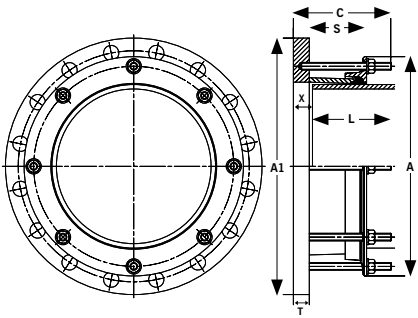


# Large Diameter Flange Adaptors OD355 - 945mm to BS EN 1092-1 PN25 Drilling

## Datasheet

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### Flange Adaptor



| Flange Adaptor Type | Flange Adaptor Section | Sleeve Length S (mm) | Distance L (mm) | Setting Gap X (mm) |      | Bolt Details |             |             |
|---------------------|------------------------|----------------------|-----------------|--------------------|------|--------------|-------------|-------------|
|                     |                        |                      |                 | Min.               | Max. | Bolt Dia.    | Length (mm) | Torque (Nm) |
| Standard Sleeve     | L02                    | 73                   | 150             | 25                 | 50   | M12          | 140         | 55 - 65     |
| Long Sleeve         | L03                    | 123                  | 200             | 25                 | 100  | M12          | 180         | 55 - 65     |
| Standard Sleeve     | YF2                    | 87                   | 150             | 32                 | 76   | M16          | 160         | 95 - 120    |
| Long Sleeve         | YF3                    | 123                  | 200             | 32                 | 115  | M16          | 190         | 95 - 120    |
| Standard Sleeve     | A2E                    | 87                   | 150             | 32                 | 76   | M16          | 160         | 95 - 120    |
| Long Sleeve         | A2H                    | 125                  | 200             | 32                 | 115  | M16          | 190         | 95 - 120    |
| Standard Sleeve     | XSVG                   | 254                  | 200             | 57                 | 117  | M16          | 400         | 95 - 120    |

L= Distance back from end of pipe that must be rounded, meet tolerances, and free from any wrapping to ensure correct assembly.

