

**EATON**

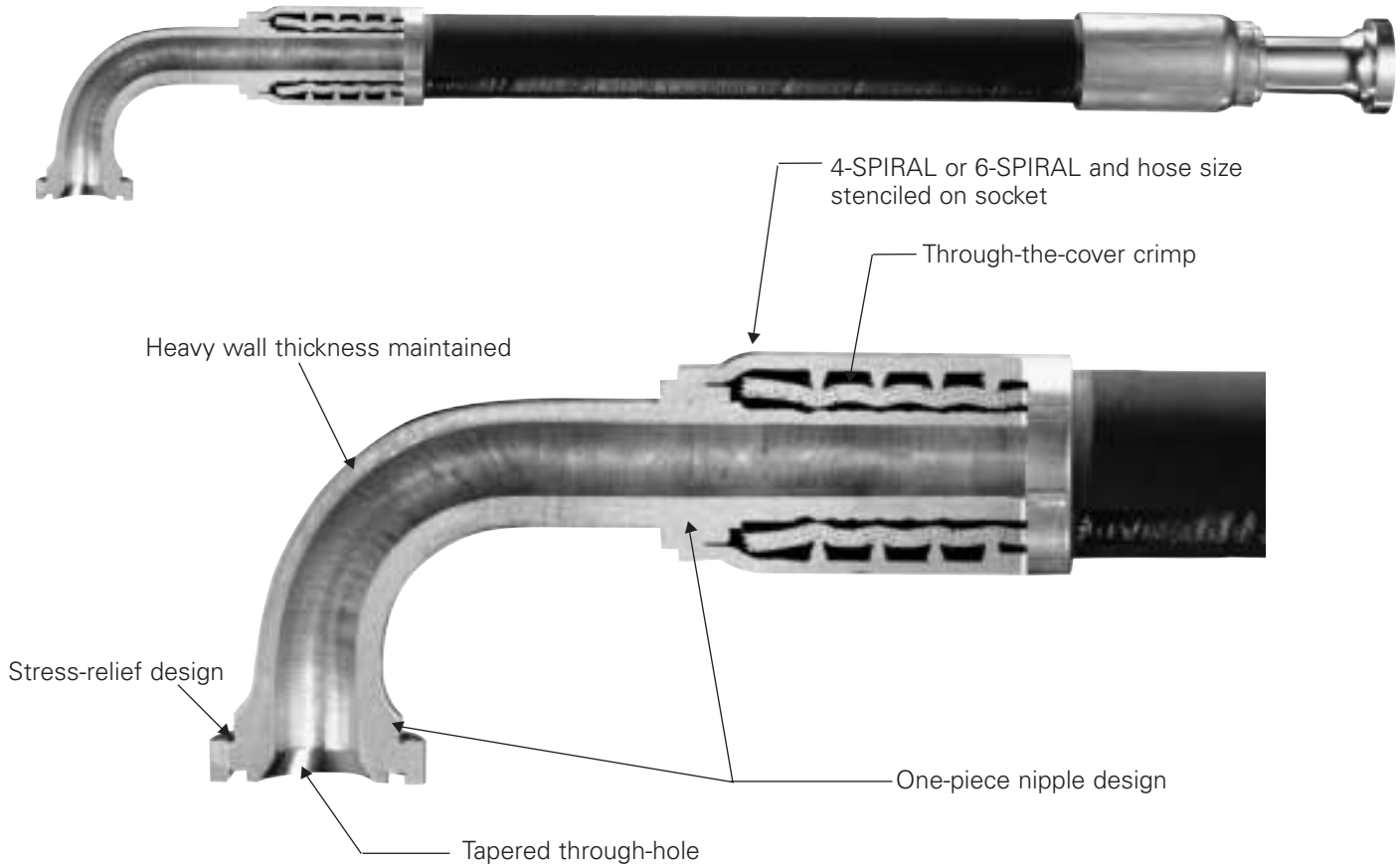
**Aeroquip**

## **Global Spiral TTC™ Fittings**

For Use with FC254, FC273, FC273B, FC606,  
FC606B, GH466 and GH506 Hose



# Global Spiral TTC Fittings



## Features and Benefits

| FEATURES                              | BENEFITS   |
|---------------------------------------|--|
| Through-the-cover crimp               | Skiving not required, saves time in assembly                               |
| One-piece nipple design               | Stronger design, no braze joints   |
| One-piece fitting                     | Easier to assemble   |
| Stress-relief design                  | Maximizes durability   |
| Heavy wall thickness                  | Heavy-duty construction for heavy-duty applications                        |
| Modern micro-alloy steel              | Maximizes fatigue life   |
| Tapered through-hole                  | Improves flow characteristics  |
| Global design                         | Global availability  |
| Stenciled socket                      | Hose insertion depth   |
| Operating pressure to 6000 psi        | Perfect for hydrostatic drives and other demanding applications            |
| Available in -12, -16, -20, -24 & -32 | Multiple configurations and jump sizes to fit a wide array of applications |

# Global Spiral TTC Fittings

## WARNING

Failure to follow Aeroquip process and product instructions and limitations could lead to premature hose assembly failures, resulting in property damage, serious injury or death.

Aeroquip fitting tolerances are engineered to match Aeroquip hose tolerances. The use of Aeroquip fittings on hose supplied by other manufacturers and/or the use of Aeroquip hose with fittings supplied by other manufacturers, may result in the production of unreliable and unsafe hose assemblies and is neither recommended nor authorized by Aeroquip.

Read and understand the operator's manual before attempting to operate any equipment.

Aeroquip hereby disclaims any obligation or liability (including incidental and consequential damages) arising from breach of contract, warranty, or tort (under negligence or strict liability theories) should Aeroquip hose, fittings or assembly equipment be used with the hose, fittings or assembly equipment supplied by another manufacturer, or in the event that product instructions for each specified hose assembly are not followed.

## WARNING







Aeroquip manufactures the terminal ends of our fittings to the appropriate requirement established by the SAE and other industry standards. It is possible to order a fitting with a terminal end that has a performance rating lower than the hose rating. Failure to consider the terminal end performance could lead to premature hose assembly failures, resulting in property damage, serious injury or death.

## Hose for Use with Global Spiral TTC Fittings

### FC254 Four spiral wire

Exceeds SAE 100R11, EN 856 4SP



| #<br>Part Number | <br>Hose I.D. |      | <br>Hose O.D. |      | <br>Maximum Operating Pressure |      | <br>Minimum Burst Pressure |       | <br>Minimum Bend Radius |       | <br>Weight of Hose |        |
|------------------|--|------|--|------|---|------|---|-------|--|-------|---|--------|
|                  | mm   | in   | mm   | in   | bar   | psi  | bar   | psi   | mm   | in    | Kg/m  | lbs/ft |
| FC254-12         | 19,1   | 0.75 | 32,0   | 1.26 | 435,0   | 6250 | 1750,0  | 25000 | 279,4  | 11.00 | 0,88  | 0.59   |
| FC254-16         | 25,4   | 1.00 | 38,6   | 1.52 | 350,0   | 5000 | 1400,0  | 20000 | 304,8  | 12.00 | 1,03  | 0.69   |
| FC254-20         | 31,8   | 1.25 | 45,7   | 1.80 | 280,0   | 4000 | 1120,0  | 16000 | 419,1  | 16.50 | 1,37  | 0.92   |
| FC254-24         | 38,1   | 1.50 | 54,1   | 2.13 | 210,0   | 3000 | 840,0   | 12000 | 508,0  | 20.00 | 1,82  | 1.22   |
| FC254-32         | 50,8   | 2.00 | 68,1   | 2.68 | 210,0   | 3000 | 840,0   | 12000 | 635,0  | 25.00 | 2,44  | 1.64   |

#### Construction

Synthetic rubber tube, 4-spiral wire reinforcement and synthetic rubber cover.

#### Operating Temperature Range

-40°C to +121°C [-40°F to +250°F]

#### Application

Hydraulic system service with petroleum and water-base fluids, for general industrial use.

# FC273

## Four or six spiral wire



SAE 100R13, EN 856 Type R13, ISO 3862 Type R13

| #           |           |      |           |      |                            |      |                        |       |                     |       |                |        |
|-------------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|             | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
| Part Number | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| FC273-12    | 19,1      | 0.75 | 32,0      | 1.26 | 350,0                      | 5000 | 1400,0                 | 20000 | 240,0               | 9.50  | 1,56           | 1.05   |
| FC273-16    | 25,4      | 1.00 | 38,6      | 1.52 | 350,0                      | 5000 | 1400,0                 | 20000 | 300,0               | 12.00 | 1,96           | 1.32   |
| FC273-20    | 31,8      | 1.25 | 49,8      | 1.96 | 350,0                      | 5000 | 1400,0                 | 20000 | 420,0               | 16.50 | 3,66           | 2.46   |
| FC273-24    | 38,1      | 1.50 | 57,4      | 2.26 | 350,0                      | 5000 | 1400,0                 | 20000 | 500,0               | 20.00 | 4,70           | 3.16   |
| FC273-32    | 50,8      | 2.00 | 71,1      | 2.80 | 350,0                      | 5000 | 1400,0                 | 20000 | 640,0               | 25.00 | 7,11           | 4.78   |

### Construction

Synthetic rubber tube, multiple heavy spiral wire (4 wire for -12, -16; 6 wire for -20, -24 and -32); black synthetic rubber cover.

### Operating Temperature Range

-40°C to +121°C [-40°F to +250°F]

### Application

Hydraulic system service with petroleum and water-base fluids, for general industrial service.

# FC273B BRUISER

## Ultra-abrasion resistant cover

### Four or six spiral wire



SAE 100R13, EN 856 Type R13, ISO 3862 Type R13

| #           |           |      |           |      |                            |      |                        |       |                     |       |                |        |
|-------------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|             | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
| Part Number | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| FC273B-12   | 19,1      | 0.75 | 33,3      | 1.31 | 350,0                      | 5000 | 1400,0                 | 20000 | 240,0               | 9.50  | 1,55           | 1.04   |
| FC273B-16   | 25,4      | 1.00 | 39,9      | 1.57 | 350,0                      | 5000 | 1400,0                 | 20000 | 300,0               | 12.00 | 1,95           | 1.31   |
| FC273B-20   | 31,8      | 1.25 | 51,3      | 2.02 | 350,0                      | 5000 | 1400,0                 | 20000 | 420,0               | 16.50 | 3,63           | 2.44   |
| FC273B-24   | 38,1      | 1.50 | 58,9      | 2.32 | 350,0                      | 5000 | 1400,0                 | 20000 | 500,0               | 20.00 | 4,78           | 3.21   |
| FC273B-32   | 50,8      | 2.00 | 72,6      | 2.86 | 350,0                      | 5000 | 1400,0                 | 20000 | 640,0               | 25.00 | 7,05           | 4.74   |

### Construction

Synthetic rubber tube, multiple heavy spiral wire (4 wire for -12, -16; 6 wire for -20, -24 and -32); synthetic rubber intermediate cover and BRUISER outer cover.

