

Stainless steel repair clamps for permanent repairs onto most pipe types and sizes. Manufactured in accordance with AS 4181. DN 450 – DN 1200.

WANG Repair Clamps – Multi-part

- 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 multipart 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: DN 450 - DN 1200
Brochures for Single Part and Double Part Repair Clamps also available.

Maximum Operating Pressure: 1600 kPa (DN 450 only).

Temperature Range: -10°C to 60°C

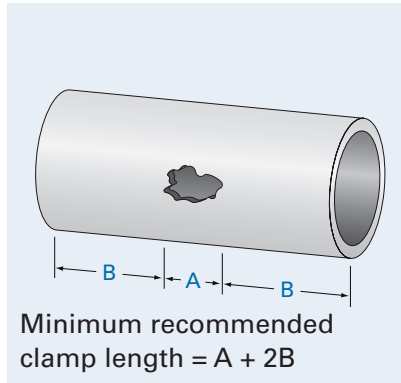
Relevant Standards: AS 4181.

Note. *Wang* repair clamps do not provide axial restraint.

Selecting the repair 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.



Recommended seal length. B

| Nom. dia. DN | Min. seal Length B. mm |
|--------------|------------------------|
| 450 - 600 | 150 |

AS 4181 minimum clamp lengths

| Nom. dia. DN | Length mm |
|--------------|-----------|
| 450 - 600 | 400 |

Standard clamp data

| Nom. size DN | Standard clamp lengths | No. of studs | Stud No. code | No. of parts code | Clamp length code | Stud size | OD range mm |
|--------------|------------------------|--------------|---------------|-------------------|-------------------|-----------|-------------|
| 450 - 600 | 400 | 15 | K15 | C | D | M16 | 30 |
| 450 - 600 | 600 | 21 | K21 | C | D | M16 | 30 |

Top Number = Clamp Size
(Start of OD Range)
Bottom Number = Pipe OD. mm

WANG multi-part repair clamp sizes ... for pressure pipe

| Nom. size DN | DICL | Steel | UPVC | | ABS | | Hobas |
|--------------|----------------|---------------|----------------------|----------------------|------------------|------------------|----------------|
| | AS/NZS 2280 | MSCL AS 1579 | Series 1 AS/NZ S1477 | Series 2 AS/NZS 4441 | Series 1 AS 3518 | Series 2 AS 3518 | AS 3571 |
| 450 | -490 507mm | -490 508mm | -490 500mm | -490 507mm | -490 500mm | -490 507mm | -490 507mm |
| 500 | -560 560mm | -530 559mm | -560 560mm | | -560 560mm | | -560 560mm |
| 525 | | | | -560 560mm | | -560 560mm | -560 587mm |
| 600 | *-650 667mm | -610 610mm | -620 630mm | *-650 667mm | -620 630mm | *-650 667mm | *-650 667mm |

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



| CICL | | Asbestos | | RC | PE |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|----------------------|
| B | C | AB | CD | | Actual OD |
| <i>AS 1724</i> | <i>AS 2544</i> | <i>AS 1711</i> | <i>AS 1711</i> | <i>AS 4058</i> | <i>AS/NZS 4130</i> |
| -490 <i>492mm</i> | -490 <i>507mm</i> | -490 <i>492mm</i> | -490 <i>507mm</i> | -530 <i>533mm</i> | -490 <i>500mm</i> |
| -530 <i>545mm</i> | -560 <i>560mm</i> | | | | -560 <i>560mm</i> |
| | | -570 <i>572mm</i> | -570 <i>587mm</i> | -610 <i>616mm</i> | |
| *-650 <i>650mm</i> | *-650 <i>667mm</i> | *-650 <i>650mm</i> | *-650 <i>667mm</i> | *-690 <i>699mm</i> | -620 <i>630mm</i> |

WANG multi-part repair clamp typical specifying sequence

| Example 1 | K | 15 | - | 560 | C | D |
|--|--|----|---|-----|---|---|
| K | = Clamp code | | | | | |
| 15 | = Number of studs <i>Refer to Standard Clamp Data Table on page 2</i> | | | | | |
| - | = Delineator | | | | | |
| 560 | = Clamp size – start of OD range <i>Refer to Clamp Size Table on page 2</i> | | | | | |
| C | = Number of parts – <i>three part clamp</i> | | | | | |
| D | = Clamp length. mm D = 400 / F = 600 | | | | | |
| <p>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.</p> | | | | | | |

Example 2

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

1 Determine the minimum required clamp length.

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

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.

$$\text{DN } 500 - 600 = 600\text{mm}$$

This also gives you the required clamp code and number of studs.

