

Simple

# QuickFit

Couplings & Flange Adaptors

Close Tolerance Preassembled Fittings



PIONEERS IN PIPE SOLUTIONS

**CRANE**

BUILDING SERVICES & UTILITIES



# Dedicated Couplings & Flange Adaptors

The QuickFit coupling range is designed to connect plain ended pipes with similar outside diameters. The full range includes couplings and flange adaptors in nominal sizes between DN50 (2") and DN300 (12") and accommodates PVC, coated and uncoated steel and ductile iron pipe.

### New Lay & High Pressure Applications

The QuickFit range is ideal for new lay schemes as the fittings are preassembled with close tolerance to allow for quick installation. They are also suitable for high pressure applications – DN50 to DN125 are available up to 46 bar, DN150 to DN300 to 29 bar as standard. Higher pressures are available as fabricated specials.

### Transferring the End Load

QuickFit flange adaptors are not end load-bearing products and in the event that the application requires restraining, tie rods can be used to transfer the end load forces to an anchor flange on the pipe. The design of QuickFit flange adaptors is such that there is sufficient clearance to allow the tie rods to pass over the end ring without the need for notching. This means that one product can be offered for both flexible and tied configurations, thus reducing stock holding.

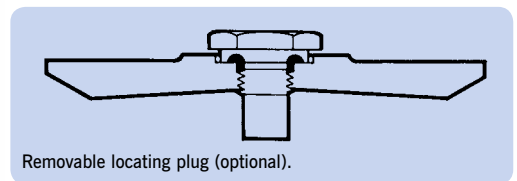
### Removable Locating Plugs – Prevent Coupling Creep

QuickFit couplings are available with removable locating plugs, to prevent coupling creep on above ground pipelines caused by repeated pipe movement from temperature variation, continuous vibrations and movement. The removable locating plug (optional) ensures the coupling can slide fully over the pipe ends for quick and simple installation. Once installed they engage between the pipe ends to prevent the coupling moving beyond fixed limits.








QuickFit Coupling

QuickFit Flange Adaptor



**Standard Pipe Materials**

 Ductile Iron	 ABS
 Steel	 PVC
 HEP30	

# QuickFit Couplings

## Product Design Benefits

### Simple to Fit

One size of captive, non-rotating bolt across whole range requiring a single spanner to install along with one bolt torque across range.

### Corrosion Protection

Metal components are coated with Rilsan Nylon 11, which is WRAS approved for use with potable water, and offers long term corrosion protection and resistance to impact damage.

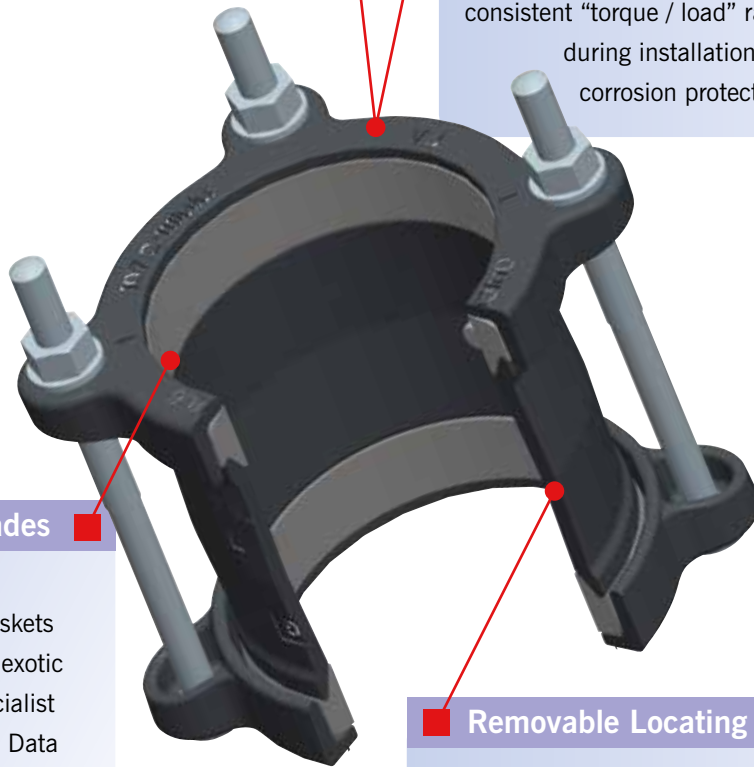
The nuts & bolts are Sheraplex coated to WIS 4-52-03, which does not gall when re-used and offers a consistent “torque / load” ratio reducing the sensitivity during installation while providing long term corrosion protection.

