mm | 'E' Centre to Face mm |
|---|---|---|---|
| 50 | 60.3 | 165 | 89 |
| 80 | 88.9 | 229 | 127 |
| 100 | 114.3 | 279 | 127 |
| 150 | 165.1 | 330 | 152 |
| 150 | 168.3 | 330 | 152 |
| 200 | 219.1 | 381 | 178 |

**Note:** Larger sizes available on enquiry

# Shouldered Fittings

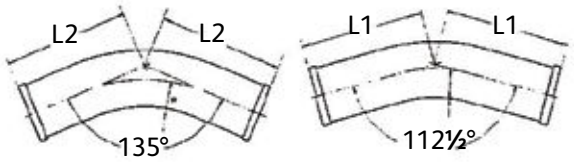
## Pieces




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'M' Minimum Overall Length Lengths Available mm | | |
|---|---|---|---|---|
| 50 | 60.3 | 300 | 600 | 900 |
| 80 | 88.9 | 300 | 600 | 900 |
| 100 | 114.3 | 300 | 600 | 900 |
| 150 | 165.1 | 300 | 600 | 900 |
| 150 | 168.3 | 300 | 600 | 900 |

**Note:** Exact lengths available on enquiry

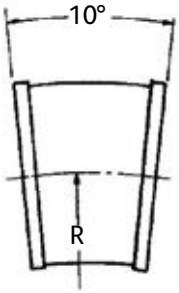
## Springs




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'L' Centre to Face 112½° Spring mm | 'L' Centre to Face 135° Spring mm | 'R' Radius mm |
|---|---|---|---|---|
| 50 | 60.3 | 197 | 187 | 146 |
| 80 | 88.9 | 273 | 260 | 238 |
| 100 | 114.3 | 378 | 365 | 308 |
| 150 | 165.1 | 546 | 521 | 457 |
| 150 | 188.3 | 546 | 521 | 457 |
| 200 | 219.1 | 819 | 778 | 711 |
| 250 | 273.0 | 1422 | 1346 | 1270 |
| 300 | 323.9 | 1702 | 1600 | 1524 |

**Note:** Larger sizes available on enquiry

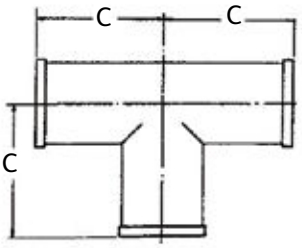
## Setting Pieces




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'R' Radius mm |
|---|---|---|
| 50 | 60.3 | 368 |
| 80 | 88.9 | 413 |
| 100 | 114.3 | 470 |
| 150 | 165.1 | 521 |
| 150 | 168.3 | 521 |
| 200 | 219.1 | 692 |
| 250 | 273.0 | 876 |
| 300 | 323.9 | 978 |

**Note:** Larger sizes available on enquiry

## Tees




| Nominal Pipe Size mm | To Suit Pipe Outside Diameter mm | 'C' Centre to Face | |
|---|---|---|---|
| | | Standard mm | Short Pattern mm |
| 50 | 60.3 | 152 | 69 |
| 80 | 88.9 | 203 | 91 |
| 100 | 114.3 | 229 | 110 |
| 150 | 165.1 | 254 | 148 |
| 150 | 168.3 | 254 | 148 |
| 200 | 219.1 | 305 | 183 |
| 250 | 273.0 | 381 | |
| 300 | 323.9 | 457 | |

**Note:** (i) Larger sizes available on enquiry
(ii) Reducing Tees also available in above sizes with outlet branches including.
(a) Screwed standard B.S.P male thread.
(bi) Screwed B.S.P. female (parallel) thread.

# Shouldered Fabricated Products

Access to our fabrication facilities is assured through our dedicated InfraBuild Piping Systems locations and support service centres across Australia. Our Australian-made products can be customised to various design specifications by our committed team who have delivered fabricated components and products for over 30 years.

Shouldered/Flanged Pressure Reducing Station made to your requirements

## Manifolds

Manifolds can be fabricated to your design and application, using various specifications, supplied fully assembled using quality components and painted.

Alternatively, select from our comprehensive range of hot dipped galvanised manifolds.




## Gas Extraction

We manufacture and assemble a range of products required for gas extraction, which can be fabricated to your design and application, using various specifications. Products currently supplied include:

- Copper draw point pipes
- Collector manifolds
- Elbows, Tees and Caps
- Isolating and check valve assemblies
- Water traps

## Hydrants

Hydrants and droppers are fabricated to suit the customer's requirements and conditions. Connections and offtakes are made to suit all fire and water hose accessories that are commonly used in mining.


# Shouldered Valves

We stock a range of shouldered valves for a variety of applications and pressure ratings. Gate, Butterfly, Ball and Check Valves can be supplied as a complete unit or with shouldered adaptors to suit your pipeline.

Victaulic 752L Gate Valve

Sureflow 3500 kpa Gate Valve

Victaulic Vic-300 MasterSeal Butterfly Valve

Wafer Style Butterfly Valve c/w Shouldered Adaptors

Check Valve c/w Shouldered Adaptors

Screwed Ball Valve c/w Shouldered Adaptors

# InfraBuild's mining program

InfraBuild has been a presence in many rural and remote communities for over 100 years, supplying our customers with materials and steel processing services.

At InfraBuild we place great importance on working closely with our customers to support community growth and long-term sustainable relationships across the country.

We live and work in regional communities and are well positioned to supply product into many industries that keep our economy thriving, including MMP (mining, minerals, processing).

As a manufacturer and distributor of materials critical to MMP, we understand the importance of predictability by having the right stock in the right place at the right time. Producing quality materials delivered on time as promised for an agreed price, we create value for our customers through a continuous improvement philosophy and experienced local representation.


## Our Customer-Focused Mining Offer and Program

At InfraBuild, we understand the importance of meeting deadlines and reducing the stresses own contract managers. We do this by appointing a single point of contact, a corporate relationship manager, from InfraBuild Steel centre, who will:

- Manage they contract and communication between the different stakeholders within your company and InfraBuild
- Act as a single point of contact at the contract level
- Act as a facilitator across all programmes agree with you

InfraBuild Steel Centre can help businesses like yours, which are often cost and time constrained, through our full-service approach for steel supply. We offer a package of exclusive 'tools' and resources aimed at adding value to your business through innovation and continuous improvement. Areas of focus include:

- Customised service offer
- Innovative solutions
- Cost saving initiative generation
- Total cost of ownership (TCO) analysis
- Gap analysis
- Undertaking reporting requirements
- Risk reduction

## Other Mining Products We Offer

- Hot rolled structural, Merchant bar, Steel plate, wear plate
- Pipe fittings – screwed, buttweld, flanges (carbon and stainless steel)
- Grooved and shouldered mechanical jointing systems
- Poly piping systems
- Valves
- Tube (carbon and stainless steel)
- Fencing
- Roadside barriers
- Rail and sleepers and track accessories
- Ground support
- Culverts

## Mining Product Quality

InfraBuild's Mining product range and supply services have been continuously developed and refined over the past 30 years. InfraBuild supplies high quality mining products which benefit our customers by minimising variation and reducing waste.

InfraBuild

*Building futures through sustainable steel*

Find your
InfraBuild Steel Centre:

**www.infrabuild.com**