

# FLANGED DUCTILE IRON PIPE AND FITTINGS

## **SUREFLOW®** FLANGED DUCTILE IRON PIPE

DN 80 - DN 750. MANUFACTURED TO AS/NZS 2280. FLANGED DIMENSIONS TO AS 4087

### **PIPE BARRELS**

Ductile iron pipe barrels are manufactured to AS/NZS 2280 Flange Class

### **FLANGES**

Pipe flanges are manufactured to AS 4087 PN 16 or PN 35

### **EPOXY RESIN**

The epoxy resin is unaffected by water, sewage, and aqueous industrial waste. It cures to a hard corrosion resistant and corrosion protective solid, is resistant to water absorption and will not impart colour, odour, taste or toxic constituents to potable water.

### **THREAD FORM**

SUREFLOW employs taper to taper thread forms for leak tight assurance.

### **CONFIGURATIONS**

Pipe may be specified as flange - flange, flange - spigot, spigot - spigot or flange - socket

### **AVAILABLE LENGTHS**

#### **Minimum lengths available are:**

DN 80 & DN 100	100mm
DN 150	150mm
DN 200 & DN 225	200mm
DN 250	250mm
DN 300	300mm
DN 375 to DN 750	400mm

For all end joint combinations

#### **Maximum lengths available for Cement lined flanged pipe are:**

DN 80	5400mm
DN 100 – DN 750	5600mm

For all end joint combinations

The Maximum length for Fusion Bond Epoxy (FBE) coated & Lined is 2700mm

### **LIMITATIONS**

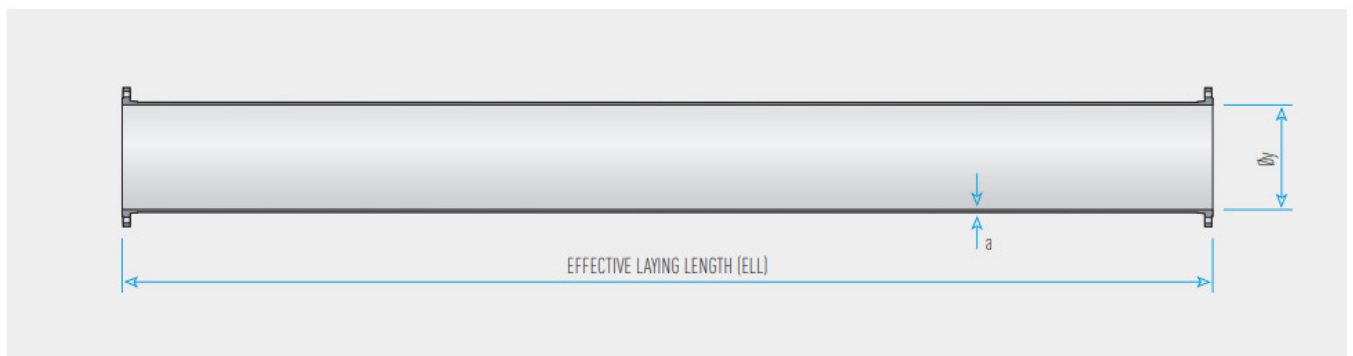
A screw-on flanged joint should not be subjected to a moment. Typical situations may include where a valve or fitting is installed onto a flanged pipe, without supporting the weight of the valve or fitting, or where a combination of flanged joints and TYTON joints are used in an arrangement without adequate support or restraint of the screw-on joint.

## FLANGED DUCTILE IRON PIPE

### FLANGED JOINT SPECIFICATIONS

#### FLANGED PIPE

Nom. Size DN	Mean External Diameter $\emptyset$ MM	Unlined Pipe		Cement Mortar Lined Pipe		Nominal Wall Thickness a MM
		Mean Internal Diameter MM	Mass per Metre KG	Mean Internal Diameter MM	Mass per Metre KG	
80	98	84	14.1	76	16.5	7
100	122	108	17.8	98	21.7	7
150	177	161	29.9	151	35.8	8
200	232	216	39.7	206	47.6	8
225	259	241	49.8	231	58.7	9
250	286	268	55.2	258	65.1	9
300	345	325	74.2	315	86.3	10
375	426	406	92.1	396	107.3	10
450	507	485	120.8	475	138.9	11
500	560	536	145.6	526	165.7	12
600	667	641	188.3	631	212.3	13
750	826	796	269.4	784	305.2	15



## FLANGED DUCTILE IRON PIPE

### FLANGED JOINT SPECIFICATIONS

#### FLANGED PIPE OPERATING/TEST PRESSURES

Nom. Size	Standard Pressure Class 16 Screw-on Flanges			High Pressure Class 35 Screw-on Flanges		
	Allowable Operating Pressure	Allowable Maximum Operating Pressure	Allowable Site Test Pressure	Allowable Operating Pressure	Allowable Maximum Operating Pressure	Allowable Test Pressure
DN	MPA	MPA	MPA	MPA	MPA	MPA
80	1.60	1.92	2.00	3.50	4.20	4.38
100	1.60	1.92	2.00	3.50	4.20	4.38
150	1.60	1.92	2.00	3.50	4.20	4.38
200	1.60	1.92	2.00	3.50	4.20	4.38
225	1.60	1.92	2.00	3.50	4.20	4.38
250	1.60	1.92	2.00	3.50	4.20	4.38
300	1.60	1.92	2.00	3.50	4.20	4.38
375	1.60	1.92	2.00	3.50	4.20	4.38
450	1.60	1.92	2.00	3.50	4.20	4.38
500	1.60	1.92	2.00	3.50	4.20	4.38
600	1.60	1.92	2.00	3.50	4.20	4.38
750	1.60	1.92	2.00	3.50	4.20	4.38