### Various Gasket Grades

EPDM (water quality approved) and Nitrile gaskets as standard. Alternative exotic grades available for specialist applications (see Design Data for more details).

### Removable Locating Plug

Optional feature is removal locating plug to prevent pipe creep on above ground pipework.



## Customer Benefits

- QuickFit couplings allow 6° of angular deflection between pipes, accommodating movement in service (e.g. ground settlement) and making for easier installation (e.g. long radius curves and misaligned pipes with two fittings and a short length of pipe).
- QuickFit couplings allow 10mm of expansion & contraction, accommodating movement in service to relieve stress in the pipeline (e.g. temperature changes in pipelines).
- Stock reduction is accomplished through the tolerance on OD means that both steel and coated steel are covered in the same fitting.
- Rapid installation of new lay pipework through tolerances designed round steel, coated steel and ductile iron pipes and need to use simply 19mm A/F socket and torque wrench.
- Standard product supplied with Rilsan Nylon coating, EPDM gaskets and Sheraplex coated bolts making it ideal for water / waste water sector; other specialist coatings, bolt materials and exotic gasket grades are available for specialist applications are available (contact Viking Johnson for further advice).
- Fully galvanised version is available – see Marine Couplings section.

# QuickFit Flange Adaptors

## Product Design Benefits

### Flexible Flange Drilling

As standard the flange adaptors are multi drilled to accommodate BS EN 1092-1 PN10 & 16. Flange drilling to other standards available to accommodate site requirements (see data sheets)

### Full Bore Flange

As standard flange adaptors are supplied with full "S Bore" flange for use with wafer style (butterfly) valves.

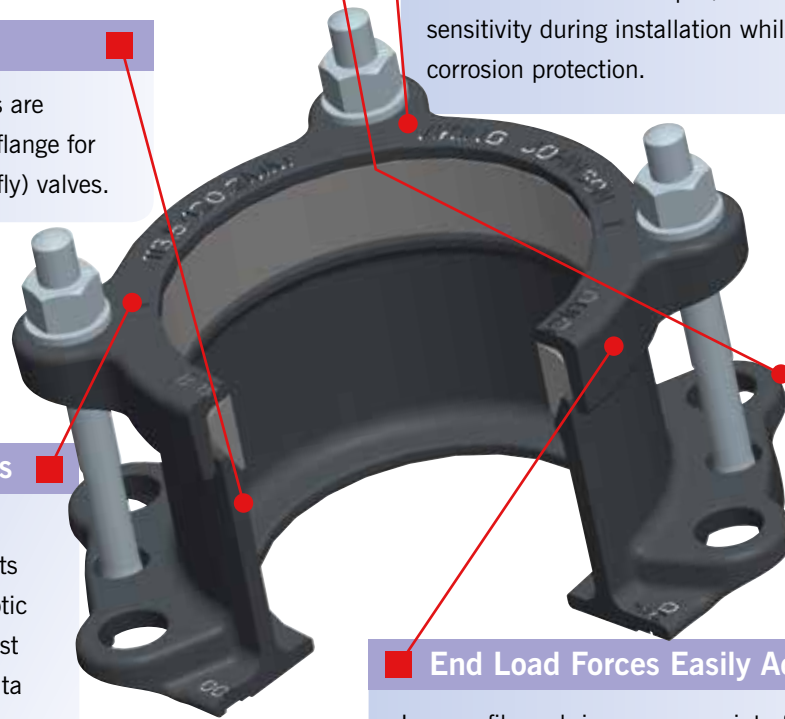
### Various Gasket Grades

EPDM (water quality approved) and Nitrile gaskets as standard. Alternative exotic grades available for specialist applications (see Design Data for more details).

