

Vari-Gib non-restrained mechanical couplings are manufactured to WSA 105 and provide an effective method for connecting pipes with equal or unequal diameters. DN 40 – DN 1200.

WANG Vari-Gib Couplings



- One coupling fits a wide range of pipe OD's (up to 24mm variation), significantly reducing stockholding requirements.
- Specially designed wedge shaped nitrile seal for use with water, wastewater and gas mediums.
- Compatible with most pipe types.
- Vari-Gib couplings can be installed without the need to disassemble, significantly improving speed and ease of installation.
- Fasteners have a captive head configuration to enable single spanner operation, facilitating ease of field assembly.
- Fasteners are 316 stainless steel for long life operation, or galvanised mild steel is available in sizes up to DN 300.

- Components are pre-lubricated during assembly to provide low torque installation.
- Three bolt design is used on DN150 and smaller for ease of installation.

General applications

Vari-Gib couplings are ideal for joining two pipe ends together and are predominantly used in a maintenance situation where a burst or damaged pipeline is repaired by a cut-out and replace method. Suitable for drinking water, wastewater and gas applications.

Technical data

Size Range: DN 40 - DN 1200

Larger sizes available on request.

Maximum Operating Pressure: 1600 kPa (up to and including DN 600).

Temperature Range: -10°C to 60°C

Approvals:

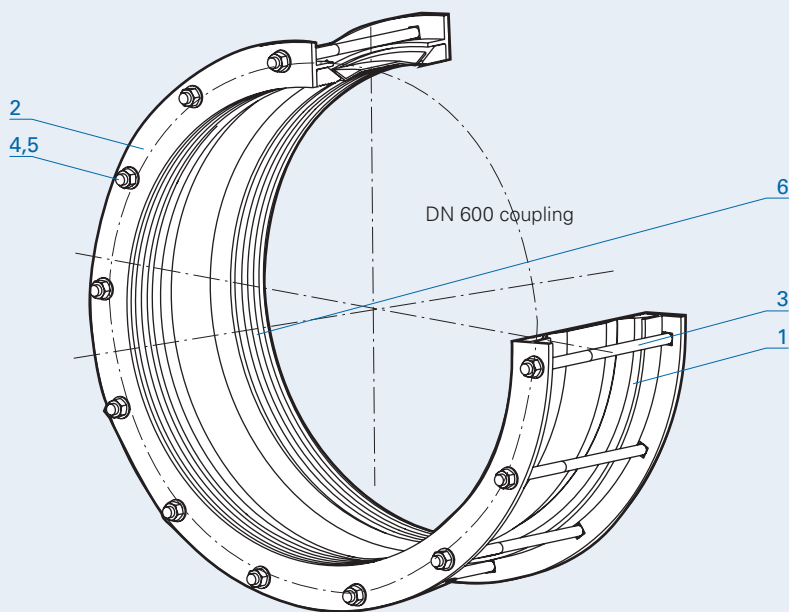
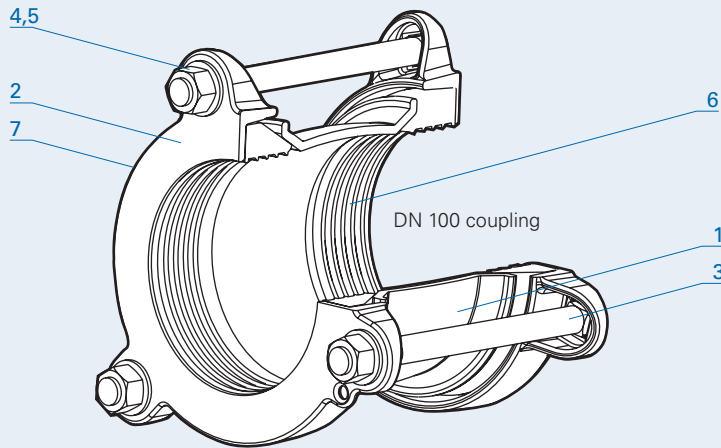
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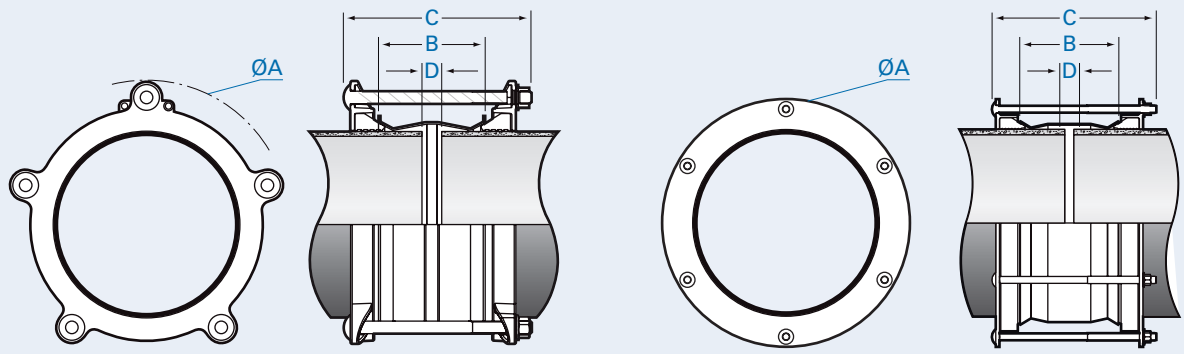
Certified to AS 4020 : Products in contact with potable water.

