

**CRANE**

A Crane Co. Company

Wide Tolerance Pipe Couplings



 **VIKING JOHNSON**

# MidiFit

## Wide Tolerance Pipe Couplings

The Viking Johnson range of MidiFit universal pipe couplings represents the very best in mechanical pipe coupling technology. MidiFit products are designed to accommodate plain ended pipes with different outside diameters, thus reducing stocks. One fitting is able to connect steel, ductile iron, PVCu, cast iron and asbestos cement pipes. The MidiFit range is designed under quality management systems to BS EN ISO 9001. It meets the requirements of the UK Water Regulations, the American Water Works Association specification for bolted couplings C.219 and EN 14525 for Ductile Iron Wide Tolerance Couplings.

### Features and Benefits

#### Wide Tolerance

- Up to 23mm tolerance on pipe OD
- Cast Iron, Ductile Iron, Asbestos Cement, Steel, PVC, ABS, GRP etc all covered in one product
- Wide tolerance reduces stock holding
  - 12 Couplings (including 1 stepped coupling)
  - 12 Flange Adaptors
  - Covers the range DN40 to DN300
- One product per nominal bore is needed to effect a repair in most pipe materials

#### Speed of Installation

- Pre-assembled - allows quick & efficient installation
- Gasket has "slide easy" ribs to reduce installation friction on pipes at top end of OD range
- Captive, non-rotating bolt head requiring single spanner to install
- One bolt size/torque across range DN50 to DN300

#### Technical Parameters

- Angularity - 6° for Couplings/Stepped Couplings & 3° for Flange Adaptors
- Expansion/Contraction - 10mm for Coupling/Stepped Coupling & 5mm for Flange Adaptor
- Maximum working pressure = 16 bar
- Maximum site test pressure = 24 bar

#### Guaranteed Sealing & Product Performance Testing

- Distinctive circumferential ribs in unique 'slide-easy' gasket provides maximum sealing on corroded, pitted pipes
- Proof testing of elastomeric sealing mechanism (gaskets)
- Mechanical and chemical relaxation of the gasket material over its 50 year design life simulated by subjecting products to working pressure test at 80°C for 1000 hours
- Design pressure rating confirmed by subjecting all sizes to type tests at top and bottom tolerance for 24 hours at:
  - 2.25-times rated working pressure
  - Full vacuum
- All products subjected to a bolt torque test, confirming that the bolt, end ring and adaptor body capable of withstanding bolt over-tightening to 1.5-times maximum recommended torque
- Design life expectancy of 50 years

#### Designed in Accordance With

- American Water Works Standard AWWA/ANSI C.219
- EN 14525:2004 - Ductile Iron Wide Tolerance Couplings and Flange Adaptors for use with pipes of different materials: Ductile Iron, Grey Iron, Steel, PVC-U, Fibre Cement

#### Product Quality

- Designed & manufactured under quality management systems to BS EN ISO 9001
- Environmental Management System accredited to ISO 14001

#### Materials of Construction

- All metal components (end ring, sleeve, flange adaptor body) manufactured from Ductile Iron
- Full markings (OD, Manufacturer) cast into metal components
- All water contact materials approved for use on potable water pipelines

#### Product Finish Available

- Product Coating – WRAS approved Fusion Bonded Epoxy using a fluidised bed dipping facility Bolts – Spun galvanised zinc coated Gaskets – WRAS approved EPDM

#### Pipe Materials

- MidiFit is designed for use on the following rigid pipe materials:
  - Steel
  - Ductile Iron
  - Asbestos Cement
  - Cast Iron
  - PVC - Metric and Imperial
  - GRP
  - ABS

#### Approvals

- WRAS approved wetted parts

## Specification

### MIDIFIT

A comprehensive range of couplings to suit the various outside diameters of pipes with nominal bores between DN40 and DN300. MidiFit couplings cater for all popular sizes and types of cast iron, asbestos cement, steel, ductile iron and PVCu pipes. MidiFit couplings allow for a total angular deflection of  $\pm 6$  degrees.