### Corrosion Protection

Metal components are coated with Rilsan Nylon 11, which is WRAS approved for use with potable water, and offers long term corrosion protection and resistance to impact damage.

The nuts & bolts are Sheraplex coated to WIS 4-52-03, which does not gall when re-used and offers a consistent "torque / load" ratio reducing the sensitivity during installation while providing long term corrosion protection.



### End Load Forces Easily Accommodated

Low profile end ring means no interference with tie rods used to harness the flange adaptor to accommodate end load forces.

## Customer Benefits

- QuickFit flange adaptors allow 3° angular deflection between pipes and flange equipment, accommodating movement in service (e.g. ground settlement) and making for easier installation.
- QuickFit flange adaptors allow 5mm expansion & contraction, accommodating movement in service to relieve stress in the pipeline (e.g. temperature changes in pipelines).
- Stock reduction is accomplished from:-
  - Use of low profile end rings that do not interfere with tie rods means standard flange adaptor can be used as either a flexible or harnessed version.
  - Tolerance on OD means that both steel and coated steel are covered in the same fitting.
- The full bore flange supplied as standard in QuickFit flange adaptors with BS EN 1092-1 PN10 & 16 drillings make them ideal for use with wafer style valves. All other flange adaptors come with either clear bore or full face options.
- Rapid installation of new lay pipework through tolerances designed round steel, coated steel and ductile iron pipes and need to use simply 19mm A/F socket and torque wrench.
- Standard product supplied with Rilsan Nylon coating, EPDM gaskets and Sheraplex coated bolts making it ideal for water / waste water sector; other specialist coatings, bolt materials and exotic gasket grades are available for specialist applications are available (contact Viking Johnson for further advice).
- Fully galvanised version is available – see Marine Couplings section.

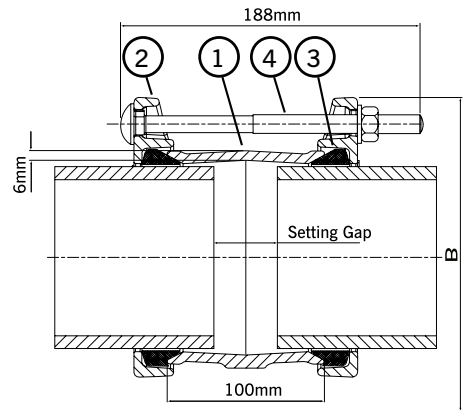
# QuickFit Couplings

## Specifications

### QuickFit Coupling

Bolt size	M12 x 180mm CDX	1 = Centre Sleeve
Setting gap	Recommended - 20mm Max - 40mm	2 = End Ring
Bolt torque	55-65Nm	3 = Gasket
Expansion/Contraction	10mm	4 = Bolts
Angularity	6°	

QuickFit Couplings DO NOT resist end load due to the internal pressure - adequate external restraint must be provided to prevent pipe pull out.



Size Range (mm)		Working Pressure (bar)	End Ring OD B (mm)	Bolt Size No.-Dia x Length	Gasket Mould No.	Weight (kg)
Min	Max					
47.9	51.3	46.6	136.0	2-M12 x 180	12477/41	2.22
59.5	63.3	46.6	148.0	2-M12 x 180	12477/1	2.51
75.3	79.1	46.6	164.0	2-M12 x 180	12477/5	2.89
88.1	91.9	46.6	177.0	4-M12 x 180	12477/7	3.81
95.8	100.2	46.6	185.0	4-M12 x 180	12477/10	4.00
107.2	111.0	46.6	196.0	4-M12 x 180	12477/12	4.26
113.5	120.2	46.6	205.0	4-M12 x 180	12477/15	4.48
138.9	142.7	44	228.0	4-M12 x 180	12477/19	5.02
158.2	162.0	38.8	254.0	4-M12 x 180	12477/21	6.32
167.5	172.3	36.9	264.0	4-M12 x 180	12477/24	6.59
192.9	196.7	32.2	292.0	4-M12 x 180	12477/26	8.06
218.3	224.4	35.8	319.0	4-M12 x 180	12477/29	8.89
272.2	276.5	34.8	372.0	6-M12 x 180	12477/34	11.15
323.1	328.6	29.5	424.0	6-M12 x 180	12477/37	12.76