Please contact your Tyco distributor for information on alternative specifications.

WANG Vari-Gib couplings parts list

| No. | Description / Material / Standard |
|-----|--|
| 1 | Barrel Ductile Iron / AS 1831 316 Stainless Steel / ASTM A240M |
| 2 | Flanges Ductile Iron / AS 1831 316 Stainless Steel / ASTM A276 |
| 3 | Bolts 316 Stainless Steel / DIN 603 Mild Steel – Galvanised / DIN 603 |
| 4 | Nuts 316 Stainless Steel / AS 1112.1 Mild Steel – Galvanised / DIN 603 |
| 5 | Washers 316 Stainless Steel / ISO 887/ISO 7089 Mild Steel – Galvanised |
| 6 | Gasket Nitrile (NBR) Compound AS 1646 and AS/NZS 4020 |
| 7 | Coating Fusion Coated / AS/NZS 4158 Fusion Coated (Black Epoxy) |





WANG Vari-Gib coupling dimensions

| Start of range | End of range | Flange OD A | Bolt | | Angular deflection | Barrel length B | | Bolt length C | | Max. allow. pipe gap. D | | Rec. min. setting gap | | Approx. weight kg |
|----------------|--------------|----------------|------|------|--------------------|-----------------|------|---------------|------|-------------------------|------|-----------------------|------|----------------------|
| | | | Qty | Size | | Short | Long | Short | Long | Short | Long | Short | Long | |
| 45 | 69 | 191 | 3 | M12 | 6 | 110 | | 200 | | 15 | | 10 | | 4 |
| 52 | 76 | 198 | 3 | M12 | 6 | 110 | | 200 | | 15 | | 10 | | 4 |
| 63 | 87 | 213 | 3 | M12 | 6 | 110 | | 200 | | 15 | | 10 | | 5 |
| 84 | 108 | 238 | 3 | M16 | 6 | 110 | 176 | 200 | 270 | 15 | 50 | 10 | 10 | 5.5 |
| 109 | 133 | 263 | 3 | M16 | 6 | 110 | 176 | 200 | 270 | 15 | 50 | 10 | 10 | 6.5 |
| 123 | 147 | 277 | 3 | M16 | 6 | 110 | | 200 | | 15 | | 10 | | 8 |
| 158 | 182 | 312 | 3 | M16 | 6 | 110 | 176 | 200 | 270 | 15 | 50 | 12 | 12 | 7.5 |
| 170 | 194 | 324 | 3 | M16 | 6 | 110 | | 200 | | 15 | | 12 | | 8.5 |
| 178 | 202 | 332 | 4 | M16 | 6 | 110 | | 200 | | 15 | | 12 | | 10 |
| 214 | 238 | 371 | 5 | M16 | 6 | | 176 | | 270 | | 50 | | 12 | 11 |
| 240 | 264 | 399 | 5 | M16 | 6 | | 176 | | 270 | | 50 | | 15 | 13 |
| 272 | 296 | 431 | 5 | M16 | 6 | | 176 | | 270 | | 50 | | 15 | 14 |
| 310 | 334 | 490 | 5 | M16 | 6 | | 216 | | 350 | | 80 | | 15 | 24 |
| 330 | 354 | 510 | 5 | M16 | 6 | | 216 | | 350 | | 80 | | 15 | 26 |
| 346 | 370 | 504 | 5 | M16 | 6 | | 216 | | 350 | | 80 | | 15 | 30 |
| 396 | 420 | 554 | 8 | M16 | 5 | | 216 | | 350 | | 80 | | 15 | 37 |
| 410 | 434 | 568 | 8 | M16 | 5 | | 216 | | 350 | | 80 | | 15 | 38 |
| 436 | 460 | 594 | 8 | M16 | 4 | | 216 | | 350 | | 80 | | 15 | 42 |
| 444 | 468 | 602 | 8 | M16 | 4 | | 216 | | 350 | | 80 | | 15 | 45 |
| 488 | 512 | 646 | 10 | M16 | 4 | | 216 | | 350 | | 80 | | 15 | 49.5 |
| 498 | 522 | 656 | 10 | M16 | 4 | | 216 | | 350 | | 80 | | 15 | 51 |
| 530 | 554 | 688 | 12 | M16 | 4 | | 216 | | 350 | | 80 | | 15 | 57 |
| 542 | 566 | 700 | 12 | M16 | 4 | | 216 | | 350 | | 80 | | 20 | 58 |
| 552 | 576 | 710 | 12 | M16 | 4 | | 216 | | 350 | | 80 | | 20 | 59 |
| 574 | 598 | 732 | 12 | M16 | 4 | | 216 | | 350 | | 80 | | 20 | 60 |
| 596 | 620 | 754 | 14 | M16 | 4 | | 216 | | 350 | | 80 | | 25 | 65 |
| 630 | 654 | 788 | 14 | M16 | 3 | | 216 | | 350 | | 80 | | 25 | 70 |
| 648 | 672 | 806 | 14 | M16 | 3 | | 216 | | 350 | | 80 | | 25 | 71.5 |
| 658 | 682 | 816 | 14 | M16 | 3 | | 216 | | 350 | | 80 | | 25 | 72 |

