

tyco

Flow Control

Tyco Water

Stainless steel repair clamps for permanent repairs onto most pipe types and sizes. Manufactured in accordance with AS 4181.

Features

- Simple to install.
- Fully constructed from 316 stainless steel for high corrosion protection.
- Full-circle nitrile rubber gasket.
- Each clamp fits a number of pipe diameters.
- Can be installed on a pressurized main.
- Able to adapt to pipe irregularities or ovality.
- Fully passivated.
- Supplied with plastic thread protectors.
- All sharp surfaces finished to avoid harm to installer.
- Minimum downtime to affected mains.
- Molybond[®] coated fasteners to prevent galling.
- Available for most pipe types and sizes.
- Dispatched with installation instructions.
- Manufactured in accordance with ISO 9001 quality standards.
- Can in certain circumstances eliminate the need to cut out a damaged section of pipe.



General Applications

The Wang multi-part clamp offers the advantage of greater size range over single & double part clamps. The multi-part clamp is a permanent repair to most damaged pipes, with holes, cracks & breaks. Each clamp has the capability to fit a wide variety of types & classes of pipe, so reducing stock requirements. Use of quality materials & superior clamp design allows application onto high- pressure pipelines & non-pressure pipelines in a variety of industries.

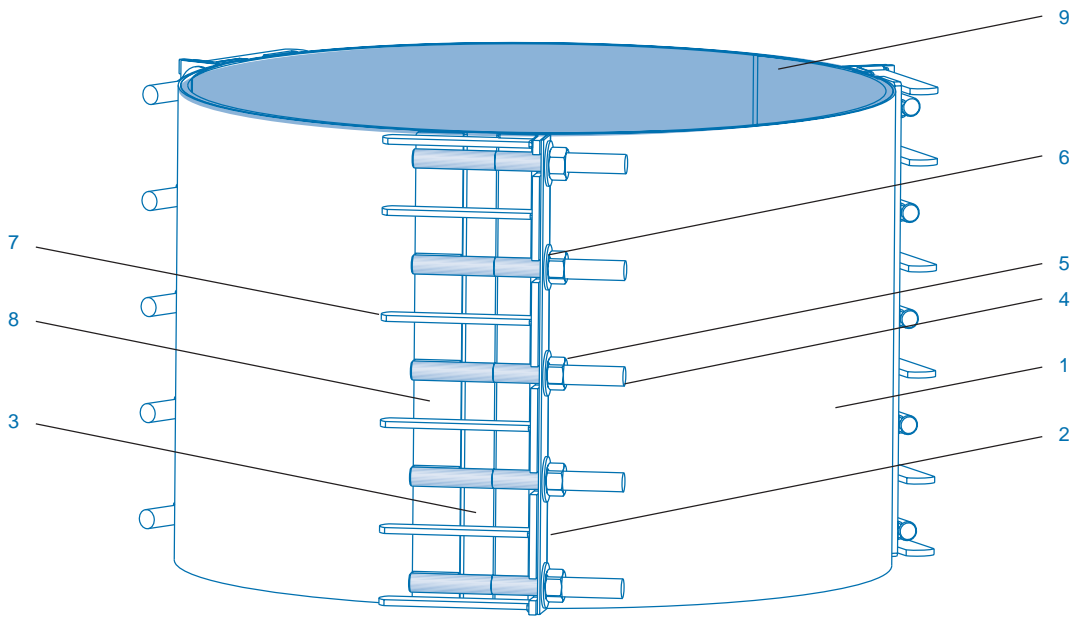
Technical Data

Size Range: DN375 - DN600
(Brochures for Single-part and Double-part repair clamps also available)
Max Operating Pressure: 1600 kPa
(Tested: -80 kPa to 2000 kPa)
Max Temperature: 60°C
Relevant Standards: AS 4181

Note: Wang repair clamps do not provide axial restraint.

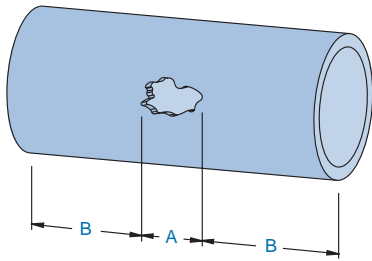
Wang - Stainless Steel Repair Clamps

Multi Part DN375-DN600



Parts List

No.	Description	Material	Standards
1	Skin	316 Stainless Steel	ASTM A240M
2	Locking Plate	316 Stainless Steel	ASTM A240M
3	Bridge Plate	316 Stainless Steel bonded to gasket	ASTM A240M
4	Studs	316 Stainless Steel - Molybond coated	ASTM A276
5	Nuts	316 Stainless Steel - Molybond coated	AS 1112.1
6	Washers	316 Stainless Steel	ISO 7089
7	Lugs	316 Stainless Steel	ASTM A276
8	Flat Bars	316 Stainless Steel	ASTM A276
9	Sealing Gasket	Full-circle Nitrile (NBR) Compound	AS 1646 and AS/NZS 4020



Selecting the Clamp Length

When repairing a damaged pipe, it is important to consider the extent of the pipe damage and the most suitable clamp length for the purpose. It is important that there is sufficient gasket contact between the edge of the damage and the end of the clamp.