Site Test pressure = 1.5 x working pressure

## Materials & Relevant Standards

### Centre Sleeve and End Rings

Ductile Iron to BS EN1563: Symbol EN-GJS-450-10

### Gaskets

Standard: EPDM to BS EN681-1, TYPE WA, WC Nitrile to BS EN682:

Type G Other grades are available - contact Viking Johnson for details

### Tee Bolts/Bolts

Standard: Steel to BS EN ISO 898-1: property class 4.8

Option: Stainless Steel to BS EN ISO 3506-1: grade A4 property class 50

### Nuts/Washers

Nuts - Standard: Steel to BS EN 20898-2: property class 8  
Option: Stainless Steel to BS EN ISO 3506-2: grade A4 property class 80

Washers - Stainless Steel to BS1449:PART 2: GRADE 304S15

### Coatings

Centre sleeve and end rings coated with:

Standard: Rilsan Nylon 11 to WIS 4-52-01 Part 1

Other coatings available: Scotchkote, Primer, Galvanised

Tee bolts, CDX bolts and nuts coated with Standard Sheraplex to WIS 4-52-03

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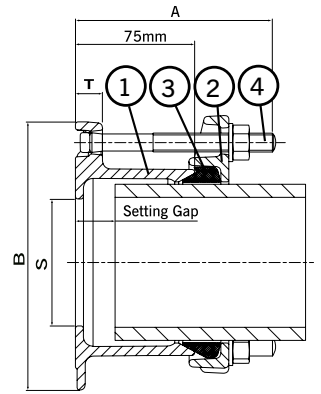
# QuickFit Flange Adaptors - Standard Cast

## Specifications

### QuickFit Flange Adaptor (Standard Cast Product)

Bolt Size	M12 x 115mm Tee Bolt
Setting gap	Recommended - 25mm Max - 45mm
Bolt torque	55-65Nm
Max working	In accordance with flange rating pressure
Expansion/Contraction	5mm
Angularity	3°

- 1 = Body
- 2 = End Ring
- 3 = Gasket
- 4 = Bolts



QuickFit Flange Adaptors DO NOT resist end load due to the internal pressure  
- adequate external restraint must be provided to prevent pipe pull out.

Size Range (mm)		Flange Detail (mm)		Overall Length A (mm)	S Bore S (mm)	Flange Drilling	Bolt Size No.-Dia x Length	Gasket Mould No.	Weight (kg)
Min	Max	Flange OD (B)	Flange Thickness (T)						
59.5	63.3	161.0	17.0	125.0	50.0	50 PN10,16,25,40	2-M12 x 115	12477/1	2.28
75.3	79.1	181.0	17.0	125.0	65.0	65 PN10,16	2-M12 x 115	12477/5	2.66
88.1	91.9	196.0	17.0	126.0	80.0	80 PN10,16,25,40	4-M12 x 115	12477/7	3.48
95.8	100.2	196.0	17.0	126.0	80.0	80 PN10,16,25,40	4-M12 x 115	12477/10	3.59
107.2	111.0	216.0	17.0	126.0	100.0	100 PN10,16	4-M12 x 115	12477/12	3.91
113.5	120.2	216.0	17.0	126.0	100.0	100 PN10,16	4-M12 x 115	12477/15	4.03
138.9	142.7	246.0	17.0	126.0	125.0	125 PN10,16	4-M12 x 115	12477/19	4.71
158.2	162.0	284.0	17.0	126.0	150.0	150 PN10,16	4-M12 x 115	12477/21	5.76
167.5	172.3	284.0	17.0	126.0	150.0	150 PN10,16	4-M12 x 115	12477/24	5.87
192.9	196.7	339.0	20.0	126.0	199.0	200 PN10,16	4-M12 x 115	12477/26	8.43
218.3	224.4	339.0	20.0	126.0	200.0	200 PN10,16	4-M12 x 115	12477/29	8.49
272.2	276.5	405.0	20.0	129.0	250.0	250 PN10,16	6-M12 x 115	12477/34	11.38
323.1	328.6	455.0	20.0	129.0	300.0	300 PN10,16	6-M12 x 115	12477/37	13.04

