

tyco

Flow Control

Tyco Water

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.
- 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.



General Applications

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

Technical Data

Size Range: DN200 – DN450
(Brochures for Single-part and Multi-part repair clamps also available).

Max Operating Pressure:
1600 kPa

(Tested: -80 kPa to 2000 kPa)

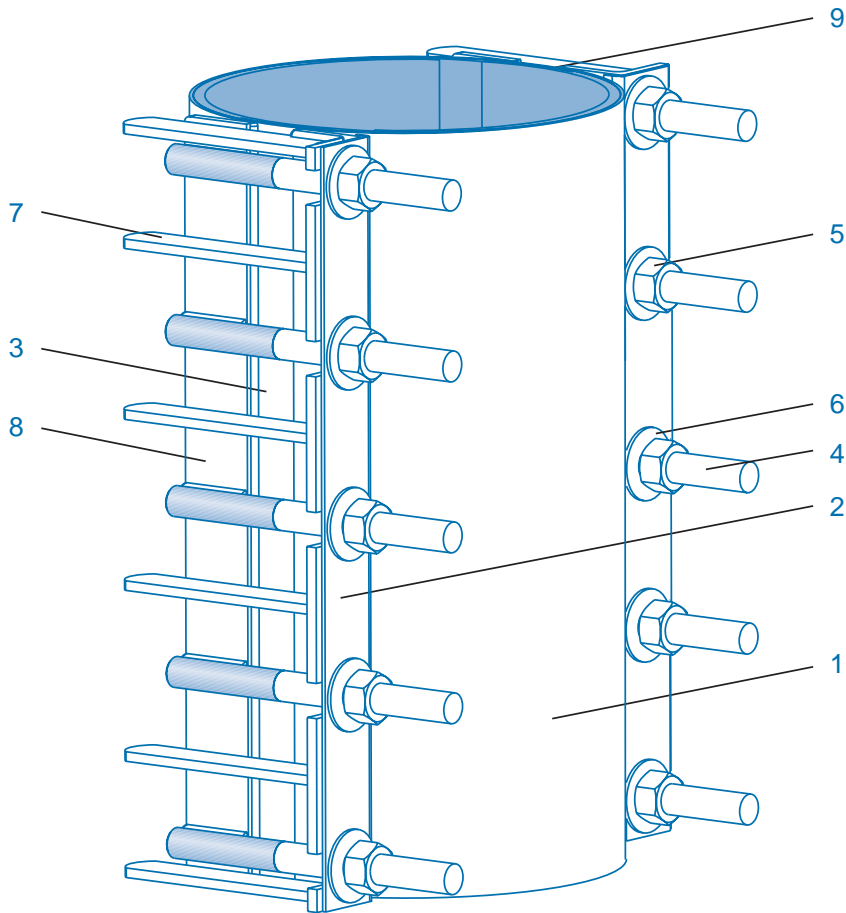
Max Temperature: 60°C

Relevant Standards: AS 4181

Note: Wang repair clamps do not provide axial restraint.

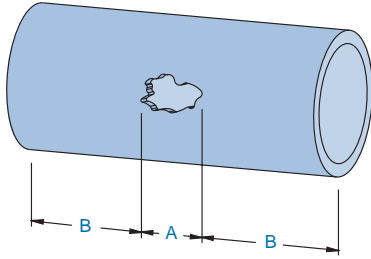
Wang - Stainless Steel Repair Clamps

Double Part DN200-DN450



Parts List

No.	Description	Material	Standard
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
200	65mm
225-300	100mm
350-450	150mm

AS 4181 Minimum Clamp Lengths

Nom. Dia.	Length (mm)
200	200
225-300	300
350-450	400

Standard Clamp Data

DN	Standard Clamp Lengths	No. of Studs	Stud No. Code	No. of Parts Code	Clamp Length Code	Stud Size	OD Range
200-225	300	6	K6	B	C	M16	20mm
250-300	300	8	K8	B	C	M16	20mm
200-450	400	10	K10	B	D	M16	20mm
300-450	600	14	K14	B	F	M16	20mm