WANG Vari-Gib stepped couplings

| Nom size DN | Small end | | | Large end | | | Bolt size | Angular deflection | Barrel length B | Bolt length C | Max. allow. pipe gap D | Rec. min. setting gap | Approx. weight kg |
|----------------|------------|----------------|----------|-----------|----------------|----------|-----------|--------------------|--------------------|------------------|---------------------------|-----------------------|----------------------|
| | Size mm | Flange OD A | Bolt qty | Size | Flange OD A | Bolt qty | | | | | | | |
| 80-100 | 84-108 | 238 | 3 | 109-133 | 263 | 3 | M16 | 6 | 110 | 200 | 15 | 10 | 7.5 |
| 200-225 | 214-238 | 371 | 5 | 240-264 | 399 | 5 | M16 | 6 | 216 | 300 | 80 | 15 | 21 |

WANG Vari-Gib
selection chart for pressure pipe

Top numbers = Vari-Gib Option1
Vari-Gib Option 2
Bottom number = Pipe OD. mm

| Nom. size DN | DICL | Steel | | UPVC | | ABS | | Hobas |
|-----------------|-----------------------|-----------------------|----------------------|-------------------------|-------------------------|-----------------------|-----------------------|-----------------------|
| | AS/NZS 2280 | MSCL AS 1579 | GW1 AS 1074 | Series 1 AS/NZS 1477 | Series 2 AS/NZS 4441 | Series 1 AS 3518 | Series 2 AS 3518 | AS 3571 |
| 40 | | | 0045 48mm | 0045 48mm | | 0045 48mm | | |
| 50 | | | 0045 0052 60mm | 0045 0052 60mm | | 0045 0052 60mm | | |
| 65 | | | 0052 0063 76mm | 0052 0063 75mm | | 0052 0063 75mm | | |
| 80 | 0084 96mm | | 0084 89mm | 0084 89mm | | 0084 89mm | | |
| 100 | 0109 122mm | 0109 114mm | 0109 114mm | 0109 114mm | 0109 122mm | 0109 114mm | 0109 122mm | 0109 122mm |
| 125 | | 0123 140mm | 0123 140mm | 0123 140mm | | 0123 140mm | | 127mm |
| 150 | 0158 0170 177mm | 0158 168mm | 0158 168mm | 0158 160mm | 0158 0170 177mm | 0158 168mm | 0158 0170 177mm | 0158 0170 177mm |
| 175 | | | | 0178 200mm | | | | |
| 200 | 0214 232mm | 0214 218mm | | 0214 225mm | 0214 232mm | 0214 225mm | 0214 232mm | 0214 232mm |
| 225 | 0240 259mm | 0240 257mm | | 0240 250mm | 0240 259mm | 0240 250mm | 0240 259mm | 0240 259mm |
| 250 | 0272 286mm | 0272 273mm | | 0272 280mm | 0272 286mm | | 0272 286mm | 0272 286mm |
| 300 | 0330 345mm | 0310 324mm | | 0310 315mm | 0330 345mm | 0310 315mm | 0330 345mm | 0330 345mm |
| 350 | | 0346 355mm | | 0346 355mm | | 0346 355mm | | 0396 399mm |
| 375 | 0410 426mm | 0396 406mm | | 0396 400mm | 0410 426mm | 0396 400mm | 0410 426mm | 0410 426mm |
| 400 | | 0436 0444 457mm | | 0436 0444 450mm | | 0436 0444 450mm | | 0436 0444 453mm |
| 450 | 0488 0498 507mm | 0488 0498 508mm | | 0488 0498 500mm | 0488 0498 507mm | 0488 0498 500mm | 0488 0498 507mm | 0488 0498 507mm |
| 500 | 0542 0552 560mm | 0542 0552 559mm | | 0542 0552 560mm | | 0542 0552 560mm | | 0542 0552 560mm |
| 525 | | 0596 610mm | | | 0542 0552 560mm | | 0542 0552 560mm | 0574 587mm |
| 600 | 0658 0648 667mm | 0648 0658 660mm | | 0630 630mm | 0658 0648 667mm | 0630 630mm | 0658 0648 667mm | 0658 0648 667mm |

