

BENDS TECHNICAL DATA

SINTAKOTE® STEEL PIPELINE SYSTEMS



Steel Mains Steel Pipeline System is available across a full size range and can be tailor-made to suit specific design parameters.

Bends are generally manufactured from pipe depending on diameter and wall thickness required.

The fabricated fitting is 100% non-destructively tested and complies to AS 1579.

SINTAKOTE is the recommended coating for pipe and fittings for the Steel Mains Steel Pipeline System and complies to AS 4321. Alternative coatings are available where reduced operating life of the pipeline is permissible.

Cement Mortar Lining (CML) is the recommended lining for the Steel Pipeline System pipe and fittings and complies to AS 1281. Alternative lining systems are available where required.

Special considerations to the jointing and the pipeline system's capabilities need to be confirmed with Steel Mains prior to proceeding with design.

- Consult the Steel Mains Steel Pipeline Systems Design manual for design information.
- Check with Steel Mains on material availability prior to placing orders.

GENERAL APPLICATION

Steel Mains Bends for Steel Pipeline Systems are suitable for use with potable water and waste water in above and below ground applications.*

For special application requirements, beyond what is specified in this datasheet, please contact Steel Mains.

*Only applies to Steel Mains recommended coating and lining systems. Please consult the design manual for further details.

TECHNICAL DATA

Size Range

114mm to 2500mm diameter

Operating Pressures

Maximum 3500kPa

Maximum Velocities

6m/s for cement lined fittings

Operating Temperatures

-40°C to 70°C

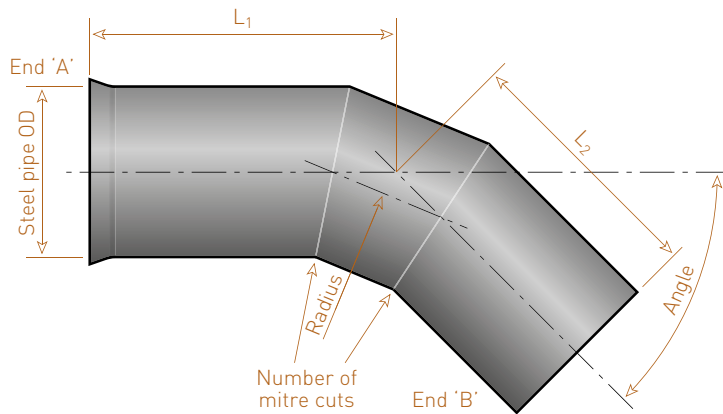
Certifications

AS/NZS ISO 9001

AS/NZS 4020

AS 1579 Standards Mark

IDENTIFICATION OF BENDS



Steel fitting	Bend	Number cuts	End type 'A'	End type 'B'	Radius	Pipe diameter mm	Wall thickness	Coating	Lining	Angle
Y	B	1	P	P	D	0660	6	S	C	45

Number of cuts		Radius		External coating	
1	Mitre cuts	A	0.8 x dia	S	Sintakote
2	Mitre cuts	B	1.0 x dia	U	Uncoated
3	Mitre cuts	C	1.2 x dia	P	Painted
4	Mitre cuts	D	1.4 x dia	X	Special coating ²
		E	1.6 x dia		
		F	1.8 x dia		
		G	2.0 x dia		
		H	2.2 x dia		
		I	2.4 x dia		
		J	2.6 x dia		
		K	2.8 x dia		
		L	3.0 x dia		

End types		Internal coating	
P	Plain end	C	Cement mortar
S	Slip-in joint - SO ³	D	Cement mortar + seal coat
T	Slip-in joint - SP ⁴	S	Sintakote
R	Rubber ring joint - SO	U	Uncoated
U	Rubber ring joint - SP	P	Painted
B	Ball & Socket	X	Special coating ²
A	Ball & Socket ball		
X	Coupling end		
C	AS2129-Table C		
D	AS2129-Table D		
E	AS2129-Table E		
F	AS2129-Table F		
H	AS2129-Table H		
1	AS4087-PN16		
2	AS4087-PN21		
3	AS4087-PN35		
X	Special end type ¹		

Wall thickness		Angle	
5	5mm wall	11	11.25 degree
6	6mm wall	22	22.5 degree
8	8mm wall	45	45.0 degree
A	10mm wall	90	90.0 degree
B	12mm wall	S1	Special ≤65 degree
C	16mm wall	S2	Special >65 degree
D	20mm wall		

- 1- Specify special end type requirements
- 2 - Specify special coating requirement details
- 3 - Socket
- 4 - Spigot

SPECIFYING BENDS

1 - Cuts

Specify the number of mitre cuts to meet space and/or head loss requirements. This will also influence the stress in the wall of the bend. The typical angle per each cut for each mitre in the bend does not exceed 22.5 degrees

2 - End type

Specify the end types ('A' and 'B') on the bend:
 - Plain - most commonly used
 - RRJ Spigot, RRJ Socket, Flange etc.
 Specify paint system for flanges, if applicable. Inorganic Zinc paint is included as standard

3 - Radius

Specify the radius to meet the space requirements. Steel Mains standard radius is 1.8 x Diameter)

4 - Diameter

Nominate the steel pipe shell outside diameter required

5 - Wall thickness

Determine the wall thickness of the bend (normally to suit the pipe wall thickness). Hoop stresses can decrease the operating pressure of the pipe used to manufacture the bend

6 - External coating

Specify the external coating of the bend. SINTAKOTE® is the recommended external coating

7 - Internal lining

Specify the internal lining of the bend. Cement mortar lining is the recommended internal lining

8 - Angle

Specify the angle in degrees. The tolerance for a bend for any specified angle is ±1 degree measured at the ends of the bend

9 - Length

Specify the lengths required, with the associated end type at 'A' and 'B':
 - Length 1 (L_1)
 - Length 2 (L_2)

10 - Pressure

Determine the pressure requirements for the bend - PN Rating (e.g. PN16 - equivalent to 1600KPa, 16 Bar or approximately 160 metres of head)

11 - Additional component

To add additional fittings component to the bend - refer to Steel Mains Steel Fittings 'Combination' datasheet



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