Repair Clamp Size Table

Nom Size	Pressure Pipe							
	DICL AS/NZS 2280	Steel MSCL AS 1579	UPVC		ABS		Hobas AS 3571	Copper AS 1432
			Series-1 AS/NZ S1477	Series-2 AS/NZS 4441	Series-1 AS 3518	Series-2 AS 3518		
200	-215	-215	-215	-215	-215	-215	-215	N/A
	232mm	218mm	225mm	232mm	225mm	232mm	232mm	203mm
225	-250		-250	-250	-250	-250	-250	-215
	259mm		250mm	259mm	250mm	259mm	259mm	229mm
250	-270	-270	-270	-270		-270	-270	
	286mm	273mm	280mm	286mm		286mm	286mm	
300	-330	-310	-310	-330	-310	-330	-330	
	345mm	324mm	315mm	345mm	315mm	345mm	345mm	
350		-350	-350		-350		-390	
		355mm	355mm		355mm		399mm	
375	-410	-400	-400	-410	-400	-410	-410	
	426mm	406mm	400mm	426mm	400mm	426mm	426mm	
400		-450	-450		-450		-450	
		457mm	450mm		450mm		450mm	
450	-490	-490	-490	-490	-490	-490	-490	
	507mm	508mm	500mm	507mm	507mm	507mm	507mm	

Note:

Top Number = Clamp Size (Start of OD Range)

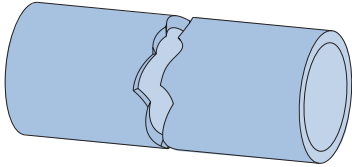
Bottom Number = Pipe OD (mm)

Wang - Stainless Steel Repair Clamps

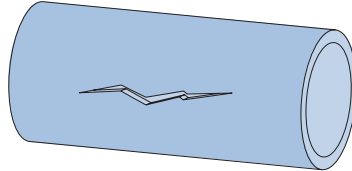
Double Part DN200-DN450

Typical Application Diagram

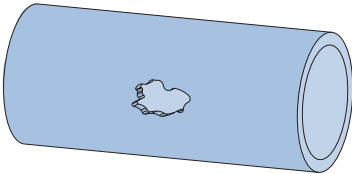
Full Breaks



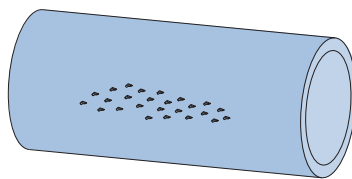
Splits



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:

Only a tension wrench recommended for installing.

CICL		Asbestos		RC	PE
B	C	AB	CD	RC	Actual OD
AS 1724	AS 2544	AS 1711	AS 1711	AS 4058	AS/NZS 4130
-215	-215	-215	-215		-215
232mm	232mm	232mm	232mm		225mm
-250	-250	-250	-250	-270	-250
259mm	259mm	259mm	259mm	279mm	250mm
-270	-270	-270	-270		-270
286mm	286mm	286mm	286mm		280mm
-330	-330	-330	-330	-350	-310
334mm	345mm	334mm	345mm	362mm	315mm
					-350
					355mm
-410	-410	-410	-410	-440	-400
413mm	426mm	413mm	426mm	445mm	400mm
					-450
					450mm
-490	-490	-490	-490	N/A	
492mm	507mm	492mm	507mm	533mm	

Typical Specifying Sequence

Example	K	10	-	350	B	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 B = Double Part Clamp						

Clamp Length (mm)

A = 150
 B = 200
 C = 300
 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 DN350 UPVC Series 1 pipe with a 90mm hole.

1. Determine the minimum required clamp length:

$$\begin{aligned} \text{Min Clamp length} &= A + 2B \\ &= 90 + (2 \times 150) \\ \text{Min Clamp length} &= 390\text{mm} \end{aligned}$$

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 350) that is equal to or greater than the above minimum clamp length that you calculate above. **DN 300-450 = 400mm**

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

Code = **K10**

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

The Clamp Length Code = **D**

3. Determine the clamp size

From the Clamp Selection Table find the intersection of DN350 pipe and UPVC Series 1 pipe = **355mm** Starting Range = **-350**
 Pipe OD = **355mm**

Therefore the clamp ordering code would be: **K10 - 350 BD**