### MIDISTEP

MidiStep couplings are designed to provide transitions between pipes of differing nominal bores, irrespective of the materials involved. They cater for cast iron, asbestos cement, steel, ductile iron and PVCu pipes. MidiStep couplings allow for a total angular deflection of  $\pm 6$  degrees.

### MIDIFIT - Coupling

PIPE NOM	Pipe Materials	OD Range mm		Weight kg
		Min	Max	
040mm	Duct Iron, 50mm PVCu, Imp PVCu, Steel, Cast Iron, Imp AC	47.9	59.5	2.7
050mm	63mm PVCu, Imp PVCu, Duct Iron, Steel, Met & Imp AC, Cast Iron	59.5	72.0	3.3
065mm	75mm PVCu, Imp PVCu, Imp AC, Steel, Cast Iron	72.2	85.0	3.6
080mm	Duct Iron, 90mm PVCu, Imp PVCu, Met & Imp AC, Steel, Cast Iron	88.1	102.4	3.9
100mm	Duct Iron, 110/125mm PVCu, Cast Iron, Steel, Met & Imp AC	107.2	127.8	4.8
125mm	Cast Iron, Imp AC, Duct Iron, 140mm PVCu, Steel, Imp PVCu	138.9	153.2	6.0
150mm	Duct Iron, 160/180mm PVCu, Steel, Imp PVCu, Cast Iron, Met & Imp AC	158.2	181.6	7.5
200mm	Duct Iron, 225mm PVCu, Met AC (Class 15 & 20), Steel, Imp PVCu, Cast Iron, Imp AC	218.1	235.0	8.4
250mm	Duct Iron, 280mm PVCu, Met AC (Class 15 & 20), Steel, Imp PVCu, Cast Iron, Imp AC	270.5	289.0	14.8
300mm	315mm PVCu, Steel, Imp PVCu, Ductile Iron	315.0	332.0	18.3
300mm	Duct Iron, Met AC (Class 15), Steel, Imp PVCu, Cast Iron (Class AB)	322.9	339.4	17.0

### MIDISTEP - Stepped Coupling

PIPE NOM	SMALL END Pipe Materials	OD Range mm		PIPE NOM	LARGE END Pipe Materials	OD Range mm		Weight kg
		Min	Max			Min	Max	
300mm	315mm PVCu, Steel, Imp PVCu, Ductile Iron	315.0	332.0	300mm	Duct Iron, Met AC (Class 15), Steel, Imp PVCu, Cast Iron (Class AB)	322.9	339.4	17.8

Bolt details - Couplings			
Nominal size	Bolt size	Bolt torque	Spanner/Wrench size
DN040 - 125	M12 x 180mm	55 - 65Nm	19mm A/F
DN150	M12 x 200mm	55 - 65Nm	19mm A/F
DN200	M12 x 180mm	55 - 65Nm	19mm A/F
DN250 - DN300	M12 x 220mm	55 - 65Nm	19mm A/F



MidiFit Flange Adaptor



MidiFit

## MIDIFIT - Flange Adaptor

Flange adaptors designed to join pipes of various materials and outside diameters to flanges of the same or different nominal bores. MidiFit flange adaptors cover a range of flange drillings, including ISO 7005-1:1992, BS10:1962 and ANSI B16.2 & B16.5.

All MidiFit flange adaptors with the exception of the 332-349mm OD version are compatible with both PN10 and PN16.

MidiFit flange adaptors cater for a total angular deflection of  $\pm 3$  degrees.