Code = K21

The number of parts code = C

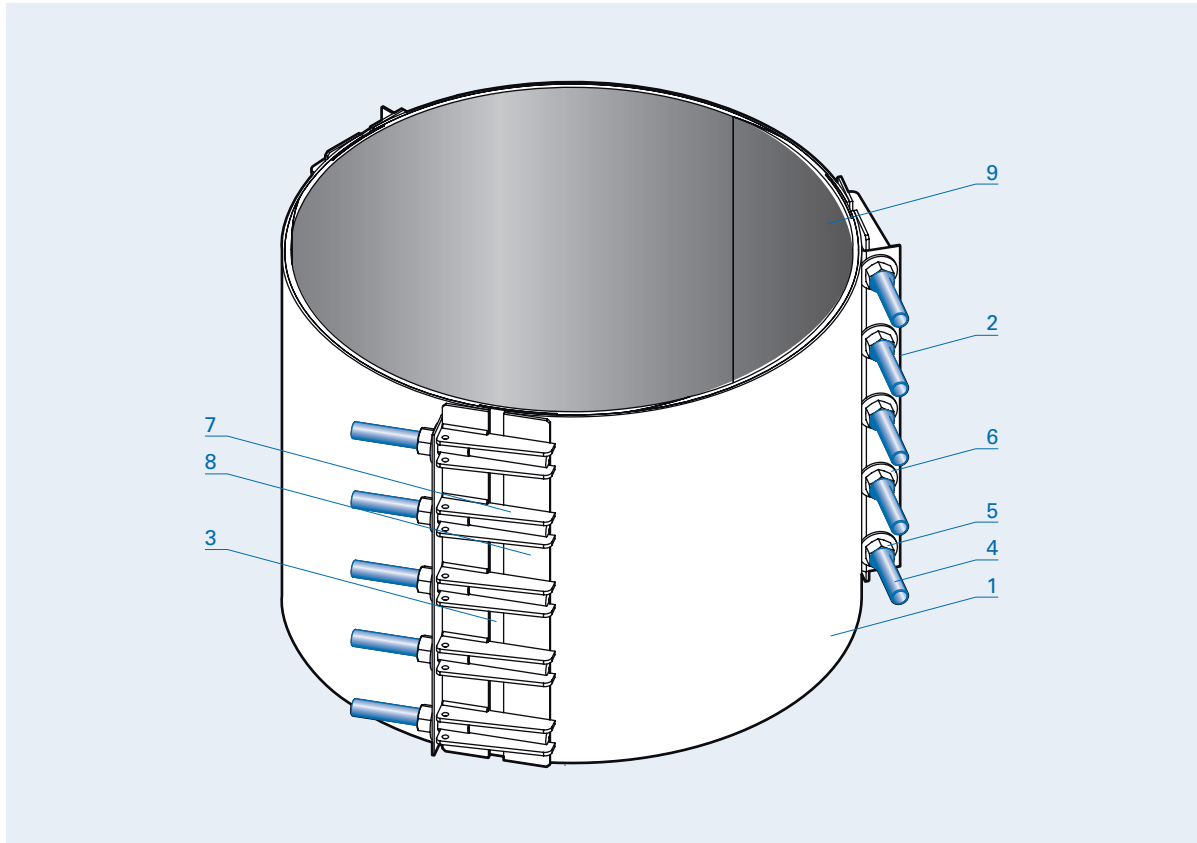
The clamp length code = F

3 Determine the clamp size.

From the clamp selection table find the intersection of DN 500 pipe and Ductile Iron Pipe starting size = -560