### Operating Temperature Range

-40°C to +121°C [-40°F to +250°F]

### Application

High abrasion industrial and hydraulic system applications with petroleum and water-based fluids.

Recommended for use on critical applications in construction, forestry, and other off-highway vehicles. BRUISER outer cover offers unmatched abrasion, chemical and environmental protection.

# GH506

## Four spiral wire



EN 856 4SH

| #           |           |      |           |      |                            |      |                        |       |                     |       |                |        |
|-------------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|             | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
| Part Number | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| GH506-12*   | 19,1      | 0.75 | 32,3      | 1.27 | 420,0                      | 6090 | 1680,0                 | 24360 | 280,0               | 11.00 | 1,49           | 1.00   |
| GH506-16*   | 25,4      | 1.00 | 38,4      | 1.51 | 380,0                      | 5510 | 1520,0                 | 22040 | 340,0               | 13.38 | 2,05           | 1.38   |
| GH506-20*   | 31,8      | 1.25 | 45,5      | 1.79 | 350,0                      | 5075 | 1400,0                 | 20300 | 460,0               | 18.11 | 2,54           | 1.71   |
| GH506-24*   | 38,1      | 1.50 | 53,6      | 2.11 | 300,0                      | 4350 | 1200,0                 | 17400 | 560,0               | 22.05 | 3,27           | 2.20   |
| GH506-32*   | 50,8      | 2.00 | 68,1      | 2.68 | 250,0                      | 3625 | 1000,0                 | 14500 | 700,0               | 27.56 | 4,58           | 3.08   |

### Construction

Synthetic rubber tube, 4-spiral wire reinforcement, synthetic rubber cover.

### Operating Temperature Range

-40°C to +100°C [-40°F to +212°F]

### Application

Four wire hose for high pressure hydraulic systems with petroleum and water-base fluids.

\* Also available as an M100 length (GH506-12M100). This P/N is a minimum 100 feet in length.

# FC606

## Six spiral wire

SAE 100R15



| #        | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
|----------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|          | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| FC606-16 | 25,4      | 1.00 | 41,9      | 1.65 | 420,0                      | 6000 | 1680,0                 | 24000 | 304,8               | 12.00 | 2,66           | 1.79   |
| FC606-20 | 31,8      | 1.25 | 49,5      | 1.95 | 420,0                      | 6000 | 1680,0                 | 24000 | 419,1               | 16.50 | 3,62           | 2.43   |
| FC606-24 | 38,1      | 1.50 | 58,4      | 2.30 | 420,0                      | 6000 | 1680,0                 | 24000 | 508,0               | 20.00 | 4,72           | 3.17   |

### Construction

Synthetic rubber tube, 6-spiral wire reinforcement, synthetic rubber cover.

### Operating Temperature Range

-40°C to +121°C [-40°F to +250°F]

### Application

High-pressure hydraulics, hydrostatic transmissions.

# FC606B BRUISER

## Ultra-abrasion resistant cover

## Six spiral wire

SAE 100R15, ISO 3862 Type R15



| #         | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
|-----------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|           | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| FC606B-16 | 25,4      | 1.00 | 42,9      | 1.69 | 420,0                      | 6000 | 1680,0                 | 24000 | 304,8               | 12.00 | 2,60           | 1.79   |
| FC606B-20 | 31,8      | 1.25 | 51,6      | 2.03 | 420,0                      | 6000 | 1680,0                 | 24000 | 419,1               | 16.50 | 3,57           | 2.43   |
| FC606B-24 | 38,1      | 1.50 | 58,9      | 2.32 | 420,0                      | 6000 | 1680,0                 | 24000 | 508,0               | 20.00 | 4,57           | 3.07   |

### Construction

Synthetic rubber tube, 6-spiral wire reinforcement, synthetic rubber intermediate cover and BRUISER outer cover.

### Operating Temperature Range

-40°C to +121°C [-40°F to +250°F]

### Application

High-abrasion industrial and hydraulic system applications with petroleum and water-based fluids.

Recommended for use on critical applications in construction, forestry, and other off-highway vehicles. BRUISER outer cover offers unmatched abrasion, chemical, and environmental protection.

# GH466

## Six spiral wire



| #        | Hose I.D. |      | Hose O.D. |      | Maximum Operating Pressure |      | Minimum Burst Pressure |       | Minimum Bend Radius |       | Weight of Hose |        |
|----------|-----------|------|-----------|------|----------------------------|------|------------------------|-------|---------------------|-------|----------------|--------|
|          | mm        | in   | mm        | in   | bar                        | psi  | bar                    | psi   | mm                  | in    | Kg/m           | lbs/ft |
| GH466-20 | 31,8      | 1.25 | 49,3      | 1.94 | 420,0                      | 6090 | 1680,0                 | 24000 | 420,0               | 16.50 | 3,48           | 2.34   |
| GH466-24 | 38,1      | 1.50 | 57,4      | 2.26 | 420,0                      | 6090 | 1680,0                 | 24000 | 510,0               | 20.80 | 4,63           | 3.11   |

### Construction

Synthetic rubber tube, 6-spiral wire reinforcement, synthetic rubber cover.

### Operating Temperature Range

-40°C to +100°C [-40°F to +212°F]

### Application

Six wire spiral hose for pressure systems with extreme pressure peaks. For use with petroleum and water-base fluids.

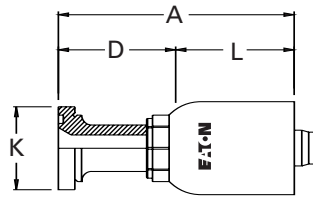
# Global Spiral TTC Fittings

**Straight split flange –**  
**45° split flange -**  
**90° split flange -**  
**Code 62 (SAE J518)**

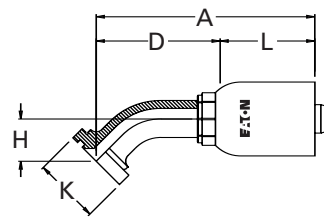
**Spiral TTC Fittings for use**  
**with hose:** FC254, FC273, FC273B,  
 FC606, FC606B, GH466, GH506

**1E Fittings** for use on 4-wire  
 construction

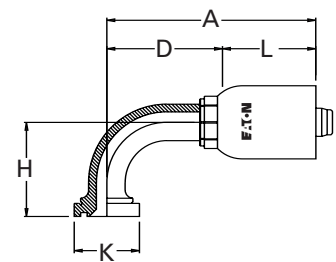
**1Z Fittings** for use on 6-wire  
 construction