The following table gives a guide to selecting the clamp of recommended length, where "B" is the minimum sealing width between damaged area and the end of the clamp.

Minimum recommended clamp length = A + 2B

Recommended Seal Length - (B)

Nom. Dia.	Min. Seal Length B (mm)
375-600	150

Standard Clamp Data

DN	Standard Clamp Lengths	No. of Studs	Stud No. Code	No. of Parts Code	Clamp Length Code	Stud Size	OD Range
375-600	400	15	K15	C	D	M16	30mm
375-600	600	21	K21	C	F	M16	30mm

AS 4181 Minimum Clamp Lengths

Nom. Dia.	Length (mm)
375-600	400

Repair Clamp Size Table

Nom Size	DICAL AS/NZS 2280	Steel MSCL AS 1579	UPVC		ABS		Hobas AS 3571	Pressure B AS 1433
			Series-1 AS 1074	Series-2 AS/NZ S1477	Series-1 AS/NZS 4441	Series-2 AS 3518		
375	-400	-400	-400	-400	-400	-400	-400	-400
	426mm	406mm	400mm	426mm	400mm	426mm	426mm	413mm
400		-430	-430		-430		-430	
		457mm	450mm		450mm		450mm	
450	-490	-490	-490	-490	-490	-490	-490	-490
	507mm	508mm	500mm	507mm	500mm	507mm	507mm	492mm
500	-560	-530	-560		-560		-560	-530
	560mm	559mm	560mm		560mm		560mm	545mm
525				-560		-560	-560	
				560mm		560mm	587mm	
600	*-650	-610	-620	*-650	-620	*-650	*-650	*-650
	667mm	610mm	630mm	667mm	630mm	667mm	667mm	650mm

Note:

Top Number = Clamp Size (Start of OD Range)

Bottom Number = Pipe OD (mm)

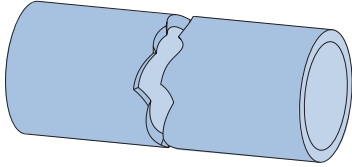
*Repair clamps highlighted with an asterisk do not meet AS 4181. Operating pressure = 1500 kPa.

Wang - Stainless Steel Repair Clamps

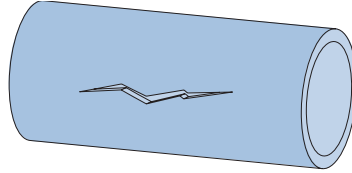
Multi Part DN375-DN600

Typical Application Diagram

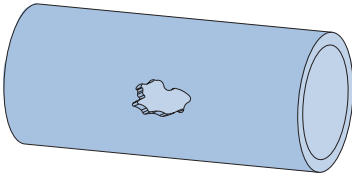
Full Breaks



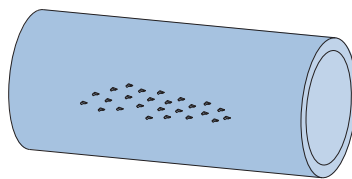
Splits



Holes



Pin Holes



Note:

The pressure that a repair clamp can contain is affected by the torque applied to the studs, the uniformity of stud tightening, the type and extent of pipe damage, the surface condition of the pipe, environmental conditions and installation workmanship.

Note:

A tension wrench is recommended for proper installing.

Pipe CICL	Asbestos				PE
	C AS 1724	AB AS 2544	CD AS 1711	RC AS 1711	Actual OD AS 4058
-400	-400	-400	-400	-430	-400
426mm	413mm	426mm	445mm	400mm	-430
					450mm
-490	-490	-490	-530	-490	-490
507mm	492mm	507mm	533mm	500mm	
-560					-560
560mm					560mm
	-570	-570	-610	-620	
	572mm	587mm	616mm	630mm	
*-650	*-650	*-650	*-690		
667mm	650mm	667mm	699mm		

Typical Specifying Sequence

Example	K	15	-	560	C	D
K = Clamp Code						
No. of Studs (Refer to Standard Clamp Data Table)						
Delineator						
Clamp Size (Start of OD range) (Refer to Clamp Size Table)						
No. of Parts C = Three Part Clamp						

Clamp Length (mm)

D = 400

F = 600

Note: This specifying sequence is not to be used to construct a clamp of your own configuration, it must comply with the standard range as listed.

Example:

You require a clamp to repair a DN500 DICL pipe with a 125mm hole.

1. Determine the minimum required clamp length:

$$\begin{aligned} \text{Min Clamp length} &= A + 2B \\ &= 125 + (2 \times 150) \\ \text{Min Clamp length} &= 425\text{mm} \end{aligned}$$

Where: A = damaged dimension
B = recommended sealing length (refer to table)

2. Find Standard Available Clamp Length:

From the Standard Clamp Data Table select the clamp length for the required pipe diameter (DN 500) that is equal to or greater than the above minimum clamp length that you calculate above. **DN 500-600 = 600mm**

This also gives you the required clamp code and No. of studs.

Code = **K21**

The No. of parts Code = **C**

The Clamp Length Code = **F**

3. Determine the clamp size

From the Clamp Selection Table find the intersection of DN500 pipe and Ductile Iron pipe = **560mm**
Starting Range = **-560**
Pipe OD = **560mm**

Therefore the clamp ordering code would be: **K21 - 560 CF**