



E3/E4 Series Subsea Hose Fittings

Dual Seal Flange and JIC Connections for Subsea Applications



ENGINEERING YOUR SUCCESS.

*U.S. Patent No. 10,132,434 - Patented single piece bent tube design that reduces leak points and increases reliability

Improved System Performance, Simplified Hose Routing and the Elimination of Adapters



Parker's E3/E4 series fittings are specifically designed for the rigors of subsea use and meets the performance requirements of API-17E. Hermetically sealed with an industry exclusive, patent-pending O-ring boss design for unmatched protection against sea water ingressions.

E3/E4 series hose fittings are offered in straight, 45° and 90° bent tube configurations, eliminating the need for adapters, which means less potential leak points, quicker installation, and lower cost.

E3/E4 series Dual Seal Flange hose fittings incorporate both radial and face seal technologies, reducing the potential for system leakage and air or water ingestion caused by side loading of traditional flange face seal connections. Dual Seal Flange provides superior reliability in subsea applications exposed to high-vibration & shock.

Product Features:

- E3 available for 1/4", 1/2" hose and E4 series for 1" hose sizes
- Available in straight, 45° and 90° configurations
- Available in standard JIC and Dual Seal Flange connections
- 5,000 psi (345 bar) working pressure rating with 4:1 design factor
- 316/316L stainless steel construction
- Heat Lot Code traceable
- Tested to API-17E (ISO-13628-5)
- Dual Seal fittings use SAE Code 62 bolt pattern which enables use of standard flange hardware
- For use with 2390N and 2380N series hoses

Improved Reliability Through Sealing and Port Retention

Combination radial seal and face seal gives Dual Seal Flange Fittings superior leak-free port connections

Parker's Dual Seal Flange Fittings provide increased reliability of hydraulic four-bolt flange connections in critical oil and gas applications experiencing high-vibration & shock and side loading. Illustrated below, the radial seal provides system pressure holding capability while the face seal provides resistance to water ingestion from external pressure.

Exclusive Design Advantages

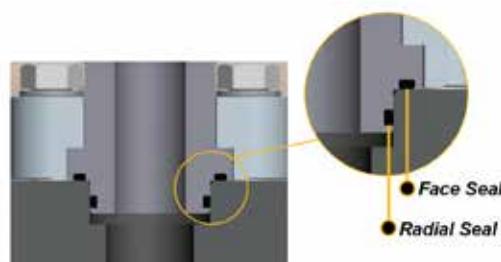
The Parker Dual Seal design has been tested to 5,000 psi with a 4:1 design factor and validated by conducting impulse testing per API-17E (ISO-13628-5). Patterned after the SAE J518 / ISO 6162 flange design, the Dual Seal flange fittings use standard flange clamps and hardware for installation.

Available Styles and Sizes

The Dual Seal fitting offering includes a wide range of hose connection styles to meet various hydraulic system design requirements. For Dual Seal flange, Parker offers straight, 45° and 90° configurations for 1/2", 1" and 1-1/2" I.D. hoses.

Superior Materials

Dual Seal fittings are manufactured from 316/316L stainless steel for superior corrosion resistance and have Heat Lot Code Traceability. The face seal and radial seal O-rings are composed of 90 durometer Nitrile material meeting SAE J515 dimensions.



E3/E4 Series*

Subsea Hose Fittings

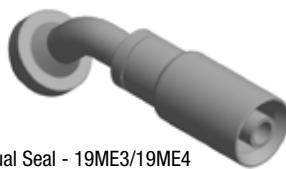
*U.S. Patent No. 10,132,434 - Patented single piece bent tube design that reduces leak points and increases reliability

E3 Series fittings are available for 1/4" and 1/2" hose sizes and E4 Series for 1" hose with straight, 45° or 90° bent tube configurations