**Straight Split Flange  
Code 62**



**45° Elbow Split Flange  
Code 62**



**90° Elbow Split Flange  
Code 62**

| Fitting Part Number                               | Flange Head Dia. K Ø |      | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H     |      |
|---|----------------------|------|-----------|-------|------|-------|------|-------------------------|------|-------|------|
|   | mm                   | in   |           | mm    | in   | mm    | in   | mm                      | in   | mm    | in   |
| <b>Straight split flange – Code 62 (SAE J518)</b> |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FH12  | 41,3                 | 1.62 | -12       | 105,8 | 4.16 | 60,8  | 2.39 | 45,0                    | 1.77 |       |      |
| 1E16FH12  | 47,6                 | 1.88 | -12       | 110,0 | 4.33 | 65,0  | 2.56 | 45,0                    | 1.77 |       |      |
| 1E16FH16  | 47,6                 | 1.88 | -16       | 135,2 | 5.32 | 70,2  | 2.76 | 65,0                    | 2.56 |       |      |
| 1Z16FH16  | 47,6                 | 1.88 | -16       | 135,2 | 5.32 | 70,2  | 2.76 | 65,0                    | 2.56 |       |      |
| 1E20FH16  | 54,0                 | 2.12 | -16       | 132,6 | 5.22 | 67,6  | 2.66 | 65,0                    | 2.56 |       |      |
| 1E20FH20  | 54,0                 | 2.12 | -20       | 148,6 | 5.85 | 73,6  | 2.90 | 75,0                    | 2.95 |       |      |
| 1Z20FH16  | 54,0                 | 2.12 | -16       | 132,6 | 5.22 | 67,6  | 2.66 | 65,0                    | 2.56 |       |      |
| 1Z20FH20  | 54,0                 | 2.12 | -20       | 148,6 | 5.85 | 73,6  | 2.90 | 75,0                    | 2.95 |       |      |
| 1E24FH20  | 63,5                 | 2.50 | -20       | 185,6 | 7.31 | 110,6 | 4.35 | 75,0                    | 2.95 |       |      |
| 1Z24FH20  | 63,5                 | 2.50 | -20       | 185,6 | 7.31 | 110,6 | 4.35 | 75,0                    | 2.95 |       |      |
| 1E24FH24  | 63,5                 | 2.50 | -24       | 189,6 | 7.46 | 111,6 | 4.39 | 78,0                    | 3.07 |       |      |
| 1Z24FH24  | 63,5                 | 2.50 | -24       | 189,6 | 7.46 | 111,6 | 4.39 | 78,0                    | 3.07 |       |      |
| 1E32FH24  | 79,4                 | 3.13 | -24       | 200,6 | 7.90 | 122,6 | 4.83 | 78,0                    | 3.07 |       |      |
| 1Z32FH24  | 79,4                 | 3.13 | -24       | 200,6 | 7.90 | 122,6 | 4.83 | 78,0                    | 3.07 |       |      |
| 1E32FH32  | 79,4                 | 3.13 | -32       | 202,7 | 7.98 | 124,7 | 4.91 | 78,0                    | 3.07 |       |      |
| 1Z32FH32  | 79,4                 | 3.13 | -32       | 202,7 | 7.98 | 124,7 | 4.91 | 78,0                    | 3.07 |       |      |
| <b>45° Split flange - Code 62 (SAE J518)</b>      |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FHA12   | 41,3                 | 1.62 | -12       | 125,3 | 4.93 | 80,3  | 3.16 | 45,0                    | 1.77 | 27,0  | 1.06 |
| 1E16FHA12   | 47,6                 | 1.88 | -12       | 136,5 | 5.37 | 91,5  | 3.60 | 45,0                    | 1.77 | 32,0  | 1.26 |
| 1E16FHA16   | 47,6                 | 1.88 | -16       | 161,7 | 6.37 | 96,7  | 3.81 | 65,0                    | 2.56 | 32,0  | 1.26 |
| 1Z16FHA16   | 47,6                 | 1.88 | -16       | 161,7 | 6.37 | 96,7  | 3.81 | 65,0                    | 2.56 | 32,0  | 1.26 |
| 1E20FHA16   | 54,0                 | 2.12 | -16       | 177,4 | 6.99 | 112,4 | 4.43 | 65,0                    | 2.56 | 39,0  | 1.54 |
| 1E20FHA20   | 54,0                 | 2.12 | -20       | 193,4 | 7.61 | 118,4 | 4.66 | 75,0                    | 2.95 | 39,0  | 1.54 |
| 1Z20FHA16   | 54,0                 | 2.12 | -16       | 177,4 | 6.99 | 112,4 | 4.43 | 65,0                    | 2.56 | 39,0  | 1.54 |
| 1Z20FHA20   | 54,0                 | 2.12 | -20       | 193,4 | 7.61 | 118,4 | 4.66 | 75,0                    | 2.95 | 39,0  | 1.54 |
| 1E24FHA20   | 63,5                 | 2.50 | -20       | 206,3 | 8.12 | 131,3 | 5.17 | 75,0                    | 2.95 | 45,0  | 1.77 |
| 1Z24FHA20   | 63,5                 | 2.50 | -20       | 206,3 | 8.12 | 131,3 | 5.17 | 75,0                    | 2.95 | 45,0  | 1.77 |
| 1E24FHA24   | 63,5                 | 2.50 | -24       | 210,3 | 8.28 | 132,3 | 5.21 | 78,0                    | 3.07 | 45,0  | 1.77 |
| 1Z24FHA24   | 63,5                 | 2.50 | -24       | 210,3 | 8.28 | 132,3 | 5.21 | 78,0                    | 3.07 | 45,0  | 1.77 |
| 1E32FHA24   | 79,4                 | 3.13 | -24       | 247,2 | 9.73 | 169,2 | 6.66 | 78,0                    | 3.07 | 57,5  | 2.26 |
| 1Z32FHA24   | 79,4                 | 3.13 | -24       | 247,2 | 9.73 | 169,2 | 6.66 | 78,0                    | 3.07 | 57,5  | 2.26 |
| 1E32FHA32   | 79,4                 | 3.13 | -32       | 249,3 | 9.81 | 171,3 | 6.74 | 78,0                    | 3.07 | 57,5  | 2.26 |
| 1Z32FHA32   | 79,4                 | 3.13 | -32       | 249,3 | 9.81 | 171,3 | 6.74 | 78,0                    | 3.07 | 57,5  | 2.26 |
| <b>90° Split flange - Code 62 (SAE J518)</b>      |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FHB12   | 41,3                 | 1.62 | -12       | 120,0 | 4.72 | 75,0  | 2.95 | 45,0                    | 1.77 | 59,0  | 2.32 |
| 1E16FHB12   | 47,6                 | 1.88 | -12       | 131,4 | 5.17 | 86,4  | 3.40 | 45,0                    | 1.77 | 71,0  | 2.80 |
| 1E16FHB16   | 47,6                 | 1.88 | -16       | 156,6 | 6.17 | 91,6  | 3.61 | 65,0                    | 2.56 | 71,0  | 2.80 |
| 1Z16FHB16   | 47,6                 | 1.88 | -16       | 156,6 | 6.17 | 91,6  | 3.61 | 65,0                    | 2.56 | 71,0  | 2.80 |
| 1E20FHB16   | 54,0                 | 2.12 | -16       | 172,4 | 6.79 | 107,4 | 4.23 | 65,0                    | 2.56 | 89,0  | 3.50 |
| 1E20FHB20   | 54,0                 | 2.12 | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0  | 3.50 |
| 1Z20FHB16   | 54,0                 | 2.12 | -16       | 172,4 | 6.79 | 107,4 | 4.23 | 65,0                    | 2.56 | 89,0  | 3.50 |
| 1Z20FHB20   | 54,0                 | 2.12 | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0  | 3.50 |
| 1E24FHB20   | 63,5                 | 2.50 | -20       | 201,1 | 7.92 | 126,1 | 4.96 | 75,0                    | 2.95 | 104,0 | 4.09 |
| 1Z24FHB20   | 63,5                 | 2.50 | -20       | 201,1 | 7.92 | 126,1 | 4.96 | 75,0                    | 2.95 | 104,0 | 4.09 |
| 1E24FHB24   | 63,5                 | 2.50 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1Z24FHB24   | 63,5                 | 2.50 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1E32FHB24   | 79,4                 | 3.13 | -24       | 243,6 | 9.59 | 165,6 | 6.52 | 78,0                    | 3.07 | 138,0 | 5.43 |
| 1Z32FHB24   | 79,4                 | 3.13 | -24       | 243,6 | 9.59 | 165,6 | 6.52 | 78,0                    | 3.07 | 138,0 | 5.43 |
| 1E32FHB32   | 79,4                 | 3.13 | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 138,0 | 5.43 |
| 1Z32FHB32   | 79,4                 | 3.13 | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 138,0 | 5.43 |

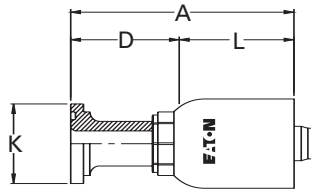
# Global Spiral TTC Fittings

**Straight split flange -  
45° split flange -  
90° split flange -  
Code 61 (SAE J518)**

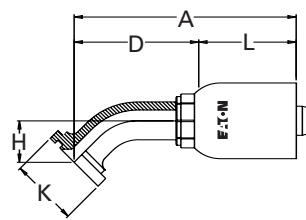
**Spiral TTC Fittings for use  
with hose:** FC254, FC273,  
FC273B, FC606, FC606B,  
GH466, GH506

**1E Fittings** for use on 4-wire  
construction

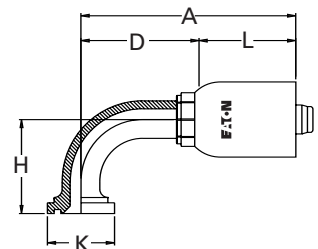
**1Z Fittings** for use on 6-wire  
construction



**Straight Split Flange  
Code 61**



**45° Elbow Split Flange  
Code 61**



**90° Elbow Split Flange  
Code 61**

| Fitting Part Number                               | Flange Head Dia. K Ø |      | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H     |      |
|---|----------------------|------|-----------|-------|------|-------|------|-------------------------|------|-------|------|
|   | mm                   | in   |           | mm    | in   | mm    | in   | mm                      | in   | mm    | in   |
| <b>Straight split flange - Code 61 (SAE J518)</b> |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FL12  | 38,1                 | 1.50 | -12       | 99,5  | 3.92 | 54,5  | 2.15 | 45,0                    | 1.77 |       |      |
| 1E16FL12  | 44,4                 | 1.75 | -12       | 96,1  | 3.78 | 51,1  | 2.01 | 45,0                    | 1.77 |       |      |
| 1E16FL16  | 44,4                 | 1.75 | -16       | 121,3 | 4.78 | 56,3  | 2.22 | 65,0                    | 2.56 |       |      |
| 1Z16FL16  | 44,4                 | 1.75 | -16       | 121,3 | 4.78 | 56,3  | 2.22 | 65,0                    | 2.56 |       |      |
| 1E20FL16  | 50,8                 | 2.00 | -16       | 125,5 | 4.94 | 60,5  | 2.38 | 65,0                    | 2.56 |       |      |
| 1E20FL20  | 50,8                 | 2.00 | -20       | 141,5 | 5.57 | 66,5  | 2.62 | 75,0                    | 2.95 |       |      |
| 1Z20FL20  | 50,8                 | 2.00 | -20       | 141,5 | 5.57 | 66,5  | 2.62 | 75,0                    | 2.95 |       |      |
| 1E24FL20  | 60,3                 | 2.38 | -20       | 163,8 | 6.45 | 88,8  | 3.50 | 75,0                    | 2.95 |       |      |
| 1E24FL24  | 60,3                 | 2.38 | -24       | 167,8 | 6.61 | 89,8  | 3.54 | 78,0                    | 3.07 |       |      |
| 1Z24FL24  | 60,3                 | 2.38 | -24       | 167,8 | 6.61 | 89,8  | 3.54 | 78,0                    | 3.07 |       |      |
| 1E32FL24  | 71,4                 | 2.81 | -24       | 170,9 | 6.73 | 92,9  | 3.66 | 78,0                    | 3.07 |       |      |
| 1E32FL32  | 71,4                 | 2.81 | -32       | 173,0 | 6.81 | 95,0  | 3.74 | 78,0                    | 3.07 |       |      |
| 1Z32FL32  | 71,4                 | 2.81 | -32       | 173,0 | 6.81 | 95,0  | 3.74 | 78,0                    | 3.07 |       |      |
| <b>45° Split flange - Code 61 (SAE J518)</b>      |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FLA12   | 38,1                 | 1.50 | -12       | 125,3 | 4.93 | 80,3  | 3.16 | 45,0                    | 1.77 | 27,0  | 1.06 |
| 1E16FLA12   | 44,4                 | 1.75 | -12       | 136,5 | 5.37 | 91,5  | 3.60 | 45,0                    | 1.77 | 32,0  | 1.26 |
| 1E16FLA16   | 44,4                 | 1.75 | -16       | 161,7 | 6.37 | 96,7  | 3.81 | 65,0                    | 2.56 | 32,0  | 1.26 |
| 1Z16FLA16   | 44,4                 | 1.75 | -16       | 161,7 | 6.37 | 96,7  | 3.81 | 65,0                    | 2.56 | 32,0  | 1.26 |
| 1E20FLA16   | 50,8                 | 2.00 | -16       | 177,4 | 6.99 | 112,4 | 4.43 | 65,0                    | 2.56 | 39,0  | 1.54 |
| 1E20FLA20   | 50,8                 | 2.00 | -20       | 193,4 | 7.61 | 118,4 | 4.66 | 75,0                    | 2.95 | 39,0  | 1.54 |
| 1Z20FLA20   | 50,8                 | 2.00 | -20       | 193,4 | 7.61 | 118,4 | 4.66 | 75,0                    | 2.95 | 39,0  | 1.54 |
| 1E24FLA20   | 60,3                 | 2.38 | -20       | 206,3 | 8.12 | 131,3 | 5.17 | 75,0                    | 2.95 | 45,0  | 1.77 |
| 1E24FLA24   | 60,3                 | 2.38 | -24       | 210,3 | 8.28 | 132,3 | 5.21 | 78,0                    | 3.07 | 45,0  | 1.77 |
| 1Z24FLA24   | 60,3                 | 2.38 | -24       | 210,3 | 8.28 | 132,3 | 5.21 | 78,0                    | 3.07 | 45,0  | 1.77 |
| 1E32FLA24   | 71,4                 | 2.81 | -24       | 247,2 | 9.73 | 169,2 | 6.66 | 78,0                    | 3.07 | 57,5  | 2.26 |
| 1E32FLA32   | 71,4                 | 2.81 | -32       | 249,3 | 9.81 | 171,3 | 6.74 | 78,0                    | 3.07 | 57,5  | 2.26 |
| 1Z32FLA32   | 71,4                 | 2.81 | -32       | 249,3 | 9.81 | 171,3 | 6.74 | 78,0                    | 3.07 | 57,5  | 2.26 |
| <b>90° Split flange - Code 61 (SAE J518)</b>      |                      |      |           |       |      |       |      |                         |      |       |      |
| 1E12FLB12   | 38,1                 | 1.50 | -12       | 120,0 | 4.72 | 75,0  | 2.95 | 45,0                    | 1.77 | 59,0  | 2.32 |
| 1E16FLB12   | 44,4                 | 1.75 | -12       | 131,4 | 5.17 | 86,4  | 3.40 | 45,0                    | 1.77 | 71,0  | 2.80 |
| 1E16FLB16   | 44,4                 | 1.75 | -16       | 156,6 | 6.17 | 91,6  | 3.61 | 65,0                    | 2.56 | 71,0  | 2.80 |
| 1Z16FLB16   | 44,4                 | 1.75 | -16       | 156,6 | 6.17 | 91,6  | 3.61 | 65,0                    | 2.56 | 71,0  | 2.80 |
| 1E20FLB16   | 50,8                 | 2.00 | -16       | 172,4 | 6.79 | 107,4 | 4.23 | 65,0                    | 2.56 | 89,0  | 3.50 |
| 1E20FLB20   | 50,8                 | 2.00 | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0  | 3.50 |
| 1Z20FLB20   | 50,8                 | 2.00 | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0  | 3.50 |
| 1E24FLB20   | 60,3                 | 2.38 | -20       | 201,1 | 7.92 | 126,1 | 4.96 | 75,0                    | 2.95 | 104,0 | 4.09 |
| 1E24FLB24   | 60,3                 | 2.38 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1Z24FLB24   | 60,3                 | 2.38 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1E32FLB24   | 71,4                 | 2.81 | -24       | 243,6 | 9.59 | 165,6 | 6.52 | 78,0                    | 3.07 | 138,0 | 5.43 |
| 1E32FLB32   | 71,4                 | 2.81 | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 138,0 | 5.43 |
| 1E32FLB32   | 71,4                 | 2.81 | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 138,0 | 5.43 |