PIPE NOM	Pipe Materials	OD Range mm		ISO 7005-1 or Equal		BS:10 1962		ANSI B16.5 or 16.2		Flange Connecting Bolts		Weight kg
		Min	Max	NOM Size mm	NP Table	Nom Size	Table	NOM	Class lbs	Nos	Type	
050mm	63mm PVCu, Imp PVCu, Duct Iron, Steel, Met & Imp AC, Cast Iron	59.5	72.0	50	10,16	2.0"/2.5"	ADEF/ADE	2.0"	150	4	M16 x 60	3.0
065mm	75mm PVCu, Imp PVCu, Imp AC, Steel, Cast Iron	72.2	85.0	60/65	10,16	2.5"	ADE	2.5"	150	4	M16 x 60	3.5
065mm	75mm PVCu, Imp PVCu, Imp AC, Steel, Cast Iron	72.2	85.0	80	10,16					8	M16 x 60	3.2
080mm	Duct Iron, 90mm PVCu, Imp PVCu, Met & Imp AC, Steel, Cast Iron	88.1	102.4	65/80/100	10,16	3.0"/3.5"/4.0"	ADEFH/ADFH/ADE	3.0"/3.5"	150/150	4, 8	M16 x 60	4.7
				80/90/110	6							
100mm	Duct Iron, 110/125mm PVCu, Cast Iron, Steel, Met & Imp AC	107.2	127.8	100/110	10,16	3.5"/4.0"	FH/ADEFH	3.5"/4.0"	150/150	8	M16 x 70	4.8
				110	6							
125mm	Cast Iron, Imp AC, Duct Iron, 140mm PVCu, Steel, Imp PVCu	138.9	153.2	125/150	10,16	5.0"/6.0"	ADE/E	6.0"	150	8, 8	M20 x 70, M16 x 70	7.1
150mm	Duct Iron, 160/180mm PVCu, Steel, Imp PVCu, Cast Iron, Met & Imp AC	158.2	181.6	150	10,16	5.0"/6.0"	FH/E	6.0"	150	8	M20 x 80	6.2
200mm	Duct Iron, 225mm PVCu, Met AC (Class 15 & 20) Steel, Imp PVCu, Cast Iron, Imp AC	218.1	235.0	200	10,16					8, 12	M20 x 90, M20 x 90	10.7
250mm	Duct Iron, 280mm PVCu, Met AC (Class 15 & 20) Steel, Imp PVCu, Cast Iron, Imp AC	270.5	289.0	250	10,16			10.0"	150	12, 12	M20 x 80, M24 x 80	14.0
300mm	315mm PVCu, Steel, Imp PVCu, Ductile Iron	315.0	332.0	300	10, 16			12.0"	150	12, 12	M20 x 80, M24 x 80	16.5
300mm	Duct Iron, Met AC (Class 15) Steel, Imp PVCu, Cast Iron (Class AB)	322.9	339.4	300	10,16			12.0"	150	12, 12	M20 x 80, M24 x 80	14.8
300mm	AC (Class 15, 20, 25) Cast Iron (Class AB & CD), Imp AC	332.0	349.0	300	16					12	M24 x 80	17.6

Bolt details - Flange Adaptors			
Nominal size	Tee Bolt/Stud size	Bolt torque	Spanner/Wrench size
DN050 - 125	M12 x 115mm	55 - 65Nm	19mm A/F
DN150	M12 x 125mm	55 - 65Nm	19mm A/F
DN200	M12 x 115mm	55 - 65Nm	19mm A/F
DN250 - DN300	M12 x 125mm	55 - 65Nm	19mm A/F
DN300 (332 - 349)	M12 x 135mm	55 - 65Nm	19mm A/F

## Viking Johnson is the acknowledged world leader in the field of mechanical pipe couplings.

From our extensive manufacturing facilities the company employs some of the most advanced design, manufacturing and testing technologies available, such as finite element analysis and 3D real time surface modelling, to ensure that its products attain the very highest levels of product quality possible.

Through this total commitment to quality, and over seventy years of innovative design, Viking Johnson products have been successfully used around the world to such an extent that the name Viking Johnson has become synonymous with excellence in the field of mechanical pipe couplings.



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For further information on all Viking Johnson products and services contact our Marketing Department.