### Large Diameter Flange Adaptors (BS EN 1092-1 PN25 Drilling)

| Pipe OD (mm) | Pipe Material | Flange Drilling BS EN 1092-1 |          | Tolerance on Pipe OD for Distance L |        | Gasket Mould No. | No. Notches In End Ring If Required | Flange Adaptor Section Type |             | Flange Adaptor Studs No. x Dia | Weight (kg)     |             | Dimensions      |                   |                         |                        |                                |                            | Flange Adaptor Studs Length |             |
|--------------|---------------|------------------------------|----------|-------------------------------------|--------|------------------|-------------------------------------|-----------------------------|-------------|--------------------------------|-----------------|-------------|-----------------|-------------------|-------------------------|------------------------|--------------------------------|----------------------------|-----------------------------|-------------|
|              |               | Nominal                      | Drilling | (mm) +                              | (mm) - |                  |                                     | Standard Sleeve             | Long Sleeve |                                | Standard Sleeve | Long Sleeve | Diameter A (mm) | Flange OD A1 (mm) | Flange Thickness T (mm) | Flange Bolts No. x Dia | Overall C Standard Sleeve (mm) | Overall C Long Sleeve (mm) | Standard Sleeve             | Long Sleeve |
| 355.6        | Steel         | 350                          | PN25     | 1.6                                 | 1.6    | J51LS            | Not Rqd.                            | L02                         | L03         | 8 x M12                        | 34.4            | 37.8        | 446             | 555               | 25                      | 16 x M30               | 155                            | 195                        | 140                         | 180         |
| 358.6        | Coated Steel  | 350                          | PN25     | 1.6                                 | 1.6    | J51LS            | Not Rqd.                            | L02                         | L03         | 8 x M12                        | 34.1            | 37.5        | 450             | 555               | 25                      | 16 x M30               | 155                            | 195                        | 140                         | 180         |
| 378          | Ductile Iron  | 350                          | PN25     | 2.7                                 | 3.5    | J52LS            | 8                                   | L02                         | L03         | 8 x M12                        | 32.2            | 35.8        | 469             | 555               | 25                      | 16 x M30               | 155                            | 195                        | 140                         | 180         |
| 406.4        | Steel         | 400                          | PN25     | 1.6                                 | 1.6    | J53LS            | Not Rqd.                            | L02                         | L03         | 8 x M12                        | 40.7            | 44.6        | 497             | 620               | 25                      | 16 x M33               | 155                            | 195                        | 140                         | 180         |
| 409.4        | Coated Steel  | 400                          | PN25     | 1.6                                 | 1.6    | J53LS            | Not Rqd.                            | L02                         | L03         | 8 x M12                        | 40.4            | 44.3        | 500             | 620               | 25                      | 16 x M33               | 155                            | 195                        | 140                         | 180         |
| 429          | Ductile Iron  | 400                          | PN25     | 2.8                                 | 4.0    | J54LS            | 8                                   | L02                         | L03         | 8 x M12                        | 38.2            | 42.3        | 520             | 620               | 25                      | 16 x M33               | 155                            | 195                        | 140                         | 180         |
| 457          | Steel         | 450                          | PN25     | 1.6                                 | 1.6    | J55LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 44.4            | 48.8        | 548             | 670               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 460          | Coated Steel  | 450                          | PN25     | 1.6                                 | 1.6    | J55LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 44.1            | 48.4        | 551             | 670               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 480          | Ductile Iron  | 450                          | PN25     | 2.9                                 | 4.0    | J56LS            | 10                                  | L02                         | L03         | 10 x M12                       | 41.4            | 46.0        | 571             | 670               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 508          | Steel         | 500                          | PN25     | 1.6                                 | 1.6    | J57LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 50.9            | 55.7        | 598             | 730               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 511          | Coated Steel  | 500                          | PN25     | 1.6                                 | 1.6    | J57LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 50.4            | 55.3        | 602             | 730               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 532          | Ductile Iron  | 500                          | PN25     | 3.0                                 | 4.0    | J58LS            | 10                                  | L02                         | L03         | 10 x M12                       | 47.4            | 52.4        | 624             | 730               | 25                      | 20 x M33               | 155                            | 195                        | 140                         | 180         |
| 610          | Steel         | 600                          | PN25     | 1.6                                 | 1.6    | J60LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 62.7            | 68.4        | 700             | 845               | 25                      | 20 x M36               | 155                            | 195                        | 140                         | 180         |
| 613          | Coated Steel  | 600                          | PN25     | 1.6                                 | 1.6    | J60LS            | Not Rqd.                            | L02                         | L03         | 10 x M12                       | 62.2            | 67.9        | 703             | 845               | 25                      | 20 x M36               | 155                            | 195                        | 140                         | 180         |
| 635          | Ductile Iron  | 600                          | PN25     | 3.2                                 | 4.5    | J61LS            | 10                                  | L02                         | L03         | 10 x M12                       | 58.3            | 64.2        | 726             | 845               | 25                      | 20 x M36               | 155                            | 195                        | 140                         | 180         |
| 711          | Steel         | 700                          | PN25     | 1.6                                 | 1.6    | J63LS            | Not Rqd.                            | L02                         | L03         | 12 x M12                       | 74.2            | 81.0        | 802             | 960               | 25                      | 24 x M39               | 155                            | 195                        | 140                         | 180         |
| 714          | Coated Steel  | 700                          | PN25     | 1.6                                 | 1.6    | J63LS            | Not Rqd.                            | L02                         | L03         | 12 x M12                       | 69.4            | 76.1        | 805             | 960               | 25                      | 24 x M39               | 155                            | 195                        | 140                         | 180         |
| 738          | Ductile Iron  | 700                          | PN25     | 3.4                                 | 4.5    | J63LS            | 12                                  | YF2                         | YF3         | 12 x M16                       | 82.5            | 90.0        | 849             | 960               | 25                      | 24 x M39               | 169                            | 195                        | 160                         | 190         |
| 813          | Steel         | 800                          | PN25     | 1.6                                 | 1.6    | J65LS            | Not Rqd.                            | YF2                         | YF3         | 12 x M16                       | 106.5           | 113.6       | 922             | 1085              | 25                      | 24 x M45               | 169                            | 199                        | 160                         | 190         |
| 816          | Coated Steel  | 800                          | PN25     | 1.6                                 | 1.6    | J65LS            | Not Rqd.                            | YF2                         | YF3         | 12 x M16                       | 83.8            | 113.0       | 906             | 1085              | 25                      | 24 x M45               | 169                            | 199                        | 160                         | 190         |
| 842          | Ductile Iron  | 800                          | PN25     | 1.0                                 | 4.5    | J65LS            | 12                                  | YF2                         | YF3         | 12 x M16                       | 100.0           | 107.5       | 950             | 1085              | 25                      | 24 x M45               | 169                            | 199                        | 160                         | 190         |
| 914          | Steel         | 900                          | PN25     | 1.6                                 | 1.6    | J117M            | 7                                   | A2E                         | A2H         | 14 x M16                       | 168.6           | 137.1       | 1038            | 1185              | 38                      | 28 x M45               | 182                            | 212                        | 160                         | 190         |
| 916          | Coated Steel  | 900                          | PN25     | 1.6                                 | 1.6    | J117M            | 7                                   | A2E                         | A2H         | 14 x M16                       | 167.9           | 136.3       | 1041            | 1185              | 38                      | 28 x M45               | 182                            | 212                        | 160                         | 190         |
| 945          | Ductile Iron  | 900                          | PN25     | 1.0                                 | 5.0    | J118M            | 14                                  | A2E                         | A2H         | 14 x M16                       | 156.1           | 124.0       | 1069            | 1185              | 38                      | 28 x M45               | 182                            | 212                        | 160                         | 190         |