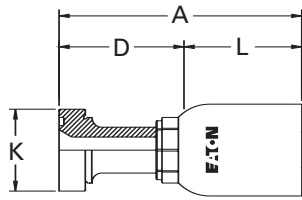
# Global Spiral TTC Fittings

**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

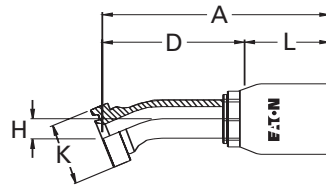
**1E Fittings** for use on 4-wire construction

**1Z Fittings** for use on 6-wire construction

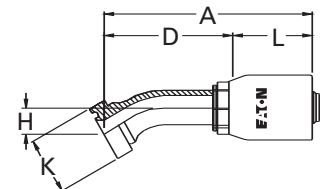
Compatible only with D-rings  
P/N FF90319.



**Cat Flange**  
Straight



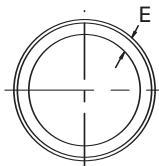
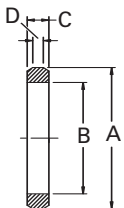
**Cat Flange**  
22.5° Elbow



**Cat Flange**  
30° Elbow

| Fitting Part Number                        | Flange Head Dia. K Ø |      | Hose Size | A     |       | D     |      | Hose Insertion Length L |      | H    |      |
|--|----------------------|------|-----------|-------|-------|-------|------|-------------------------|------|------|------|
|  | mm                   | in   |           | mm    | in    | mm    | in   | mm                      | in   | mm   | in   |
| <b>Caterpillar - Straight split flange</b> |                      |      |           |       |       |       |      |                         |      |      |      |
| 1E12CT12                                   | 41,3                 | 1.62 | -12       | 111,3 | 4.38  | 66,3  | 2.61 | 45,0                    | 1.77 |      |      |
| 1E16CT12                                   | 47,6                 | 1.88 | -12       | 114,7 | 4.51  | 69,7  | 2.74 | 45,0                    | 1.77 |      |      |
| 1E16CT16                                   | 47,6                 | 1.88 | -16       | 139,9 | 5.51  | 74,9  | 2.95 | 65,0                    | 2.56 |      |      |
| 1Z16CT16                                   | 47,6                 | 1.88 | -16       | 139,9 | 5.51  | 74,9  | 2.95 | 65,0                    | 2.56 |      |      |
| 1E20CT16                                   | 54,0                 | 2.12 | -16       | 136,5 | 5.37  | 71,5  | 2.81 | 65,0                    | 2.56 |      |      |
| 1E20CT20                                   | 54,0                 | 2.12 | -20       | 152,5 | 6.00  | 77,5  | 3.05 | 75,0                    | 2.95 |      |      |
| 1Z20CT16                                   | 54,0                 | 2.12 | -16       | 136,5 | 5.37  | 71,5  | 2.81 | 65,0                    | 2.56 |      |      |
| 1Z20CT20                                   | 54,0                 | 2.12 | -20       | 152,5 | 6.00  | 77,5  | 3.05 | 75,0                    | 2.95 |      |      |
| 1Z24CT20                                   | 63,5                 | 2.50 | -20       | 187,3 | 7.37  | 112,3 | 4.42 | 75,0                    | 2.95 |      |      |
| 1Z24CT24                                   | 63,5                 | 2.50 | -24       | 191,3 | 7.53  | 113,3 | 4.46 | 78,0                    | 3.07 |      |      |
| 1Z32CT24                                   | 79,4                 | 3.13 | -24       | 202,3 | 7.96  | 124,3 | 4.89 | 78,0                    | 3.07 |      |      |
| 1Z32CT32                                   | 79,4                 | 3.13 | -32       | 204,4 | 8.05  | 126,4 | 4.98 | 78,0                    | 3.07 |      |      |
| <b>Caterpillar - 22.5° Split flange</b>    |                      |      |           |       |       |       |      |                         |      |      |      |
| 1E12CTD12                                  | 41,3                 | 1.62 | -12       | 137,9 | 5.43  | 92,9  | 3.66 | 45,0                    | 1.77 | 13,7 | 0.54 |
| 1E16CTD16                                  | 47,6                 | 1.88 | -16       | 174,8 | 6.88  | 109,8 | 4.32 | 65,0                    | 2.56 | 15,3 | 0.60 |
| 1Z16CTD16                                  | 47,6                 | 1.88 | -16       | 174,8 | 6.88  | 109,8 | 4.32 | 65,0                    | 2.56 | 15,3 | 0.60 |
| 1E20CTD16                                  | 54,0                 | 2.12 | -16       | 191,9 | 7.56  | 126,9 | 5.00 | 65,0                    | 2.56 | 17,8 | 0.70 |
| 1Z20CTD20                                  | 54,0                 | 2.12 | -20       | 207,9 | 8.19  | 132,9 | 5.23 | 75,0                    | 2.95 | 17,8 | 0.70 |
| 1Z24CTD20                                  | 63,5                 | 2.50 | -20       | 220,1 | 8.67  | 145,1 | 5.71 | 75,0                    | 2.95 | 19,4 | 0.76 |
| 1Z24CTD24                                  | 63,5                 | 2.50 | -24       | 224,1 | 8.82  | 146,1 | 5.75 | 78,0                    | 3.07 | 19,4 | 0.76 |
| <b>Caterpillar - 30° Split flange</b>      |                      |      |           |       |       |       |      |                         |      |      |      |
| 1E12CTF12                                  | 41,3                 | 1.62 | -12       | 135,7 | 5.34  | 90,7  | 3.57 | 45,0                    | 1.77 | 19,1 | 0.75 |
| 1E16CTF16                                  | 47,6                 | 1.88 | -16       | 172,4 | 6.79  | 107,4 | 4.23 | 65,0                    | 2.56 | 21,6 | 0.85 |
| 1Z16CTF16                                  | 47,6                 | 1.88 | -16       | 172,4 | 6.79  | 107,4 | 4.23 | 65,0                    | 2.56 | 21,6 | 0.85 |
| 1E20CTF16                                  | 54,0                 | 2.12 | -16       | 189,1 | 7.45  | 124,1 | 4.89 | 65,0                    | 2.56 | 25,3 | 1.00 |
| 1Z20CTF20                                  | 54,0                 | 2.12 | -20       | 205,1 | 8.08  | 130,1 | 5.12 | 75,0                    | 2.95 | 25,3 | 1.00 |
| 1Z24CTF20                                  | 63,5                 | 2.50 | -20       | 217,1 | 8.55  | 142,1 | 5.59 | 75,0                    | 2.95 | 27,7 | 1.09 |
| 1Z24CTF24                                  | 63,5                 | 2.50 | -24       | 221,1 | 8.70  | 143,1 | 5.63 | 78,0                    | 3.07 | 27,7 | 1.09 |
| 1Z32CTF24                                  | 79,4                 | 3.13 | -24       | 260,5 | 10.26 | 182,5 | 7.19 | 78,0                    | 3.07 | 34,8 | 1.37 |
| 1Z32CTF32                                  | 79,4                 | 3.13 | -32       | 262,6 | 10.34 | 184,6 | 7.27 | 78,0                    | 3.07 | 34,8 | 1.37 |

## Cat Flange D-Ring\*\*



| PART NUMBER | A REF |      | B REF |      | C REF |     | D REF |     | E REF |     |
|-------------|-------|------|-------|------|-------|-----|-------|-----|-------|-----|
|             | INCH  | MM   | INCH  | MM   | INCH  | MM  | INCH  | MM  | INCH  | MM  |
| FF90319-12  | 1.27  | 32,3 | 1.00  | 25,4 | .20   | 5,1 | .10   | 2,5 | .135  | 3,4 |
| FF90319-16  | 1.52  | 36,6 | 1.25  | 31,8 | .20   | 5,1 | .10   | 2,5 | .135  | 3,4 |
| FF90319-20  | 1.77  | 45,0 | 1.50  | 38,1 | .20   | 5,1 | .10   | 2,5 | .135  | 3,4 |
| FF90319-24  | 2.03  | 51,6 | 1.76  | 44,7 | .20   | 5,1 | .10   | 2,5 | .135  | 3,4 |
| FF90319-32  | 2.78  | 70,6 | 2.52  | 64,0 | .20   | 5,1 | .10   | 2,5 | .135  | 3,4 |

Temperature range: -40°F to +212°F.