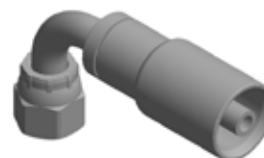
| Parker Part Number | Description |
|--------------------|---|
| 19WE4-24-16C | 1" Hose -24 Dual Seal 90° Fitting |
| 19ME4-24-16C | 1" Hose -24 Dual Seal 45° Fitting |
| 19GE4-24-16C | 1" Hose -24 Dual Seal Straight Fitting |
| 19WE4-16-16C | 1" Hose -16 Dual Seal 90° Fitting |
| 19ME4-16-16C | 1" Hose -16 Dual Seal 45° Fitting |
| 19GE4-16-16C | 1" Hose -16 Dual Seal Straight Fitting |
| 19WE3-16-8C | 1/2" Hose -16 Dual Seal 90° Fitting |
| 19ME3-16-8C | 1/2" Hose -16 Dual Seal 45° Fitting |
| 19GE3-16-8C | 1/2" Hose -16 Dual Seal Straight Fitting |
| 19WE3-8-8C | 1/2" Hose -8 Dual Seal 90° Fitting |
| 19ME3-8-8C | 1/2" Hose -8 Dual Seal 45° Fitting |
| 19GE3-8-8C | 1/2" Hose -8 Dual Seal Straight Fitting |
| 139E4-16-16C-411 | 1" Hose -16 JIC Female 90° Fitting |
| 137E4-16-16C | 1" Hose -16 JIC Female 45° Fitting |
| 139E3-8-8C-411 | 1/2" Hose -8 JIC Female 90° Fitting |
| 137E3-8-8C | 1/2" Hose -8 JIC Female 45° Fitting |
| 139E3-4-4C | 1/4" Hose -4 JIC Female 90° Fitting |
| 137E3-4-4C | 1/4" Hose -4 JIC Female 45° Fitting |
| 139E3-6-4C | 1/4" Hose -6 JIC Female 90° Fitting |
| 137E3-6-4C | 1/4" Hose -6 JIC Female 45° Fitting |
| 106E4-16-16C | 1" Hose -16 JIC Female Swivel Straight Fitting |
| 106E3-8-8C | 1/2" Hose -8 JIC Female Swivel Straight Fitting |
| 106E3-6-4C | 1/4" Hose -6 JIC Female Swivel Straight Fitting |
| 106E3-4-4C | 1/4" Hose -4 JIC Female Swivel Straight Fitting |



45° JIC - 137E3/137E4



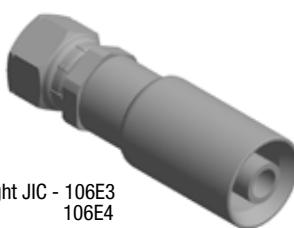
45° Dual Seal - 19ME3/19ME4



90° JIC - 139E3/139E4



90° Dual Seal - 19WE3/19WE4



Straight JIC - 106E3
106E4

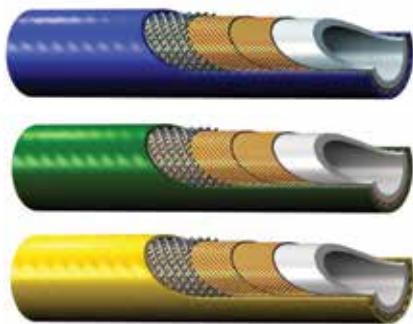


Straight Dual Seal 19GE3

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2380N - High Pressure Hose

Parker's 2380N BOP stack hoses have a flexible, compact design with a low minimum bend radius which makes them the ideal choice for efficient plumbing of BOP stack hydraulic lines.



Features

- Available with blue, yellow or green jacket colors for POD identification
- Low volumetric expansion
- Smooth bore for low pressure drop
- Sea-water resistant polyurethane jacket
- For use with E4 Series Subsea Fittings designed for unmatched protection against moisture ingress
- Dual Seal Flange and JIC connections
- Offered in 45° and 90° bent tube configurations, as well as, straight fittings