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## Technical Information

Viking Johnson manufacture flange adaptors to any pipe OD and flange drilling. If the product required is not shown in any of our tables please contact Viking Johnson who can provide the relevant information.

### Working Pressure Rating

For Water / Wastewater applications in accordance with flange rating.

Gas 6 bar

### Vacuum Pressure

Capable of accommodating a vacuum pressure of -0.7 bar

### Site Test Pressure

1.5 times working pressure for short duration (2 hours)

### End Load Due to Internal Pressure

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

### Tie Rods

When using tie rods to provide restraint, depending on the pipe OD & flange drilling the flange adaptor end ring may need to be notched to allow the tie rod to pass over.

The Large Diameter Flange Adaptor Technical Data (BS EN 1092-1 PN25 Drilling) Table provides details on:

- ▶ Those products that do not require notching (i.e. there is no interference between the tie rods and end ring) - indicated by "Not Rqd."
- ▶ Those products where there is interference between the tie rod and end ring and do require notching, with the number of notches provided as standard indicated.

### Tie Rod Yield Strength

The number of notches indicated assumes the use of tie rods with a minimum yield strength of 725 N/mm<sup>2</sup>.

If tie rods with a lower yield strength are used, then depending on the working pressure an increased number than that specified in the table may be required; in this situation please advise Viking Johnson of the number of notches and we will accommodate your requirements.

### Temperature Rating of Product

EPDM -20°C to +90°C

Nitrile -20°C to +90°C

Other Gasket Grades Contact Viking Johnson.

For use on applications with fluctuating and / or elevated temperatures (> 60°C) may require regular maintenance to re-tighten the bolts and must be included in any maintenance schedule.

### Approvals

The following water contact materials used in Large Diameter Dedicated products are approved for use with potable water:-

Rilsan Nylon 11:

- ▶ WRAS, AS/NZS 4020, DVGW, W270, ACS & KIWA.

EPDM Gaskets:

- ▶ WRAS, AS/NZS 4020

In addition to the above, Large Diameter Dedicated range as a finished product has KIWA certification verifying that the above products comply with the requirements of the Water Supply (Water Fittings) Regulations for England and Wales 1999, the Water Byelaws 2000, Scotland and the Water Regulations Northern Ireland.