Notes. 1. Vari-Gib couplings are not recommended for use on polyethylene pipe.
2. Other sizes may be available on request.

| Copper | CICL | | Asbestos | | RC |
|----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------|
| | B | C | AB | CD | |
| AS 1432 | AS 1724 | AS 2544 | AS 1711 | AS 1711 | AS 4058 |
| 38mm | | | | | |
| 0045 51mm | | | 0045 0052 69mm | | |
| 0052 0063 64mm | | | 0063 79mm | | |
| 0052 0063 76mm | | 0084 96mm | 0084 96mm | 0084 96mm | |
| 0084 101mm | 0109 122mm | 0109 122mm | 0109 122mm | 0109 122mm | |
| 0123 | | N/A 149mm | | | |
| | 0158 0170 177mm | 0158 0170 177mm | 0158 0170 177mm | 0158 0170 177mm | 0178 197mm |
| 203mm | 0214 232mm | 0214 232mm | 0214 232mm | 0214 232mm | |
| 0214 229mm | 0240 259mm | 0240 259mm | 0240 259mm | 0240 259mm | 0272 279mm |
| | 0272 286mm | 0272 286mm | 0272 286mm | 0272 286mm | |
| | 0310 0330 334mm | 0330 345mm | 0310 0330 345mm | 0330 345mm | 0346 362mm |
| | 0410 413mm | 0410 426mm | 0410 413mm | 0410 426mm | 0444 445mm |
| | 0488 492mm | 0488 0498 507mm | 0488 492mm | 0488 0498 507mm | 0530 533mm |
| | 0530 0542 545mm | 0542 0552 560mm | | | |
| | | | 0552 572mm | 0574 587mm | 0600 616mm |
| | 0648 0630 650mm | 0655 0648 667mm | 0648 0630 650mm | 0658 0648 667mm | |

Recommended specification

- Couplings shall be manufactured in conformance with WSA 105 and shall accommodate a wide range of pipes of the same nominal size.
- The design shall incorporate a wedge shaped nitrile rubber seal manufactured in accordance with AS 1646.
- Couplings shall be un-restrained.
- Coupling components shall be manufactured from Grade 316 Stainless Steel to ASTM A 240M or Ductile Iron to AS 1831.
- Ductile barrels shall be coated with a thermal bonded polymeric coating in accordance with AS/NZS 4158
- Ductile Iron flanges shall utilise the following coatings:
 - Thermal bonded polymeric coating to AS/NZS 4158;
 - Thermal bonded polymeric coating (Fusion Coated Black Epoxy)