Markets

- Oil & Gas
- Hydraulic

| Part Number | Color | Nominal I.D. | | Maximum O.D. | | Max. Working Pressure** | | Minimum Bend Radius | | Weight | | |
|-------------|--------|--------------|------|--------------|-------|-------------------------|------|---------------------|------|--------|--------|------|
| | | DN | inch | mm | inch | mm | psi | bar | inch | mm | lbs/ft | kg/m |
| 2380N-16V12 | Blue | 25 | 1 | 25.4 | 1.449 | 36.8 | 5510 | 379.9 | 11.4 | 290 | 1 | 1.49 |
| 2380N-16V13 | Green | 25 | 1 | 25.4 | 1.449 | 36.8 | 5510 | 379.9 | 11.4 | 290 | 1 | 1.49 |
| 2380N-16V16 | Yellow | 25 | 1 | 25.4 | 1.449 | 36.8 | 5510 | 379.9 | 11.4 | 290 | 1 | 1.49 |

Construction

Core tube: Polyamide

Reinforcement: Two open spiral layers and two open spiral layers of "High Strength Wire"

Jacket: Sea water resistant Polyurethane

Color: Blue, Yellow or Green

Operating Parameters

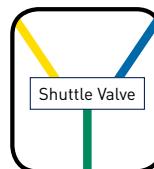
Temperature Range: -40°F to +212°F (-40°C to +100°C) at a 4:1 design factor; Max of +158°F (+70°C) for water, glycol or methanol-based fluids

Minimum Burst Pressure is 4 x Max. Working Pressure

Notes

**Assembly working pressure is dependent on the lowest rated component. Therefore, if fittings have a lower pressure rating than the hose, the working pressure of the fittings is the working pressure of the assembly.

Blue and yellow hoses come from the corresponding pod to the shuttle valve; green hose goes from the shuttle valve to the function.



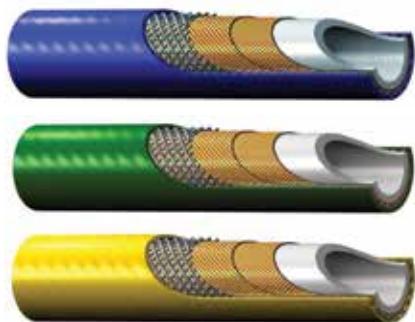
Fittings

E4 Series - Configurations limited to 1" hose (2380N/2390N)

*U.S. Patent No. 10,132,434 - Patented single piece bent tube design that reduces leak points and increases reliability

2390N - High Pressure Hose

Parker's 2390N BOP stack hoses have a flexible, compact design with a low minimum bend radius which makes them the ideal choice for efficient plumbing of BOP stack hydraulic lines.



Markets

- Oil & Gas
- Hydraulic

Features

- Available with blue, yellow or green jacket colors for POD identification
- Low volumetric expansion
- Smooth bore for low pressure drop
- Sea-water resistant polyurethane jacket
- For use with E3/E4 Series Subsea Fittings designed for unmatched protection against moisture ingress
- Dual Seal Flange and JIC connections
- Offered in 45° and 90° bent tube configurations, as well as, straight fittings

| Part Number | Color | Nominal I.D. | | | Maximum O.D. | | Max. Working Pressure** | | Minimum Bend Radius | | Weight | |
|-------------|--------|--------------|------|------|--------------|------|-------------------------|-------|---------------------|-----|--------|------|
| | | DN | inch | mm | inch | mm | psi | bar | inch | mm | lbs/ft | kg/m |
| 2390N-04V12 | Blue | 6 | 1/4 | 6.4 | 0.52 | 13.3 | 7,100 | 489.5 | 6.3 | 160 | 0.17 | 0.25 |
| 2390N-04V13 | Green | 6 | 1/4 | 6.4 | 0.52 | 13.3 | 7,100 | 489.5 | 6.3 | 160 | 0.17 | 0.25 |
| 2390N-04V16 | Yellow | 6 | 1/4 | 6.4 | 0.52 | 13.3 | 7,100 | 489.5 | 6.3 | 160 | 0.17 | 0.25 |
| 2390N-08V12 | Blue | 12 | 1/2 | 12.7 | 0.80 | 21.3 | 6,017 | 414.9 | 5.9 | 150 | 0.36 | 0.54 |
| 2390N-08V13 | Green | 12 | 1/2 | 12.7 | 0.80 | 21.3 | 6,017 | 414.9 | 5.9 | 150 | 0.36 | 0.54 |
| 2390N-08V16 | Yellow | 12 | 1/2 | 12.7 | 0.80 | 21.3 | 6,017 | 414.9 | 5.9 | 150 | 0.36 | 0.54 |
| 2390N-16V12 | Blue | 25 | 25 | 25.4 | 1.38 | 35.0 | 4,060 | 279.9 | 11.0 | 280 | 0.79 | 1.17 |
| 2390N-16V13 | Green | 25 | 25 | 25.4 | 1.38 | 35.0 | 4,060 | 279.9 | 11.0 | 280 | 0.79 | 1.17 |
| 2390N-16V16 | Yellow | 25 | 25 | 25.4 | 1.38 | 35.0 | 4,060 | 279.9 | 11.0 | 280 | 0.79 | 1.17 |