## Materials & Relevant Standards

### Flange Body & End Ring

Steel to BS EN10025-2: Grade S275JR

### Gaskets: LO2/LO3/YF2/YF3

Rubber 80 IRHD Moulded Compound to BS EN681-1: Type WA,WC,WG

BS EN682: Type G

(other materials available on request)

### Gaskets: A2E/A2H/XSXC

Rubber 70 IRHD Moulded Compound to BS EN681-1: Type WA, WC, WG

BS EN682: Type G

(other materials available on request)

### Coatings

Body, Flange & End Ring:

- ▶ Rilsan Nylon 11 to WIS 4-52-01 Part 1

Nuts & Studs:

- ▶ Sheraplex coated to WIS 4-52-03

### Studs

Steel to BS EN ISO898-1: Property Class 4.8

### Nuts

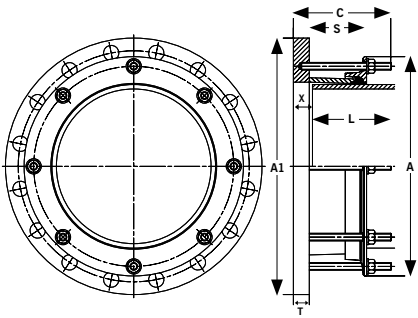
Steel to BS4190: Grade 4

### Washers

Stainless Steel to BS1449:Part 2: Grade 304S15

# Large Diameter Flange Adaptors OD1016 - 1255mm to BS EN 1092-1 PN25 Drilling

## Flange Adaptor



| Flange Adaptor Type | Flange Adaptor Section | Sleeve Length S (mm) | Distance L (mm) | Setting Gap X (mm) |      | Bolt Details |             |             |
|---------------------|------------------------|----------------------|-----------------|--------------------|------|--------------|-------------|-------------|
|                     |                        |                      |                 | Min.               | Max. | Bolt Dia.    | Length (mm) | Torque (Nm) |
| Standard Sleeve     | L02                    | 73                   | 150             | 25                 | 50   | M12          | 140         | 55 - 65     |
| Long Sleeve         | L03                    | 123                  | 200             | 25                 | 100  | M12          | 180         | 55 - 65     |
| Standard Sleeve     | YF2                    | 87                   | 150             | 32                 | 76   | M16          | 160         | 95 - 120    |
| Long Sleeve         | YF3                    | 123                  | 200             | 32                 | 115  | M16          | 190         | 95 - 120    |
| Standard Sleeve     | A2E                    | 87                   | 150             | 32                 | 76   | M16          | 160         | 95 - 120    |
| Long Sleeve         | A2H                    | 125                  | 200             | 32                 | 115  | M16          | 190         | 95 - 120    |
| Standard Sleeve     | XSVG                   | 254                  | 200             | 57                 | 117  | M16          | 400         | 95 - 120    |

L= Distance back from end of pipe that must be rounded, meet tolerances, and free from any wrapping to ensure correct assembly.