WANG Vari-Gib material options

| Start of range | End of range | Barrel | | Flanges | | Fasteners | | Gasket |
|----------------|--------------|----------------------------------|---------------------|-----------------------------|----------------------------------|---------------------|-----------------|----------------|
| | | Ductile Iron FC blue AS/NZS 4158 | 316 stainless steel | Ductile Iron FC black epoxy | Ductile Iron FC blue AS/NZS 4158 | 316 stainless steel | Galv mild steel | Nitrile rubber |
| 45 | 69 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 52 | 76 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 63 | 87 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 84 | 108 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 109 | 133 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 123 | 147 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 158 | 182 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 170 | 194 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 178 | 202 | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 214 | 238 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 240 | 264 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 272 | 296 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 310 | 334 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 330 | 354 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |
| 346 | 370 | | ✓ | | | ✓ | | ✓ |
| 396 | 420 | | ✓ | | | ✓ | | ✓ |
| 410 | 434 | | ✓ | | | ✓ | | ✓ |
| 436 | 460 | | ✓ | | | ✓ | | ✓ |
| 444 | 468 | | ✓ | | | ✓ | | ✓ |
| 488 | 512 | | ✓ | | | ✓ | | ✓ |
| 498 | 522 | | ✓ | | | ✓ | | ✓ |
| 530 | 554 | | ✓ | | | ✓ | | ✓ |
| 542 | 566 | | ✓ | | | ✓ | | ✓ |
| 552 | 576 | | ✓ | | | ✓ | | ✓ |
| 574 | 598 | | ✓ | | | ✓ | | ✓ |
| 596 | 620 | | ✓ | | | ✓ | | ✓ |
| 630 | 654 | | ✓ | | | ✓ | | ✓ |
| 648 | 672 | | ✓ | | | ✓ | | ✓ |
| 658 | 682 | | ✓ | | | ✓ | | ✓ |

WANG Vari-Gib material options for stepped couplings

| Start of range | End of range | Barrel | | Flanges | | Fasteners | | Gasket |
|-----------------|--------------|----------------------------------|---------------------|-----------------------------|----------------------------------|---------------------|-----------------|----------------|
| | | Ductile Iron FC blue AS/NZS 4158 | 316 stainless steel | Ductile Iron FC black epoxy | Ductile Iron FC blue AS/NZS 4158 | 316 stainless steel | Galv mild steel | Nitrile rubber |
| 84-108/109-133 | | ✓ | | | ✓ | ✓ | ✓ | ✓ |
| 214-238/240-264 | | ✓ | | | ✓ | ✓ | ✓ | ✓ |

WANG Vari-Gib typical specifying sequence

| | | | | | |
|--|----|------|---|---|---|
| Example 1 | KV | 0109 | A | A | S |
| KV = Vari-Gib | | | | | |
| 0109 = OD range <i>Select code from Vari-Gib Selection Chart on page 4</i> | | | | | |
| A = Material options <i>Select from Material Options Table opposite</i> A = 316 S/S Barrel / DI-Fusion Coated Flanges B = 316 S/S Barrel / DI-Black Epoxy Flanges C = 316 S/S Barrel / 316 S/S Flanges D = DI Fusion Coated Barrel / DI-Fusion Coated Flanges | | | | | |
| A = Barrel length <i>Select length from Dimensions Table on page 3</i> A = 110 / B = 136 / C = 176 / D = 216 | | | | | |
| S = Fastener material <i>Select from Material Options Table opposite</i> G = Galvanised / S = 316 stainless steel | | | | | |

Example 2

You require a Vari-Gib for a DN 100 Ductile Iron pipe.

1 Determine the coupling size from the Vari-Gib Selection Chart & add prefix.

Find the intersection of pipe diameter DN 100 and DI/CL.

Vari-Gib = 0109

Add prefix = KV0109

2 Determine the Material for the Barrel & Flanges:

Refer to 109-133 on Material Options Chart. Find preferred materials & match to combinations offered in "Typical Specifying Sequence" above.

A = 316 S/S Barrel / DI-Fusion Coated Flanges

= KV0109A

3 Determine the Barrel Length:

Find the intersection of Code No. 109 & Barrel Lengths B from the Dimensions Chart.

Short = 110mm

= KV0109AA

4 Determine the Material for the Fasteners from the Material Options Chart:

Find the Start of Range No. 109 and select from the available options.

S = 316 S/S

Therefore the Vari-Gib ordering code would be: KV0109 AAS



WANG Clamps and Couplings

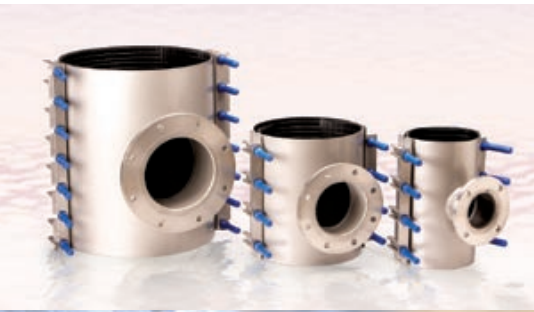
Tyco Water *Wang Components* is one of the leading suppliers of Grade 316 Stainless Steel Repair and Tapped Clamps as well as Couplings for reticulated water, sewerage and gas distribution mains including industrial piping systems.

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