#### TABLE KEY

##### Configuration options

C = Flange, T = Socket, S = Spigot

##### Size options

Per normal DI pipe from DN80 - DN750  
e.g. DN450 would be 45, 80 would be 08 etc

##### Lengths

00, 01, 02, 03, 04, etc. in 100mm increments

##### Coatings

6 for FB Epoxy options  
(which get more complicated)

7 for FB Nylon

9 for bitumen and cement lining

X = Liquid Applied Epoxy

W = Weep Flange

#### FLANGED PIPE PRODUCT CODE GENERATOR

##### SPECIFYING A DN 150 FLANGE TO FLANGE PIPE AT 150 TO 199 IN LENGTH, FUSION COATED

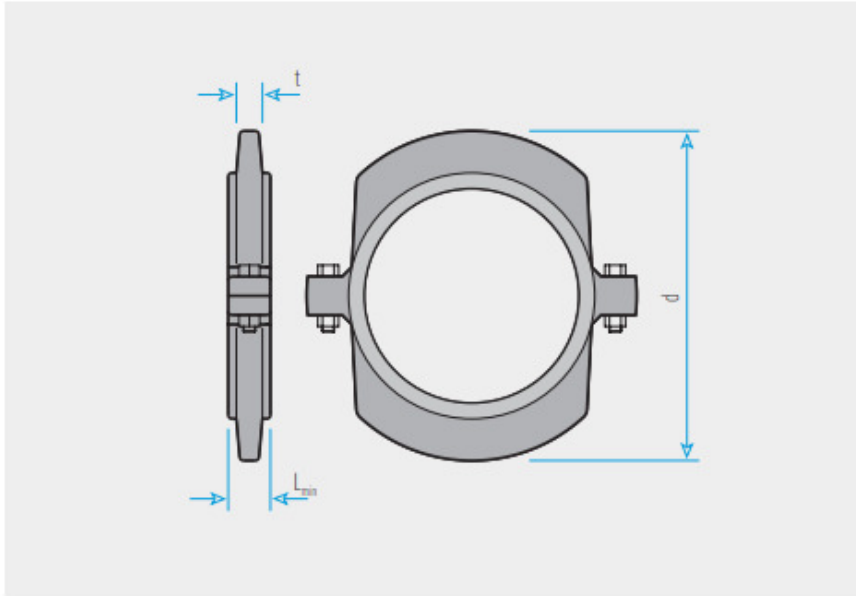
EXAMPLE DFB	CC	15	01	7
Flange Class Pipe DFB				
End Configuration CC, CT, TS, SS				
Pipe Diameter 05 to 75				
Pipe Length 00, 01, 02, 03, 04 etc.				
Coating 6, 7, 9				

##### SPECIFYING A DN 350 SOCKET TO SPIGOT PIPE AT 350 TO 399 IN LENGTH, EPOXY COATED

EXAMPLE DFB	TS	35	03	6
Flange Class Pipe DFB				
End Configuration CC, CT, TS, SS				
Pipe Diameter 05 to 75				
Pipe Length 00, 01, 02, 03, 04 etc.				
Coating 6, 7, 9				

## FLANGED DUCTILE IRON PIPE

### WEEP/THRUST FLANGES



### WEEP/THRUST FLANGES

Nom. Size	Dimensions			Ultimate Shear Force	
	DN	D	T	L <sub>min</sub>	KN
100	230	25	55	116	FUD0010008
150	305	27	55	171	FUD0015008
200	370	31	55	226	FUD0020008
225	405	34	55	253	FUD0022008
250	430	34	55	280	FUD0025008
300	485	32	65	481	FUD0030008
375	575	32	65	891	FUD0037008
450	660	32	65	1061	FUD0045008
500	730	35	70	1172	FUD0050008
600	845	35	70	1397	FUD0060008
750	1010	39	75	2881	FUD0075008

\* The ultimate shear force is a theoretical value which assumes the mode of failure to be caused by shear of the circumferential pipe wall groove. The flange is assumed to remain bolted together and the shear area is calculated over a 45° circumferential plane with its root at the base of the pipe groove. Mating dimensions from AS/NZS 2280 are adopted.

#### Notes

1 It is recommended that puddle flanges are factory fitted onto pipes. AS/NZS 2280 calls for a machine groove to be cut into the outside surface of the pipe and the puddle flange machined accordingly to provide a nominal interference fit. An epoxy resin is utilised to prevent seepage along the outside surface of the pipe.

2 Lifting hole on DN 450 to DN 750 only.

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