



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 ingress.

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 ingress 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 ingress from external pressure.

Exclusive Design Advantages

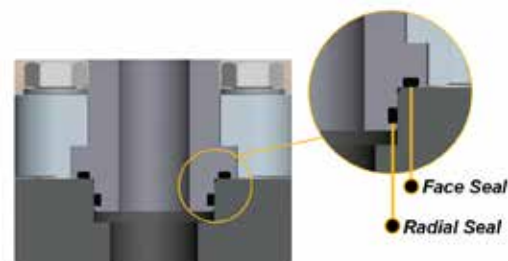
The Parker Dual Seal design has been tested to 5,000 psi with a 4:1 design factor and validated by conducting impulse testing per API-17E (ISO-13628-5). Patterned after the SAE J518 / ISO 6162 flange design, the Dual Seal flange fittings use standard flange clamps and hardware for installation.

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

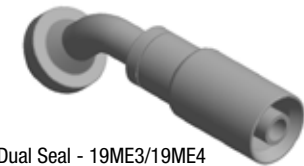
*U.S. Patent No. 10,132,434 - Patented single piece bent tube design that reduces leak points and increases reliability

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

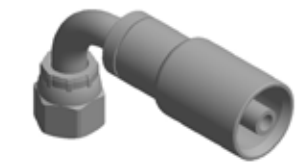
Parker Part Number	Description
19WE4-24-16C	1" Hose -24 Dual Seal 90° Fitting
19ME4-24-16C	1" Hose -24 Dual Seal 45° Fitting
19GE4-24-16C	1" Hose -24 Dual Seal Straight Fitting
19WE4-16-16C	1" Hose -16 Dual Seal 90° Fitting
19ME4-16-16C	1" Hose -16 Dual Seal 45° Fitting
19GE4-16-16C	1" Hose -16 Dual 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



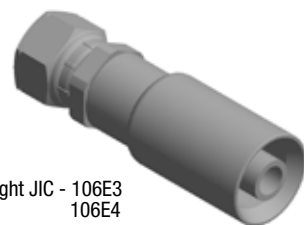
45° Dual Seal - 19ME3/19ME4



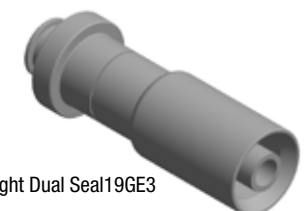
90° JIC - 139E3/139E4



90° Dual Seal - 19WE3/19WE4



Straight JIC - 106E3
106E4

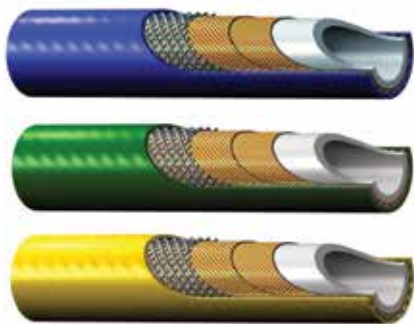


Straight Dual Seal 19GE3

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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	
#											lb	kg
		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

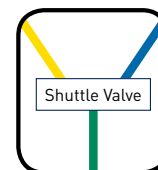
Temperature Range: -40°F to +212°F (-40°C to +100°C) at a 4:1 design factor; Max of +158°F (+70°C) for water, glycol or methanol-based fluids

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.



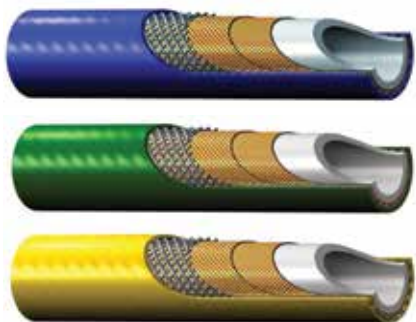
Fittings

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.



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



Markets

- Oil & Gas
- Hydraulic

Part Number	Color	Nominal I.D.			Maximum O.D.		Max. Working Pressure**		Minimum Bend Radius		Weight	
#											lb	kg
		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 ≥ 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

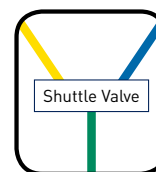
Temperature Range: -40°F to +212°F (-40°C to +100°C) at a 4:1 design factor; Max of +158°F (+70°C) for water, glycol or methanol-based fluids

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

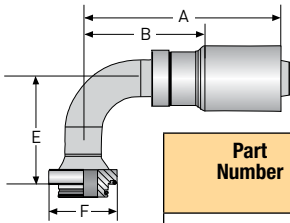
E4 Series - Configurations limited to 1" hose (2380N/2390N)

E3/E4 Series* Subsea Fittings

Improved System Performance Simplified Hose Routing Elimination of Adapters

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19WE/19WE4 - 90° Dual Seal

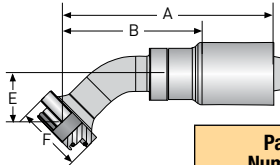


Part Number	Nominal I.D.				Flange Size	A Overall Length		B Cutoff Allowance		F		E		Maximum Working Pressure	
#															
	DN	Size	inch	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	psi	bar
19WE3-8-8C	12	-08	1/2	12.7	1/2	4.11	104	2.44	62	1.25	32	2.11	54	5,000	344
19WE3-16-8C	12	-08	1/2	12.7	1	4.11	104	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

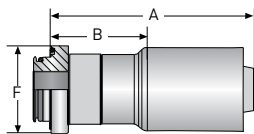


Part Number	Nominal I.D.				Flange Size	A Overall Length		B Cutoff Allowance		F		E		Maximum Working Pressure	
#															
	DN	Size	inch	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	psi	bar
19ME3-8-8C	12	-08	1/2	12.7	1/2	4.49	114	2.68	68	1.25	32	0.87	22	5,000	344
19ME3-16-8C	12	-08	1/2	12.7	1	4.53	115	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	
#													
	DN	Size	inch	mm	inch	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

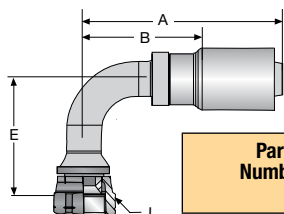
Shell: Stainless Steel

E3/E4 Series* Subsea Fittings

Improved System Performance
Simplified Hose Routing
Elimination of Adapters

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139E3/139E4 - 90° JIC



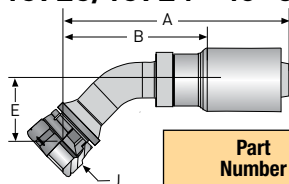
Part Number	Nominal I.D.				Thread Size	A Overall Length		B Cutoff Allowance		J Hex		E		Maximum Working Pressure	
#															
	DN	Size	inch	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	psi	bar
139E3-4-4C	6	-04	1/4	6.4	7/16" x 20	2.41	61	1.38	35	5/8	16	0.83	21	5,000	344
139E3-6-4C	6	-04	1/4	6.4	9/16" 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



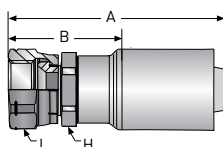
Part Number	Nominal I.D.				Thread Size	A Overall Length		B Cutoff Allowance		J Hex		E		Maximum Working Pressure	
#															
	DN	Size	inch	mm	inch	inch	mm	inch	mm	inch	mm	inch	mm	psi	bar
137E3-4-4C	6	-04	1/4	6.4	7/16" x 20	2.51	64	1.50	38	5/8	16	0.39	10	5,000	344
137E3-6-4C	6	-04	1/4	6.4	9/16" 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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