Material: Nitrile (Buna-N)

\*\*To be used only with Cat Flange.



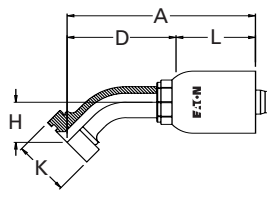
# Global Spiral TTC Fittings

**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

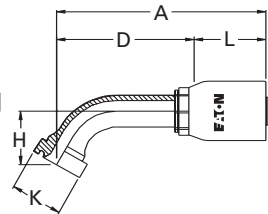
**1E Fittings** for use on 4-wire construction

**1Z Fittings** for use on 6-wire construction

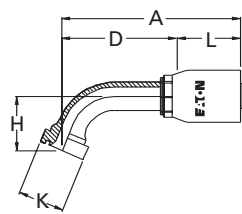
Compatible only with D-rings  
P/N FF90319.



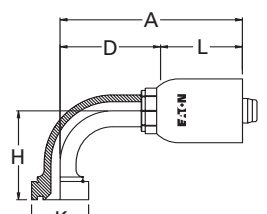
**Cat Flange**  
45° Elbow



**Cat Flange**  
60° Elbow



**Cat Flange**  
67.5° Elbow



**Cat Flange**  
90° Elbow

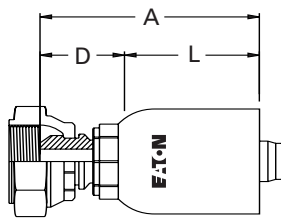
| Fitting Part Number                     | Flange Head Dia. K Ø |      | Hose Size | A     |       | D     |      | Hose Insertion Length L |      | H     |      |
|---|----------------------|------|-----------|-------|-------|-------|------|-------------------------|------|-------|------|
|   | mm                   | in   |           | mm    | in    | mm    | in   | mm                      | in   | mm    | in   |
| <b>Caterpillar - 45° Split flange</b>   |                      |      |           |       |       |       |      |                         |      |       |      |
| 1E12CTA12                               | 41,3                 | 1.62 | -12       | 129,2 | 5.08  | 84,2  | 3.31 | 45,0                    | 1.77 | 30,9  | 1.22 |
| 1E16CTA12                               | 47,6                 | 1.88 | -12       | 139,8 | 5.50  | 94,8  | 3.73 | 45,0                    | 1.77 | 35,3  | 1.39 |
| 1E16CTA16                               | 47,6                 | 1.88 | -16       | 165,0 | 6.50  | 100,0 | 3.94 | 65,0                    | 2.56 | 35,3  | 1.39 |
| 1Z16CTA16                               | 47,6                 | 1.88 | -16       | 165,0 | 6.50  | 100,0 | 3.94 | 65,0                    | 2.56 | 35,3  | 1.39 |
| 1E20CTA16                               | 54,0                 | 2.12 | -16       | 180,2 | 7.10  | 115,2 | 4.54 | 65,0                    | 2.56 | 41,8  | 1.65 |
| 1E20CTA20                               | 54,0                 | 2.12 | -20       | 196,2 | 7.72  | 121,2 | 4.77 | 75,0                    | 2.95 | 41,8  | 1.65 |
| 1Z20CTA16                               | 54,0                 | 2.12 | -16       | 180,2 | 7.10  | 115,2 | 4.54 | 65,0                    | 2.56 | 41,8  | 1.65 |
| 1Z20CTA20                               | 54,0                 | 2.12 | -20       | 196,2 | 7.72  | 121,2 | 4.77 | 75,0                    | 2.95 | 41,8  | 1.65 |
| 1Z24CTA20                               | 63,5                 | 2.50 | -20       | 207,5 | 8.17  | 132,5 | 5.22 | 75,0                    | 2.95 | 46,2  | 1.82 |
| 1Z24CTA24                               | 63,5                 | 2.50 | -24       | 211,5 | 8.33  | 133,5 | 5.26 | 78,0                    | 3.07 | 46,2  | 1.82 |
| 1Z32CTA24                               | 79,4                 | 3.13 | -24       | 248,4 | 9.78  | 170,4 | 6.71 | 78,0                    | 3.07 | 58,7  | 2.31 |
| 1Z32CTA32                               | 79,4                 | 3.13 | -32       | 250,5 | 9.86  | 172,5 | 6.79 | 78,0                    | 3.07 | 58,7  | 2.31 |
| <b>Caterpillar - 60° Split flange</b>   |                      |      |           |       |       |       |      |                         |      |       |      |
| 1E12CTG12                               | 41,3                 | 1.62 | -12       | 148,1 | 5.83  | 103,1 | 4.06 | 45,0                    | 1.77 | 42,3  | 1.66 |
| 1E16CTG16                               | 47,6                 | 1.88 | -16       | 189,3 | 7.45  | 124,3 | 4.89 | 65,0                    | 2.56 | 48,7  | 1.92 |
| 1Z16CTG16                               | 47,6                 | 1.88 | -16       | 189,3 | 7.45  | 124,3 | 4.89 | 65,0                    | 2.56 | 48,7  | 1.92 |
| 1E20CTG16                               | 54,0                 | 2.12 | -16       | 212,4 | 8.36  | 147,4 | 5.80 | 65,0                    | 2.56 | 59,3  | 2.33 |
| 1Z20CTG20                               | 54,0                 | 2.12 | -20       | 228,4 | 8.99  | 153,4 | 6.04 | 75,0                    | 2.95 | 59,3  | 2.33 |
| 1Z24CTG20                               | 63,5                 | 2.50 | -20       | 246,4 | 9.70  | 171,4 | 6.75 | 75,0                    | 2.95 | 66,6  | 2.62 |
| 1Z24CTG24                               | 63,5                 | 2.50 | -24       | 250,4 | 9.86  | 172,4 | 6.79 | 78,0                    | 3.07 | 66,6  | 2.62 |
| 1Z32CTG24                               | 79,4                 | 3.13 | -24       | 303,2 | 11.94 | 225,2 | 8.87 | 78,0                    | 3.07 | 87,3  | 3.44 |
| 1Z32CTG32                               | 79,4                 | 3.13 | -32       | 305,3 | 12.02 | 227,3 | 8.95 | 78,0                    | 3.07 | 87,3  | 3.44 |
| <b>Caterpillar - 67.5° Split flange</b> |                      |      |           |       |       |       |      |                         |      |       |      |
| 1E12CTE12                               | 41,3                 | 1.62 | -12       | 142,2 | 5.60  | 97,2  | 3.83 | 45,0                    | 1.77 | 48,2  | 1.90 |
| 1E16CTE16                               | 47,6                 | 1.88 | -16       | 182,5 | 7.18  | 117,5 | 4.62 | 65,0                    | 2.56 | 55,8  | 2.20 |
| 1Z16CTE16                               | 47,6                 | 1.88 | -16       | 182,5 | 7.18  | 117,5 | 4.62 | 65,0                    | 2.56 | 55,8  | 2.20 |
| 1E20CTE16                               | 54,0                 | 2.12 | -16       | 204,1 | 8.04  | 139,1 | 5.48 | 65,0                    | 2.56 | 68,1  | 2.68 |
| 1Z20CTE20                               | 54,0                 | 2.12 | -20       | 220,1 | 8.67  | 145,1 | 5.71 | 75,0                    | 2.95 | 68,1  | 2.68 |
| 1Z24CTE20                               | 63,5                 | 2.50 | -20       | 237,0 | 9.33  | 162,0 | 6.38 | 75,0                    | 2.95 | 76,8  | 3.02 |
| <b>Caterpillar - 90° Split flange</b>   |                      |      |           |       |       |       |      |                         |      |       |      |
| 1E12CTB12                               | 41,3                 | 1.62 | -12       | 120,0 | 4.72  | 75,0  | 2.95 | 45,0                    | 1.77 | 64,5  | 2.54 |
| 1E16CTB12                               | 47,6                 | 1.88 | -12       | 131,4 | 5.17  | 86,4  | 3.40 | 45,0                    | 1.77 | 75,7  | 2.98 |
| 1E16CTB16                               | 47,6                 | 1.88 | -16       | 156,6 | 6.17  | 91,6  | 3.61 | 65,0                    | 2.56 | 75,7  | 2.98 |
| 1Z16CTB16                               | 47,6                 | 1.88 | -16       | 156,6 | 6.17  | 91,6  | 3.61 | 65,0                    | 2.56 | 75,7  | 2.98 |
| 1E20CTB16                               | 54,0                 | 2.12 | -16       | 172,4 | 6.79  | 107,4 | 4.23 | 65,0                    | 2.56 | 92,9  | 3.66 |
| 1E20CTB20                               | 54,0                 | 2.12 | -20       | 188,4 | 7.41  | 113,4 | 4.46 | 75,0                    | 2.95 | 92,9  | 3.66 |
| 1Z20CTB16                               | 54,0                 | 2.12 | -16       | 172,4 | 6.79  | 107,4 | 4.23 | 65,0                    | 2.56 | 92,9  | 3.66 |
| 1Z20CTB20                               | 54,0                 | 2.12 | -20       | 188,4 | 7.41  | 113,4 | 4.46 | 75,0                    | 2.95 | 92,9  | 3.66 |
| 1Z24CTB20                               | 63,5                 | 2.50 | -20       | 201,1 | 7.92  | 126,1 | 4.96 | 75,0                    | 2.95 | 105,7 | 4.16 |
| 1Z24CTB24                               | 63,5                 | 2.50 | -24       | 205,1 | 8.07  | 127,1 | 5.00 | 78,0                    | 3.07 | 105,7 | 4.16 |
| 1Z32CTB24                               | 79,4                 | 3.13 | -24       | 243,6 | 9.59  | 165,6 | 6.52 | 78,0                    | 3.07 | 139,6 | 5.50 |
| 1Z32CTB32                               | 79,4                 | 3.13 | -32       | 245,7 | 9.67  | 167,7 | 6.60 | 78,0                    | 3.07 | 139,6 | 5.50 |