*Typical value is \geq value shown in table at minimum bend radius according to ISO 13628-5.

Construction

Core tube: Polyamide

Reinforcement: Two open spiral layers and two open spiral layers of "High Strength Wire"

Jacket: Sea water resistant Polyurethane

Color: Blue, Yellow or Green

Operating Parameters

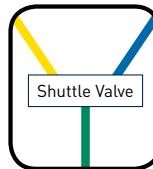
Temperature Range: -40°F to +212°F (-40°C to +100°C) at a 4:1 design factor; Max of +158°F (+70°C) for water, glycol or methanol-based fluids

Minimum Burst Pressure is 4 x Max. Working Pressure

Notes

**Assembly working pressure is dependent on the lowest rated component. Therefore, if fittings have a lower pressure rating than the hose, the working pressure of the fittings is the working pressure of the assembly.

Blue and yellow hoses come from the corresponding pod to the shuttle valve; green hose goes from the shuttle valve to the function.



Fittings

E4 Series - Configurations limited to 1" hose (2380N/2390N)

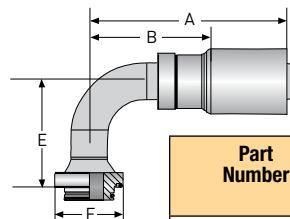
polyflex

E3/E4 Series* Subsea Fittings

Improved System Performance Simplified Hose Routing Elimination of Adapters

*U.S. Patent No. 10,132,434 - Patented single piece bent tube design that reduces leak points and increases reliability

19WE/19WE4 - 90° Dual Seal

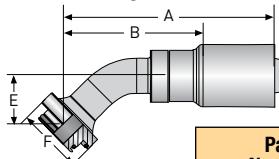


| Part Number | Nominal I.D. | | | Flange Size | A Overall Length | | B Cutoff Allowance | | F | | E | | Maximum Working Pressure | | |
|--------------|--------------|-----|-----|-------------|------------------|------|--------------------|------|------|------|------|------|--------------------------|-------|-----|
| # | () | | | | inch | mm | inch | mm | inch | mm | inch | mm | psi | bar | |
| 19WE3-8-8C | 12 | -08 | 1/2 | 12.7 | 1/2 | 4.11 | 104 | 2.44 | 62 | 1.25 | 32 | 2.11 | 54 | 5,000 | 344 |
| 19WE3-16-8C | 12 | -08 | 1/2 | 12.7 | 1 | 4.11 | 104 | 2.44 | 62 | 1.88 | 48 | 2.17 | 55 | 5,000 | 344 |
| 19WE4-16-16C | 25 | -16 | 1 | 25.4 | 1 | 5.45 | 138 | 3.13 | 80 | 1.88 | 48 | 3.27 | 83 | 5,000 | 344 |
| 19WE4-24-16C | 25 | -16 | 1 | 25.4 | 1-1/2 | 5.88 | 149 | 3.38 | 86 | 2.50 | 64 | 3.52 | 89 | 5,000 | 344 |