## Large Diameter Flange Adaptors (BS EN 1092-1 PN25 Drilling)

| Pipe OD (mm) | Pipe Material | Flange Drilling BS EN 1092-1 |          | Tolerance on Pipe OD for Distance L |        | Gasket Mould No. | No. Notches In End Ring If Required | Flange Adaptor Section Type |             | Flange Adaptor Studs No. x Dia | Weight (kg)     |             | Dimensions      |                   |                         |                        |                                |                            | Flange Adaptor Studs Length |             |
|--------------|---------------|------------------------------|----------|-------------------------------------|--------|------------------|-------------------------------------|-----------------------------|-------------|--------------------------------|-----------------|-------------|-----------------|-------------------|-------------------------|------------------------|--------------------------------|----------------------------|-----------------------------|-------------|
|              |               | Nominal                      | Drilling | (mm) +                              | (mm) - |                  |                                     | Standard Sleeve             | Long Sleeve |                                | Standard Sleeve | Long Sleeve | Diameter A (mm) | Flange OD A1 (mm) | Flange Thickness T (mm) | Flange Bolts No. x Dia | Overall C Standard Sleeve (mm) | Overall C Long Sleeve (mm) | Standard Sleeve             | Long Sleeve |
| 1016         | Steel         | 1000                         | PN25     | 1.6                                 | 1.6    | J119M            | Not Rqd.                            | A2E                         | A2H         | 14 x M16                       | 202.2           | 213.5       | 1140            | 1320              | 38                      | 28 x M52               | 182                            | 212                        | 160                         | 190         |
| 1019         | Coated Steel  | 1000                         | PN25     | 1.6                                 | 1.6    | J119M            | Not Rqd.                            | A2E                         | A2H         | 14 x M16                       | 200.7           | 212.1       | 1144            | 1320              | 38                      | 28 x M52               | 182                            | 212                        | 160                         | 190         |
| 1048         | Ductile Iron  | 1000                         | PN25     | 1.0                                 | 5.0    | J119M            | 14                                  | A2E                         | A2H         | 14 x M16                       | 188.3           | 199.9       | 1171            | 1320              | 38                      | 28 x M52               | 182                            | 212                        | 160                         | 190         |
| 1118         | Steel         | 1100                         | PN25     | 1.6                                 | 1.6    | J120M            | Not Rqd.                            | A2E                         | A2H         | 16 x M16                       | 218.1           | 230.6       | 1242            | 1420              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |
| 1121         | Coated Steel  | 1100                         | PN25     | 1.6                                 | 1.6    | J120M            | Not Rqd.                            | A2E                         | A2H         | 16 x M16                       | 216.4           | 228.9       | 1246            | 1420              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |
| 1152         | Ductile Iron  | 1100                         | PN25     | 1.0                                 | 6.0    | J121M            | 16                                  | A2E                         | A2H         | 16 x M16                       | 201.6           | 214.5       | 1275            | 1420              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |
| 1219         | Steel         | 1200                         | PN25     | 1.6                                 | 1.6    | J121M            | Not Rqd.                            | A2E                         | A2H         | 16 x M16                       | 243.5           | 257.1       | 1343            | 1530              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |
| 1222         | Coated Steel  | 1200                         | PN25     | 1.6                                 | 1.6    | J121M            | Not Rqd.                            | A2E                         | A2H         | 16 x M16                       | 242.0           | 255.6       | 1347            | 1530              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |
| 1255         | Ductile Iron  | 1200                         | PN25     | 1.0                                 | 6.0    | J122M            | 16                                  | A2E                         | A2H         | 16 x M16                       | 224.8           | 243.4       | 1378            | 1530              | 38                      | 32 x M52               | 182                            | 212                        | 160                         | 190         |

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Gas 6 bar

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Capable of accommodating a vacuum pressure of -0.7 bar

### Site Test Pressure

1.5 times working pressure for short duration (2 hours)

### End Load Due to Internal Pressure

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

### Tie Rods

When using tie rods to provide restraint, depending on the pipe OD & flange drilling the flange adaptor end ring may need to be notched to allow the tie rod to pass over.

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EPDM -20°C to +90°C

Nitrile -20°C to +90°C

Other Gasket Grades Contact Viking Johnson.

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The following water contact materials used in Large Diameter Dedicated products are approved for use with potable water:-

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## Materials & Relevant Standards

### Flange Body & End Ring

Steel to BS EN10025-2: Grade S275JR

### Gaskets: LO2/LO3/YF2/YF3

Rubber 80 IRHD Moulded Compound to BS EN681-1: Type WA,WC,WG

BS EN682: Type G

(other materials available on request)

### Gaskets: A2E/A2H/XSXC

Rubber 70 IRHD Moulded Compound to BS EN681-1: Type WA, WC, WG

BS EN682: Type G

(other materials available on request)

### Coatings

Body, Flange & End Ring:

- ▶ Rilsan Nylon 11 to WIS 4-52-01 Part 1

Nuts & Studs:

- ▶ Sheraplex coated to WIS 4-52-03

### Studs

Steel to BS EN ISO898-1: Property Class 4.8

### Nuts

Steel to BS4190: Grade 4

### Washers

Stainless Steel to BS1449:Part 2: Grade 304S15