# Global Spiral TTC Fittings

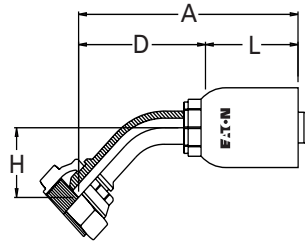
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, GH506

**1E Fittings** for use on 4-wire construction

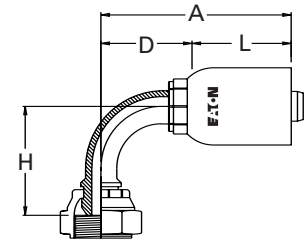
**1Z Fittings** for use on 6-wire construction



**BSPP Swivel**  
Straight



**BSPP Swivel**  
45° Elbow



**BSPP Swivel**  
90° Elbow

| Fitting Part Number                           | Thd.    | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H     |      |
|---|---------|-----------|-------|------|-------|------|-------------------------|------|-------|------|
|   |         |           | mm    | in   | mm    | in   | mm                      | in   | mm    | in   |
| <b>BSP/JIS Female swivel (BF)</b>             |         |           |       |      |       |      |                         |      |       |      |
| 1E12BF12                                      | G 3/4   | -12       | 83,0  | 3.27 | 38,0  | 1.50 | 45,0                    | 1.77 |       |      |
| 1E16BF12                                      | G 1     | -12       | 81,7  | 3.22 | 36,7  | 1.44 | 45,0                    | 1.77 |       |      |
| 1E16BF16                                      | G 1     | -16       | 106,9 | 4.21 | 41,9  | 1.65 | 65,0                    | 2.56 |       |      |
| 1E20BF16                                      | G 1 1/4 | -16       | 104,9 | 4.13 | 39,9  | 1.57 | 65,0                    | 2.56 |       |      |
| 1E20BF20                                      | G 1 1/4 | -20       | 120,9 | 4.76 | 45,9  | 1.81 | 75,0                    | 2.95 |       |      |
| 1E24BF24                                      | G 1 1/2 | -24       | 153,5 | 6.04 | 75,5  | 2.97 | 78,0                    | 3.07 |       |      |
| 1Z24BF24                                      | G 1 1/2 | -24       | 153,5 | 6.04 | 75,5  | 2.97 | 78,0                    | 3.07 |       |      |
| 1E32BF32                                      | G 2     | -32       | 159,5 | 6.28 | 81,5  | 3.21 | 78,0                    | 3.07 |       |      |
| 1Z32BF32                                      | G 2     | -32       | 159,5 | 6.28 | 81,5  | 3.21 | 78,0                    | 3.07 |       |      |
| <b>BSP/JIS Female swivel, 45° elbow (BFA)</b> |         |           |       |      |       |      |                         |      |       |      |
| 1E12BFA12                                     | G 3/4   | -12       | 121,0 | 4.76 | 76,0  | 2.99 | 45,0                    | 1.77 | 26,0  | 1.02 |
| 1E16BFA12                                     | G 1     | -12       | 130,4 | 5.13 | 85,4  | 3.36 | 45,0                    | 1.77 | 30,0  | 1.18 |
| 1E16BFA16                                     | G 1     | -16       | 155,6 | 6.13 | 90,6  | 3.57 | 65,0                    | 2.56 | 30,0  | 1.18 |
| 1E20BFA16                                     | G 1 1/4 | -16       | 166,9 | 6.57 | 101,9 | 4.01 | 65,0                    | 2.56 | 34,0  | 1.34 |
| 1E20BFA20                                     | G 1 1/4 | -20       | 182,6 | 7.19 | 107,9 | 4.25 | 75,0                    | 2.95 | 34,0  | 1.34 |
| 1E24BFA24                                     | G 1 1/2 | -24       | 208,2 | 8.20 | 130,2 | 5.13 | 78,0                    | 3.07 | 43,0  | 1.69 |
| 1Z24BFA24                                     | G 1 1/2 | -24       | 208,2 | 8.20 | 130,2 | 5.13 | 78,0                    | 3.07 | 43,0  | 1.69 |
| 1E32BFA32                                     | G 2     | -32       | 242,8 | 9.56 | 164,8 | 6.49 | 78,0                    | 3.07 | 51,0  | 2.01 |
| 1Z32BFA32                                     | G 2     | -32       | 242,8 | 9.56 | 164,8 | 6.49 | 78,0                    | 3.07 | 51,0  | 2.01 |
| <b>BSP/JIS Female swivel, 90° elbow (BFB)</b> |         |           |       |      |       |      |                         |      |       |      |
| 1E12BFB12                                     | G 3/4   | -12       | 114,5 | 4.51 | 69,5  | 2.74 | 45,0                    | 1.77 | 57,0  | 2.24 |
| 1E16BFB12                                     | G 1     | -12       | 125,6 | 4.94 | 80,6  | 3.17 | 45,0                    | 1.77 | 68,0  | 2.68 |
| 1E16BFB16                                     | G 1     | -16       | 150,8 | 5.94 | 85,8  | 3.38 | 65,0                    | 2.56 | 68,0  | 2.68 |
| 1E20BFB16                                     | G 1 1/4 | -16       | 163,7 | 6.44 | 98,7  | 3.89 | 65,0                    | 2.56 | 79,0  | 3.11 |
| 1E20BFB20                                     | G 1 1/4 | -20       | 179,7 | 7.07 | 104,7 | 4.12 | 75,0                    | 2.95 | 79,0  | 3.11 |
| 1E24BFB24                                     | G 1 1/2 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1Z24BFB24                                     | G 1 1/2 | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1E32BFB32                                     | G 2     | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 133,0 | 5.24 |
| 1Z32BFB32                                     | G 2     | -32       | 245,7 | 9.67 | 167,7 | 6.60 | 78,0                    | 3.07 | 133,0 | 5.24 |

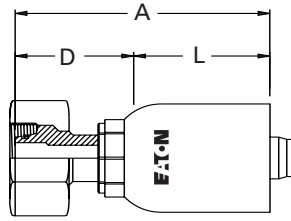
NOTE: The JIS parallel thread and BSPP connection are interchangeable.

# Global Spiral TTC Fittings

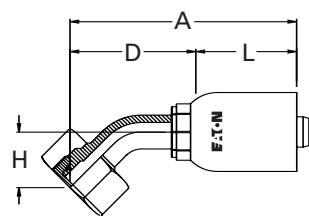
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

**1E Fittings** for use on 4-wire construction

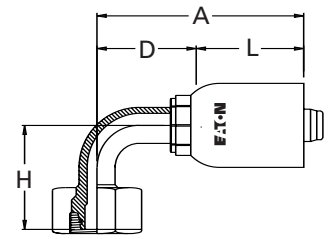
**1Z Fittings** for use on 6-wire construction



**DKOS Swivel**  
Straight



**DKOS Swivel**  
45° Elbow



**DKOS Swivel**  
90° Elbow

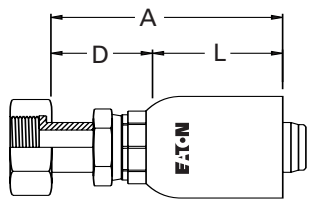
| Fitting Part Number                                   | Thd.    | Tube O.D. | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H    |      |
|---|---------|-----------|-----------|-------|------|-------|------|-------------------------|------|------|------|
|   |         |           |           | mm    | in   | mm    | in   | mm                      | in   | mm   | in   |
| <b>DKO Female swivel, heavy duty (DS)</b>             |         |           |           |       |      |       |      |                         |      |      |      |
| 1E20DS12  | M36 x 2 | 25        | -12       | 98,4  | 2.10 | 53,4  | 3.87 | 45,0                    | 1.77 |      |      |
| 1E25DS12  | M42 x 2 | 30        | -12       | 96,6  | 3.80 | 51,6  | 2.03 | 45,0                    | 1.77 |      |      |
| 1E25DS16  | M42 x 2 | 30        | -16       | 121,8 | 4.80 | 56,8  | 2.24 | 65,0                    | 2.56 |      |      |
| 1Z25DS16  | M42 x 2 | 30        | -16       | 121,8 | 4.80 | 56,8  | 2.24 | 65,0                    | 2.56 |      |      |
| 1E32DS16  | M52 x 2 | 38        | -16       | 122,3 | 4.82 | 57,3  | 2.26 | 65,0                    | 2.56 |      |      |
| 1E32DS20  | M52 x 2 | 38        | -20       | 138,3 | 5.44 | 63,3  | 2.49 | 75,0                    | 2.95 |      |      |
| 1Z32DS16  | M52 x 2 | 38        | -16       | 122,3 | 4.82 | 57,3  | 2.26 | 65,0                    | 2.56 |      |      |
| 1Z32DS20  | M52 x 2 | 38        | -20       | 138,3 | 5.44 | 63,3  | 2.49 | 75,0                    | 2.95 |      |      |
| <b>DKO Female swivel, heavy duty, 45° elbow (DSA)</b> |         |           |           |       |      |       |      |                         |      |      |      |
| 1E20DSA12   | M36 x 2 | 25        | -12       | 130,3 | 5.13 | 85,3  | 3.36 | 45,0                    | 1.77 | 32,0 | 1.26 |
| 1E25DSA12   | M42 x 2 | 30        | -12       | 139,4 | 5.49 | 94,4  | 3.72 | 45,0                    | 1.77 | 35,0 | 1.38 |
| 1E25DSA16   | M42 x 2 | 30        | -16       | 164,6 | 6.48 | 99,6  | 3.92 | 65,0                    | 2.56 | 35,0 | 1.38 |
| 1Z25DSA16   | M42 x 2 | 30        | -16       | 164,6 | 6.48 | 99,6  | 3.92 | 65,0                    | 2.56 | 35,0 | 1.38 |
| 1E32DSA16   | M52 X 2 | 38        | -16       | 177,3 | 6.98 | 112,3 | 4.42 | 65,0                    | 2.56 | 39,0 | 1.54 |
| 1E32DSA20   | M52 x 2 | 38        | -20       | 193,3 | 7.61 | 118,3 | 4.66 | 75,0                    | 2.95 | 39,0 | 1.54 |
| 1Z32DSA16   | M52 X 2 | 38        | -16       | 177,3 | 6.98 | 112,3 | 4.42 | 65,0                    | 2.56 | 39,0 | 1.54 |
| 1Z32DSA20   | M52 x 2 | 38        | -20       | 193,3 | 7.61 | 118,3 | 4.66 | 75,0                    | 2.95 | 39,0 | 1.54 |
| <b>DKO Female swivel, heavy duty, 90° elbow (DSB)</b> |         |           |           |       |      |       |      |                         |      |      |      |
| 1E20DSB12   | M36 x 2 | 25        | -12       | 120,0 | 4.72 | 75,0  | 2.95 | 45,0                    | 1.77 | 65,0 | 2.56 |
| 1E25DSB12   | M42 X 2 | 30        | -12       | 131,4 | 5.19 | 86,4  | 3.40 | 45,0                    | 1.77 | 76,0 | 2.99 |
| 1E25DSB16   | M42 x 2 | 30        | -16       | 156,8 | 6.17 | 91,8  | 3.61 | 65,0                    | 2.56 | 76,0 | 2.99 |
| 1Z25DSB16   | M42 x 2 | 30        | -16       | 156,8 | 6.17 | 91,8  | 3.61 | 65,0                    | 2.56 | 76,0 | 2.99 |
| 1E32DSB16   | M52 X 2 | 38        | -16       | 172,4 | 6.79 | 107,4 | 4.23 | 65,0                    | 2.56 | 89,0 | 3.50 |
| 1E32DSB20   | M52 x 2 | 38        | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0 | 3.50 |
| 1Z32DSB16   | M52 x 2 | 38        | -16       | 172,4 | 6.79 | 107,4 | 4.23 | 65,0                    | 2.56 | 89,0 | 3.50 |
| 1Z32DSB20   | M52 x 2 | 38        | -20       | 188,4 | 7.41 | 113,4 | 4.46 | 75,0                    | 2.95 | 89,0 | 3.50 |