Test pressure = 1.5 x working pressure

### Tied Flange Adaptor

The design of the new QuickFit flange adaptor is such that there is sufficient clearance to allow tie rods (used to restrain them) to pass over without the need for notching.

## Materials & Relevant Standards

### Flange Adaptor Body and End Rings

Ductile Iron to BS EN1563: Symbol EN-GJS-450-10

### Gaskets

Standard: EPDM to BS EN681-1, TYPE WA, WC Nitrile to BS EN682:  
Type G Other grades are available - contact Viking Johnson for details

### Tee Bolts/Bolts

Standard: Steel to BS EN ISO 898-1: property class 4.8  
Option: Stainless Steel to BS EN ISO 3506-1: grade A4  
property class 50

### Nuts/Washers

Nuts - Standard: Steel to BS EN 20898-2: property class 8  
Option: Stainless Steel to BS EN ISO 3506-2: grade A4  
property class 80

Washers - Stainless Steel to BS1449:PART 2: GRADE 304S15

### Coatings

Flange adaptor body and end rings coated with:  
Standard: Rilsan Nylon 11 to WIS 4-52-01 Part 1  
Other coatings available: Scotchkote, Primer, Galvanised  
Tee bolts, CDX bolts and nuts coated with  
Standard: Sheraplex to WIS 4-52-03

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# QuickFit Flange Adaptors - Fabricated (Common Drillings)

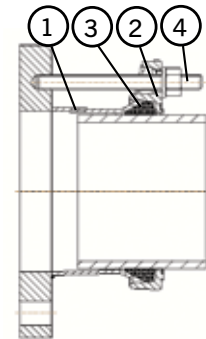
## Specifications

### QuickFit Flange Drilling Capabilities - Other common drillings

OD	Flange Details Nom - (")	ASME/ANSI B16.1/ASME B16.5 Class							
		125		150		250		300	
		Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?
059.5 - 063.3	2	✓	x	✓	x	✓	✓	x	x
075.3 - 079.1	2.5	✓	✓	✓	✓	✓	✓	x	x
088.1 - 091.9	3	✓	✓	✓	✓	✓	✓	x	x
095.8 - 100.2	3	✓	x	✓	x	✓	✓	x	x
107.2 - 111.0	4	✓	✓	✓	✓	✓	✓	x	x
113.5 - 120.2	4	✓	✓	✓	✓	✓	✓	x	x
138.9 - 142.7	5	✓	✓	✓	✓	✓	✓	x	x
158.2 - 162.0	6	✓	✓	✓	✓	✓	✓	x	x
167.5 - 172.3	6	✓	✓	✓	✓	✓	✓	x	x
192.2 - 196.7	8	✓	✓	✓	✓	x	x	x	x
218.3 - 224.4	8	✓	✓	✓	✓	✓	✓	x	x
272.2 - 276.5	10	✓	✓	✓	✓	x	x	x	x
323.1 - 328.6	12	✓	✓	✓	✓	x	x	x	x