Pipe OD = 560mm

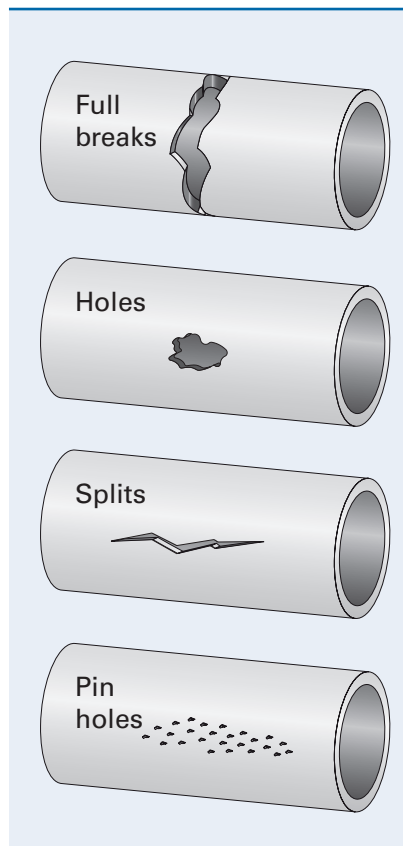
Therefore the clamp ordering code would be: K21-560CF



WANG multi-part repair clamp 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 A240M or A276 |
| 8 | Flat Bars 316 Stainless Steel ASTM A240M or A276 |
| 9 | Sealing Gasket Full-circle Nitrile (NBR) Compound AS 1646 and AS/NZS 4020 |

WANG multi-part repair clamp typical applications



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. *A tension wrench is recommended for proper installation.*

WANG Clamps and Couplings

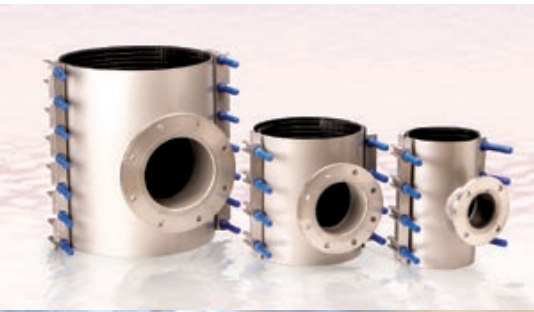
Tyco Water *Wang Components* is one of the leading suppliers of Grade 316 Stainless Steel Repair and Tapped Clamps as well as Couplings for reticulated water, sewerage and gas distribution mains including industrial piping systems.

As part of the Tyco Water business, *Wang Components* products have become synonymous with quality and reliability. Our product range is widely utilised and relied upon by Water Authorities and Councils throughout

Australia in the installation and maintenance of their supply mains and reticulation network.

Wang Components products are Australian made and can be sourced through the Tyco Water national sales and service network of customer centres.

Tyco Water is a specialist in integrated solutions for all your water and wastewater pipeline system requirements.



◀ Flanged Offtake Clamp

A cost effective means of achieving a 'T' connection or under pressure tapping. DN 100 - DN 900

KWIK Clamp ▶

A full circle repair clamp for small bore galvanised steel, copper and PVC pipe. DN 15 - DN 50



◀ Sewer OB Junction Clamp

A quick method of installing a new property service connection on a sewer main. DN 100 - DN 450

Repair Clamp ▶

A fast, permanent and economical repair solution for most pipe types and sizes. DN 50 - DN 1200



◀ Socket Joint Leak Clamp

Provides a permanent and economical seal over a leaking socket-spigot joint. DN 80 - DN 1200

Tapped Clamp ▶

A reliable means of tapping into old, unstable or damaged pipe. DN 50 - DN 1200



◀ Vari-Gib Coupling

Designed to provide a mechanical joint between similar or dissimilar pipes. DN 50 - DN 1200

Tapping Saddle – Rigid pipe ▶

Variable OD stainless steel saddle for tapping into rigid pipe. DN 40 - DN 450