# Global Spiral TTC Fittings

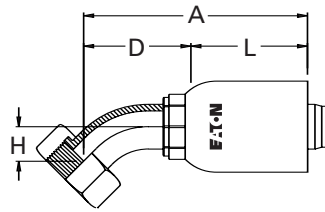
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

**1E Fittings** for use on 4-wire construction

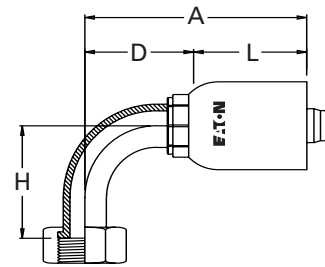
**1Z Fittings** for use on 6-wire construction



**ORS Swivel**  
Straight



**ORS Swivel**  
45° Elbow



**ORS Swivel**  
90° Elbow

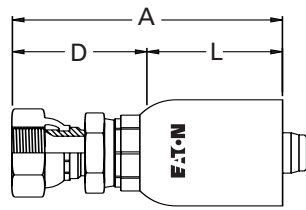
| Fitting Part Number                 | Thd.                                | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H    |      |
|-------------------------------------|-------------------------------------|-----------|-------|------|-------|------|-------------------------|------|------|------|
|                                     |                                     |           | mm    | in   | mm    | in   | mm                      | in   | mm   | in   |
| <b>Female ORS swivel, straight</b>  |                                     |           |       |      |       |      |                         |      |      |      |
| 1EA12FR12                           | 1 <sup>3</sup> / <sub>16</sub> -12  | -12       | 95,9  | 3.77 | 50,9  | 2.00 | 45,0                    | 1.77 |      |      |
| 1EA16FR12                           | 1 <sup>7</sup> / <sub>16</sub> -12  | -12       | 84,6  | 3.33 | 39,6  | 1.56 | 45,0                    | 1.77 |      |      |
| 1EA16FR16                           | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 119,5 | 4.71 | 54,5  | 2.15 | 65,0                    | 2.56 |      |      |
| 1ZA16FR16                           | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 119,5 | 4.71 | 54,5  | 2.15 | 65,0                    | 2.56 |      |      |
| 1EA20FR16                           | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 106,4 | 4.19 | 41,4  | 1.63 | 65,0                    | 2.56 |      |      |
| 1EA20FR20                           | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 136,7 | 5.38 | 61,7  | 2.43 | 75,0                    | 2.95 |      |      |
| 1EA24FR24                           | 2-12                                | -24       | 126,9 | 5.00 | 48,9  | 1.93 | 78,0                    | 3.07 |      |      |
| 1ZA20FR16                           | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 106,4 | 4.19 | 41,4  | 1.63 | 65,0                    | 2.56 |      |      |
| 1ZA20FR20                           | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 136,7 | 5.38 | 61,7  | 2.43 | 75,0                    | 2.95 |      |      |
| 1ZA24FR24                           | 2-12                                | -24       | 126,9 | 5.00 | 48,9  | 1.93 | 78,0                    | 3.07 |      |      |
| <b>Female ORS swivel, 45° elbow</b> |                                     |           |       |      |       |      |                         |      |      |      |
| 1EA12FRA12                          | 1 <sup>3</sup> / <sub>16</sub> -12  | -12       | 118,9 | 4.68 | 73,9  | 2.91 | 45,0                    | 1.77 | 24,0 | 0.94 |
| 1EA16FRA12                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -12       | 128,4 | 5.05 | 83,4  | 3.28 | 45,0                    | 1.77 | 28,0 | 1.10 |
| 1EA16FRA16                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 153,4 | 6.04 | 88,4  | 3.48 | 65,0                    | 2.56 | 28,0 | 1.10 |
| 1ZA16FRA16                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 153,4 | 6.04 | 88,4  | 3.48 | 65,0                    | 2.56 | 28,0 | 1.10 |
| 1EA20FRA16                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 163,9 | 6.45 | 98,9  | 3.89 | 65,0                    | 2.56 | 31,0 | 1.22 |
| 1EA20FRA20                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 179,8 | 7.08 | 104,8 | 4.13 | 75,0                    | 2.95 | 31,0 | 1.22 |
| 1ZA20FRA16                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 163,9 | 6.45 | 98,9  | 3.89 | 65,0                    | 2.56 | 31,0 | 1.22 |
| 1ZA20FRA20                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 179,8 | 7.08 | 104,8 | 4.13 | 75,0                    | 2.95 | 31,0 | 1.22 |
| <b>Female ORS swivel, 90° elbow</b> |                                     |           |       |      |       |      |                         |      |      |      |
| 1EA12FRB12                          | 1 <sup>3</sup> / <sub>16</sub> -12  | -12       | 114,5 | 4.51 | 69,5  | 2.74 | 45,0                    | 1.77 | 58,0 | 2.28 |
| 1EA16FRB12                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -12       | 125,6 | 4.94 | 80,6  | 3.17 | 45,0                    | 1.77 | 71,0 | 2.80 |
| 1EA16FRB16                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 150,6 | 5.93 | 85,6  | 3.37 | 65,0                    | 2.56 | 71,0 | 2.80 |
| 1ZA16FRB16                          | 1 <sup>7</sup> / <sub>16</sub> -12  | -16       | 150,6 | 5.93 | 85,6  | 3.37 | 65,0                    | 2.56 | 71,0 | 2.80 |
| 1EA20FRB16                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 163,7 | 6.45 | 98,7  | 3.89 | 65,0                    | 2.56 | 78,0 | 3.07 |
| 1EA20FRB20                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 179,6 | 7.07 | 104,6 | 4.12 | 75,0                    | 2.95 | 78,0 | 3.07 |
| 1ZA20FRB16                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -16       | 163,7 | 6.45 | 98,7  | 3.89 | 65,0                    | 2.56 | 78,0 | 3.07 |
| 1ZA20FRB20                          | 1 <sup>11</sup> / <sub>16</sub> -12 | -20       | 179,6 | 7.07 | 104,6 | 4.12 | 75,0                    | 2.95 | 84,0 | 3.07 |

# Global Spiral TTC Fittings

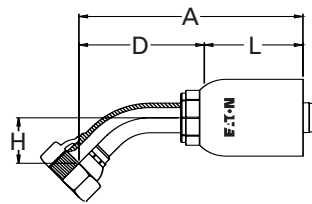
Spiral TTC Fittings for use with hose: FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

**1E Fittings** for use on 4-wire construction

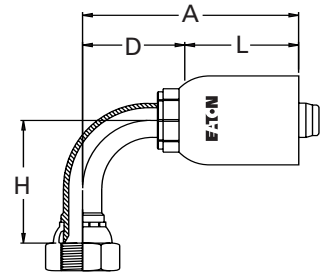
**1Z Fittings** for use on 6-wire construction