OD	Flange Details Nom - (")	AWWA C207 Class							
		B		D		E		F	
		Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?
107.2 - 111.0	4	✓	✓	✓	✓	✓	✓	✓	✓
113.5 - 120.2	4	✓	✓	✓	✓	✓	✓	✓	✓
138.9 - 142.7	5	✓	✓	✓	✓	✓	✓	✓	✓
158.2 - 162.0	6	✓	✓	✓	✓	✓	✓	✓	✓
167.5 - 172.3	6	✓	✓	✓	✓	✓	✓	✓	✓
192.2 - 196.7	8	✓	✓	✓	✓	✓	✓	✓	✓
218.3 - 224.4	8	✓	✓	✓	✓	✓	✓	✓	✓
272.2 - 276.5	10	✓	✓	✓	✓	✓	✓	x	x
323.1 - 328.6	12	✓	✓	✓	✓	✓	✓	x	x

OD	Flange Details Nom - (mm)	AS2129 Table							
		A		C		D		E	
		Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?
059.5 - 063.3	50	✓	x	✓	x	✓	x	✓	x
075.3 - 079.1	65	✓	x	✓	x	✓	x	✓	x
088.1 - 091.9	80	✓	x	✓	x	✓	x	✓	x
095.8 - 100.2	80	✓	x	✓	x	✓	x	✓	x
107.2 - 111.0	100	✓	✓	✓	✓	✓	✓	✓	✓
113.5 - 120.2	100	✓	x	✓	x	✓	x	✓	x
138.9 - 142.7	125	✓	✓	✓	✓	✓	✓	✓	✓
158.2 - 162.0	150	✓	✓	✓	✓	✓	✓	✓	✓
167.5 - 172.3	150	✓	x	✓	x	✓	x	✓	x
192.2 - 196.7	200	✓	✓	✓	✓	✓	✓	✓	✓
218.3 - 224.4	200	✓	x	✓	x	✓	x	✓	x
272.2 - 276.5	250	x	x	x	x	x	x	✓	✓
323.1 - 328.6	300	x	x	✓	✓	✓	✓	✓	x



- 1 = Body
- 2 = End Ring
- 3 = Gasket
- 4 = Studs

Y/N = ✓ = Can make QFFA with this drilling

x = Cannot make QFFA with this drilling

Tied? = ✓ = Can offer as tied FA – notching not required

x = Cannot offer as tied FA – bolts clash with end ring – cannot notch

## Materials & Relevant Standards

### Flange

Steel to BS EN 10025-2: Grade S275JR

### Sleeve

Steel Tube to BS EN 10216-1: Grade P265TRI

or Steel Tube to BS EN 10217-1:

or Steel BS EN10025-2: Grade S275JR

### Tee Bolts/Bolts

Standard: Steel to BS EN ISO 898-1: property class 4.8

Option: Stainless Steel to BS EN ISO 3506-1: grade A4 property class 50

### Nuts/Washers

Nuts - Standard: Steel to BS EN 20898-2: property class 8  
Option: Stainless Steel to BS EN ISO 3506-2: grade A4 property class 80

Washers - Stainless Steel to BS1449:PART 2: GRADE 304S15

### End Rings

Ductile Iron to BS EN1563: Symbol EN GJS-450-10

### Gaskets

Standard: EPDM to BS EN681-1, TYPE WA, WC Nitrile to BS EN682: Type G Other grades are available - contact Viking Johnson.

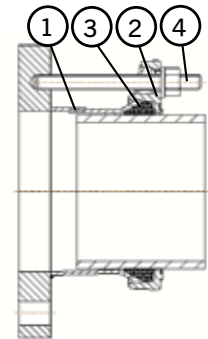
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# QuickFit Flange Adaptors - Fabricated (Standard Drillings)