Material: Nipple - Stainless Steel

Shell: Stainless Steel

19ME3/19ME4 - 45° Dual Seal

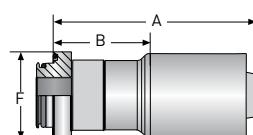


| Part Number | Nominal I.D. | | | Flange Size | A Overall Length | | B Cutoff Allowance | | F | | E | | Maximum Working Pressure | | |
|--------------|--------------|-----|-----|-------------|------------------|------|--------------------|------|------|------|------|------|--------------------------|-------|-----|
| # | () | | | | inch | mm | inch | mm | inch | mm | inch | mm | psi | bar | |
| 19ME3-8-8C | 12 | -08 | 1/2 | 12.7 | 1/2 | 4.49 | 114 | 2.68 | 68 | 1.25 | 32 | 0.87 | 22 | 5,000 | 344 |
| 19ME3-16-8C | 12 | -08 | 1/2 | 12.7 | 1 | 4.53 | 115 | 2.68 | 68 | 1.88 | 48 | 0.92 | 23 | 5,000 | 344 |
| 19ME4-16-16C | 25 | -16 | 1 | 25.4 | 1 | 6.24 | 158 | 3.88 | 99 | 1.88 | 48 | 1.42 | 36 | 5,000 | 344 |
| 19ME4-24-16C | 25 | -16 | 1 | 25.4 | 1-1/2 | 6.32 | 161 | 3.93 | 100 | 2.50 | 64 | 1.86 | 47 | 5,000 | 344 |

Material: Nipple - Stainless Steel

Shell: Stainless Steel

19GE3/19GE4 - Straight Dual Seal



| Part Number | Nominal I.D. | | | Flange Size | A Overall Length | | B Cutoff Allowance | | F | | Maximum Working Pressure | | |
|--------------|--------------|-----|-----|-------------|------------------|------|--------------------|------|------|------|--------------------------|-------|-----|
| # | () | | | | inch | mm | inch | mm | inch | mm | psi | bar | |
| 19GE3-8-8C | 12 | -08 | 1/2 | 12.7 | 1/2 | 3.26 | 83 | 1.56 | 40 | 1.25 | 32 | 5,000 | 344 |
| 19GG3-16-8C | 12 | -08 | 1/2 | 12.7 | 1 | 3.26 | 83 | 1.56 | 40 | 1.25 | 32 | 5,000 | 344 |
| 19GE4-16-16C | 25 | -16 | 1 | 25.4 | 1 | 4.35 | 110 | 2.00 | 51 | 1.88 | 48 | 5,000 | 344 |
| 19GE4-24-16C | 25 | -16 | 1 | 25.4 | 1-1/2 | 4.48 | 114 | 2.13 | 54 | 2.50 | 64 | 5,000 | 344 |

Material: Nipple - Stainless Steel

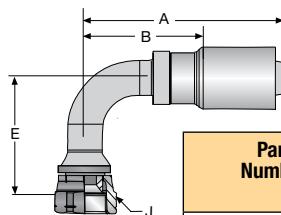
Shell: Stainless Steel

E3/E4 Series* Subsea Fittings

Improved System Performance Simplified Hose Routing Elimination of Adapters

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139E3/139E4 - 90° JIC



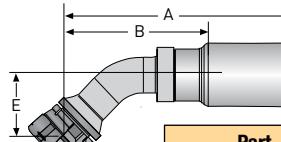
| Part Number | Nominal I.D. | | | | Thread Size | A Overall Length | | B Cutoff Allowance | | J Hex | | E | | Maximum Working Pressure | |
|------------------|--------------|------|------|------|--------------|------------------|-----|--------------------|----|-------|----|------|----|--------------------------|-----|
| # | | | | | | | | | | | | | | | |
| | DN | Size | inch | mm | inch | inch | mm | inch | mm | inch | mm | inch | mm | psi | bar |
| 139E3-4-4C | 6 | -04 | 1/4 | 6.4 | 7/16" x 20 | 2.41 | 61 | 1.38 | 35 | 5/8 | 16 | 0.83 | 21 | 5,000 | 344 |
| 139E3-6-4C | 6 | -04 | 1/4 | 6.4 | 9/16" x 18 | 2.41 | 61 | 1.38 | 35 | 3/4 | 19 | 0.91 | 23 | 5,000 | 344 |
| 139E3-8-8C-411 | 12 | -08 | 1/2 | 12.7 | 3/4" x 16 | 4.11 | 104 | 2.44 | 62 | 15/16 | 24 | 2.11 | 54 | 5,000 | 344 |
| 139E4-16-16C-411 | 25 | -16 | 1 | 25.4 | 1-5/16" x 12 | 5.69 | 145 | 3.32 | 84 | 1-5/8 | 41 | 3.27 | 83 | 5,000 | 344 |

