

REDUCERS 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.

Reducers are generally manufactured from fabricated plate depending on the dimensions required. The fabricated fitting is 100% non-destructively tested and complies with AS 1579.

Reducers manufactured from plate pressure ratings are based on 50% of specified minimum steel yield strength per requirements of 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 Reducers 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 mortar lined fittings

Operating Temperatures

-40°C to 70°C

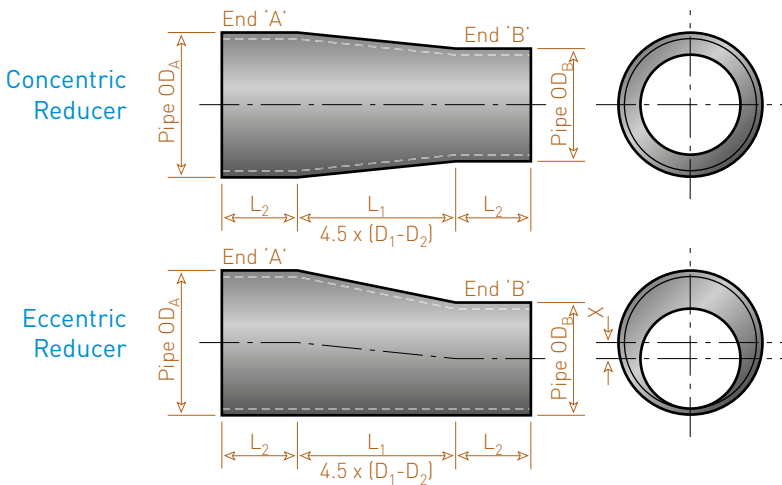
Certifications

AS/NZS ISO 9001

AS/NZS 4020

AS 1579 Standards Mark

IDENTIFICATION OF REDUCERS



SPECIFYING REDUCERS

1 - Reduce type

Determine type of reducer: Eccentric or Concentric. If the reducer is eccentric, specify the offset (X)

2 - End type

Specify the end types ('A' and 'B') on the reducer

- 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 - Pressure

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

4 - Large diameter

Specify the large diameter - OD_A

5 - Wall thickness

Determine the wall thickness of the large end (normally to suit the pipe wall thickness). Stress concentration factors need to be taken into consideration when ratio of diameter is < (4.5 x [D₁ - D₂])

6 - Small diameter

Specify the small diameter - OD_B

7 - External coating

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

8 - Internal lining

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

9 - Reducer length

Specify the reducer length required (L1). The minimum length recommended for the reducer is calculated according to the formula 4.5 x (OD_A - OD_B)

10 - Reducer length

Specify the tail length (L2) according to the type of end selected. The recommended tail length for plain ends is as follow:

$$OD \leq 800 L_2 = 150 \text{ mm}$$

$$OD > 800 L_2 = 200 \text{ mm}$$

11 - Additional component

To add any additional fittings component to the reducer, refer to Steel Mains Steel Fittings 'Combinations' datasheet

Steel fitting	Reducer	Type	End 'A' type	End 'B' type	Pressure	Large end diameter 'A' mm	Large end wall thickness mm	Small end diameter 'B' mm	Coating	Lining	
Y	R	C	P	P	1	280	8	096	U	C	
Reducer type		Diameters		External coating		Internal coating					
C	Concentric	From	To	S	Sintakote						
E	Eccentric	<999	0	999	U	Uncoated					
End types		Axx	1000	1099	P	Painted					
P	Plain end	Bxx	1100	1199	X	Special coating ³					
S	Slip-in joint - SO	Cxx	1200	1299							
T	Slip-in joint - SP	Dxx	1300	1399							
R	Rubber ring joint - SO ⁴	Exx	1400	1499							
U	Rubber ring joint - SP ⁵	Fxx	1500	1599							
B	Ball & Socket - SO	Gxx	1600	1699							
A	Ball & Socket ball	Hxx	1700	1799							
X	Coupling end	Ixx	1800	1899							
C	AS2129-Table C	Jxx	1900	1999							
D	AS2129-Table D	Kxx	2000	2099							
E	AS2129-Table E	Lxx	2100	2199							
F	AS2129-Table F	Mxx	2200	2299							
H	AS2129-Table H	Nxx	2300	2399							
1	AS4087-PN16	Oxx	2400	2499							
2	AS4087-PN21	Pxx	2500	2599							
3	AS4087-PN35										
X	Special end type ¹										
Reducer pressure											
1	Spool - 1600 KPa										
2	Spool - 2100 KPa										
3	Spool - 3500 KPa										
Wall thickness											
8	8mm wall										
A	10mm wall										
B	12mm wall										
X	Special WT ²										
		1 - Specify special end type requirements 2 - Specify wall thickness 3 - Specify special coating requirement details 4 - Socket 5 - Spigot									



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