## Specifications

### New QuickFit Flange Drilling Capabilities - Standard drillings

OD	Flange Details Nom (mm)	BS EN 1092											
		PN2.5		PN6		PN10		PN16		PN25		PN40	
		Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?
059.5 - 063.3	50	✓	x	✓	x								
075.3 - 079.1	65	✓	x	✓	x					✓	✓	✓	✓
088.1 - 091.9	80	✓	x	✓	x								
095.8 - 100.2	80	✓	x	✓	x								
107.2 - 111.0	100	✓	✓	✓	✓					✓	✓	✓	✓
113.5 - 120.2	100	✓	x	✓	x					✓	✓	✓	✓
138.9 - 142.7	125	✓	x	✓	x					✓	✓	✓	✓
158.2 - 162.0	150	✓	x	✓	x					✓	✓	x	x
167.5 - 172.3	150	✓	x	✓	x					✓	✓	x	x
192.2 - 196.7	200	✓	✓	✓	✓					✓	✓	x	x
218.3 - 224.4	200	✓	x	✓	x					✓	✓	x	x
272.2 - 276.5	250	✓	x	✓	x					✓	✓	x	x
323.1 - 328.6	300	✓	x	✓	x					x	x	x	x



- 1 = Body
- 2 = End Ring
- 3 = Gasket
- 4 = Studs

Orange shaded cells = Denotes standard cast product

OD	Flange Details Nom (")	BS 10:1962 Table											
		A		D		E		F		H		J	
		Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?	Y/N	Tied?
059.5 - 063.3	2	✓	x	✓	x	✓	x	✓	✓	✓	✓	x	x
075.3 - 079.1	2.5	✓	x	✓	x	✓	x	✓	✓	✓	✓	x	x
088.1 - 091.9	3	✓	x	✓	x	✓	x	✓	✓	✓	✓	x	x
095.8 - 100.2	3	✓	x	✓	x	✓	x	✓	✓	✓	✓	x	x
107.2 - 111.0	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x
113.5 - 120.2	4	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x
138.9 - 142.7	5	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x
158.2 - 162.0	6	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	x	x
167.5 - 172.3	6	✓	x	✓	x	✓	x	✓	✓	✓	✓	x	x
192.2 - 196.7	8	✓	✓	✓	✓	✓	✓	✓	✓	x	x	x	x
218.3 - 224.4	8	✓	✓	✓	✓	✓	x	✓	✓	✓	✓	x	x
272.2 - 276.5	10	x	x	x	x	✓	✓	✓	✓	✓	✓	x	x
323.1 - 328.6	12	x	x	✓	✓	✓	✓	x	x	x	x	x	x

- Y/N = ✓ = Can make QFFA with this drilling
- x = Cannot make QFFA with this drilling
- Tied? = ✓ = Can offer as tied FA – notching not required
- x = Cannot offer as tied FA – bolts clash with end ring – cannot notch

## Materials & Relevant Standards

### Flange

Steel to BS EN 10025-2: Grade S275JR

### Sleeve

Steel Tube to BS EN 10216-1: Grade P265TRI

or Steel Tube to BS EN 10217-1:

or Steel BS EN10025-2: Grade S275JR

### Tee Bolts/Bolts

Standard: Steel to BS EN ISO 898-1: property class 4.8

Option: Stainless Steel to BS EN ISO 3506-1: grade A4 property class 50

### Nuts/Washers

Nuts - Standard: Steel to BS EN 20898-2: property class 8

Option: Stainless Steel to BS EN ISO 3506-2: grade A4 property class 80

Washers - Stainless Steel to BS1449:PART 2: GRADE 304S15

### End Rings

Ductile Iron to BS EN1563: Symbol EN GJS-450-10

### Gaskets

Standard: EPDM to BS EN681-1, TYPE WA, WC Nitrile to BS EN682:

Type G Other grades are available - contact Viking Johnson.

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United Kingdom - Blackburn

# Hyndburn Wastewater Treatment Plant

QuickFit - DN150



## Project

QuickFits are installed on the transfer pipework to the pumping station and the perforated basket screens, at Hyndburn Wastewater Treatment Plant, which serves a population of 114,000 in the Great Harwood area of Blackburn. A recent extension to the plant aims to increase the capacity of effluent treated each day.

## Client

United Utilities

## Contractor

Valves & Engineered Products





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- Designed and manufactured under quality management systems in accordance with BS EN ISO 9001.
- Environmental Management System accredited to ISO 14001.
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