Material: Nipple - Stainless Steel

Shell: Stainless Steel

Nut: Stainless Steel

137E3/137E4 - 45° JIC



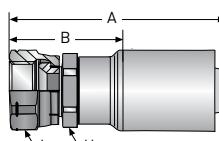
| Part Number | Nominal I.D. | | | | Thread Size | A Overall Length | | B Cutoff Allowance | | J Hex | | E | | Maximum Working Pressure | |
|------------------|--------------|------|------|------|--------------|------------------|-----|--------------------|-----|-------|----|------|----|--------------------------|-----|
| # | | | | | | | | | | | | | | | |
| | DN | Size | inch | mm | inch | inch | mm | inch | mm | inch | mm | inch | mm | psi | bar |
| 137E3-4-4C | 6 | -04 | 1/4 | 6.4 | 7/16" x 20 | 2.51 | 64 | 1.50 | 38 | 5/8 | 16 | 0.39 | 10 | 5,000 | 344 |
| 137E3-6-4C | 6 | -04 | 1/4 | 6.4 | 9/16" x 18 | 2.70 | 69 | 1.68 | 43 | 3/4 | 19 | 0.43 | 11 | 5,000 | 344 |
| 137E3-8-8C-411 | 12 | -08 | 1/2 | 12.7 | 3/4" x 16 | 4.75 | 121 | 3.06 | 78 | 15/16 | 24 | 1.14 | 29 | 5,000 | 344 |
| 137E4-16-16C-411 | 25 | -16 | 1 | 25.4 | 1-5/16" x 12 | 6.50 | 165 | 4.13 | 105 | 1-5/8 | 41 | 1.69 | 43 | 5,000 | 344 |

Material: Nipple - Stainless Steel

Shell: Stainless Steel

Nut: Stainless Steel

106E3/106E4 - Straight JIC



| Part Number | Nominal I.D. | | | | Thread Size | A Overall Length | | B Cutoff Allowance | | J Hex | | H Hex | | Maximum Working Pressure | |
|--------------|--------------|------|------|------|--------------|------------------|-----|--------------------|----|-------|----|-------|----|--------------------------|-----|
| # | | | | | | | | | | | | | | | |
| | DN | Size | inch | mm | inch | inch | mm | inch | mm | inch | mm | inch | mm | psi | bar |
| 106E3-4-4C | 6 | -04 | 1/4 | 6.4 | 7/16" x 20 | 2.46 | 62 | 1.44 | 37 | 5/8 | 16 | 5/8 | 16 | 5,000 | 344 |
| 106E3-6-4C | 6 | -04 | 1/4 | 6.4 | 9/16" x 18 | 2.55 | 65 | 1.50 | 38 | 3/4 | 19 | 5/8 | 16 | 5,000 | 344 |
| 106E3-8-8C | 12 | -08 | 1/2 | 12.7 | 3/4" x 16 | 3.55 | 90 | 1.88 | 48 | 1 | 25 | 15/16 | 24 | 5,000 | 344 |
| 106E4-16-16C | 25 | -16 | 1 | 25.4 | 1-5/16" x 12 | 4.76 | 121 | 2.38 | 60 | 1-5/8 | 41 | 1-1/2 | 41 | 5,000 | 344 |

Material: Nipple - Stainless Steel

Shell: Stainless Steel

Nut: Stainless Steel



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