**SAE 37° (JIC) Swivel**  
Straight



**SAE 37° (JIC) Swivel**  
45° Elbow



**SAE 37° (JIC) Swivel**  
90° Elbow

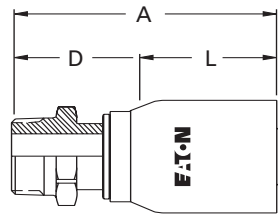
| Fitting Part Number                    | Thd.                               | Hose Size | A     |      | D     |      | Hose Insertion Length L |      | H     |      |
|--|------------------------------------|-----------|-------|------|-------|------|-------------------------|------|-------|------|
|  |                                    |           | mm    | in   | mm    | in   | mm                      | in   | mm    | in   |
| <b>SAE 37° (JIC) Swivel</b>            |                                    |           |       |      |       |      |                         |      |       |      |
| 1EA12FJ12                              | 1 <sup>1</sup> / <sub>16</sub> -12 | -12       | 104,2 | 4.10 | 59,2  | 2.33 | 45,0                    | 1.77 |       |      |
| 1EA16FJ12                              | 1 <sup>5</sup> / <sub>16</sub> -12 | -12       | 106,6 | 4.20 | 61,6  | 2.43 | 45,0                    | 1.77 |       |      |
| 1EA16FJ16                              | 1 <sup>5</sup> / <sub>16</sub> -12 | -16       | 131,8 | 5.19 | 66,8  | 2.63 | 65,0                    | 2.56 |       |      |
| 1ZA16FJ16                              | 1 <sup>5</sup> / <sub>16</sub> -12 | -16       | 131,8 | 5.19 | 66,8  | 2.63 | 65,0                    | 2.56 |       |      |
| 1EA20FJ16                              | 1 <sup>5</sup> / <sub>8</sub> -12  | -16       | 133,7 | 5.26 | 68,7  | 2.70 | 65,0                    | 2.56 |       |      |
| 1EA20FJ20                              | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 149,7 | 5.89 | 74,7  | 2.94 | 75,0                    | 2.95 |       |      |
| 1ZA20FJ20                              | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 149,7 | 5.89 | 74,7  | 2.94 | 75,0                    | 2.95 |       |      |
| 1EA24FJ20                              | 1 <sup>7</sup> / <sub>8</sub> -12  | -20       | 167,5 | 6.59 | 92,5  | 3.64 | 75,0                    | 2.95 |       |      |
| 1ZA24FJ20                              | 1 <sup>7</sup> / <sub>8</sub> -12  | -20       | 167,5 | 6.59 | 92,5  | 3.64 | 75,0                    | 2.95 |       |      |
| 1EA24FJ24                              | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 171,5 | 6.75 | 93,5  | 3.68 | 78,0                    | 3.07 |       |      |
| 1ZA24FJ24                              | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 171,5 | 6.75 | 93,5  | 3.68 | 78,0                    | 3.07 |       |      |
| 1EA32FJ32                              | 2 <sup>1</sup> / <sub>2</sub> -12  | -32       | 186,0 | 7.32 | 108,0 | 4.25 | 78,0                    | 3.07 |       |      |
| 1ZA32FJ32                              | 2 <sup>1</sup> / <sub>2</sub> -12  | -32       | 186,0 | 7.32 | 108,0 | 4.25 | 78,0                    | 3.07 |       |      |
| <b>SAE 37° (JIC) Swivel, 45° elbow</b> |                                    |           |       |      |       |      |                         |      |       |      |
| 1EA12FJA12                             | 1 <sup>1</sup> / <sub>16</sub> -12 | -12       | 121,9 | 4.80 | 76,9  | 3.03 | 45,0                    | 1.77 | 27,0  | 1.06 |
| 1EA16FJA12                             | 1 <sup>5</sup> / <sub>16</sub> -12 | -12       | 133,4 | 5.25 | 88,4  | 3.48 | 45,0                    | 1.77 | 33,0  | 1.30 |
| 1EA16FJA16                             | 1 <sup>5</sup> / <sub>16</sub> -12 | -16       | 158,6 | 6.25 | 93,6  | 3.69 | 65,0                    | 2.56 | 33,0  | 1.30 |
| 1EA20FJA16                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -16       | 170,2 | 6.70 | 105,2 | 4.14 | 65,0                    | 2.56 | 37,0  | 1.46 |
| 1EA20FJA20                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 186,2 | 7.33 | 111,2 | 4.38 | 75,0                    | 2.95 | 37,0  | 1.46 |
| 1ZA20FJA20                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 186,2 | 7.33 | 111,2 | 4.38 | 75,0                    | 2.95 | 37,0  | 1.46 |
| 1EA24FJA24                             | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 208,2 | 8.20 | 130,2 | 5.13 | 78,0                    | 3.07 | 43,0  | 1.69 |
| 1ZA24FJA24                             | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 208,2 | 8.20 | 130,2 | 5.13 | 78,0                    | 3.07 | 43,0  | 1.69 |
| <b>SAE 37° (JIC) Swivel, 90° elbow</b> |                                    |           |       |      |       |      |                         |      |       |      |
| 1EA12FJB12                             | 1 <sup>1</sup> / <sub>16</sub> -12 | -12       | 114,5 | 4.51 | 69,5  | 2.74 | 45,0                    | 1.77 | 58,0  | 2.28 |
| 1EA16FJB12                             | 1 <sup>5</sup> / <sub>16</sub> -12 | -12       | 125,6 | 4.94 | 80,6  | 3.17 | 45,0                    | 1.77 | 71,0  | 2.80 |
| 1EA16FJB16                             | 1 <sup>5</sup> / <sub>16</sub> -12 | -16       | 150,8 | 5.94 | 85,8  | 3.38 | 65,0                    | 2.56 | 71,0  | 2.80 |
| 1EA20FJB16                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -16       | 163,9 | 6.45 | 98,9  | 3.89 | 65,0                    | 2.56 | 82,0  | 3.23 |
| 1EA20FJB20                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 179,9 | 7.08 | 104,9 | 4.13 | 75,0                    | 2.95 | 82,0  | 3.23 |
| 1ZA20FJB20                             | 1 <sup>5</sup> / <sub>8</sub> -12  | -20       | 179,9 | 7.08 | 104,9 | 4.13 | 75,0                    | 2.95 | 82,0  | 3.23 |
| 1EA24FJB24                             | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |
| 1ZA24FJB24                             | 1 <sup>7</sup> / <sub>8</sub> -12  | -24       | 205,1 | 8.07 | 127,1 | 5.00 | 78,0                    | 3.07 | 104,0 | 4.09 |

# Global Spiral TTC Fittings

**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

**1E Fittings** for use on 4-wire construction

**1Z Fittings** for use on 6-wire construction



**Male Pipe**

| Fitting Part Number    | Thd.              | Hose Size | A     |      | D    |      | Hose Insertion Length L |      | HEX   |
|------------------------|-------------------|-----------|-------|------|------|------|-------------------------|------|-------|
|                        |                   |           | mm    | in   | mm   | in   | mm                      | in   |       |
| <b>Male Pipe (MP)</b>  |                   |           |       |      |      |      |                         |      |       |
| 1EA12MP12              | 3/4-14 NPTF       | -12       | 98,7  | 3.89 | 53,7 | 2.12 | 45,0                    | 1.77 | 1 1/4 |
| 1EA16MP16              | 1-11 1/2 NPTF     | -16       | 125,4 | 4.94 | 60,4 | 2.38 | 65,0                    | 2.55 | 1 1/2 |
| 1ZA16MP16              | 1-11 1/2 NPTF     | -16       | 125,4 | 4.94 | 60,4 | 2.38 | 65,0                    | 2.55 | 1 1/2 |
| 1EA20MP20              | 1 1/4-11 1/2 NPTF | -20       | 144,8 | 5.70 | 69,8 | 2.75 | 75,0                    | 2.95 | 1 7/8 |
| 1ZA20MP20              | 1 1/4-11 1/2 NPTF | -20       | 144,8 | 5.70 | 69,8 | 2.75 | 75,0                    | 2.95 | 1 7/8 |
| 1EA24MP24              | 1 1/2-11 1/2 NPTF | -24       | 150,6 | 5.93 | 72,6 | 2.86 | 78,0                    | 3.07 | 2     |
| 1ZA24MP24              | 1 1/2-11 1/2 NPTF | -24       | 150,6 | 5.93 | 72,6 | 2.86 | 78,0                    | 3.07 | 2     |
| 1EA32MP32              | 2-11 1/2 NPTF     | -32       | 153,2 | 6.03 | 75,2 | 2.96 | 78,0                    | 3.07 | 2 5/8 |
| 1ZA32MP32              | 2-11 1/2 NPTF     | -32       | 153,2 | 6.03 | 75,2 | 2.96 | 78,0                    | 3.07 | 2 5/8 |
| <b>Male Pipe (AP)*</b> |                   |           |       |      |      |      |                         |      |       |
| 1EA12AP12              | 3/4-14 API        | -12       | 109,4 | 4.31 | 64,5 | 2.54 | 45,0                    | 1.77 | 1 1/4 |
| 1EA16AP16              | 1-11 1/2 API      | -16       | 136,0 | 5.36 | 71,1 | 2.80 | 65,0                    | 2.56 | 1 1/2 |
| 1EA20AP20              | 1 1/4-11 1/2 API  | -20       | 155,3 | 6.12 | 80,5 | 3.17 | 75,0                    | 2.95 | 1 7/8 |
| 1ZA20AP20              | 1 1/4-11 1/2 API  | -20       | 155,3 | 6.12 | 80,5 | 3.17 | 75,0                    | 2.95 | 1 7/8 |
| 1EA24AP24              | 1 1/2-11 1/2 API  | -24       | 161,2 | 6.35 | 83,2 | 3.28 | 78,0                    | 3.07 | 2     |
| 1ZA24AP24              | 1 1/2-11 1/2 API  | -24       | 161,2 | 6.35 | 83,2 | 3.28 | 78,0                    | 3.07 | 2     |
| 1EA32AP32              | 2-11 1/2* API     | -32       | 164,2 | 6.47 | 86,2 | 3.40 | 78,0                    | 3.07 | 2 5/8 |
| 1ZA32AP32              | 2-11 1/2* API     | -32       | 164,2 | 6.47 | 86,2 | 3.40 | 78,0                    | 3.07 | 2 5/8 |

\*Conforms to API 5B thread standard for male pipe fittings.

# Assembly Instructions

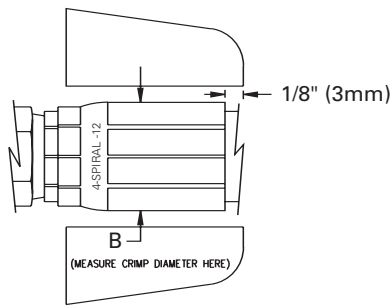


Fig. 1

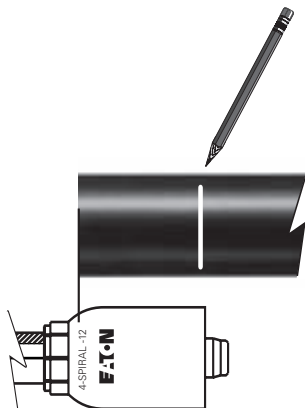
**Note:** These target settings for Aeroquip crimp machines are provided to aid in establishing actual settings. While the settings on this chart will give crimp diameters close to, or at the specified value, the machine operator must check to verify the actual diameter. Before using these target settings, the crimp machine must be properly calibrated. Consult your Aeroquip equipment manual for calibration procedures.

**1E Fittings** for use on 4-wire construction

**1Z Fittings** for use on 6-wire construction

| HOSE DASH SIZE          | FITTING PART NUMBER PREFIX | CRIMP DIAMETER "B" ± 0.15MM (± .006 IN) | CRIMP CAGE    | FIG. | FT1209 AND FT1307 TARGET SETTINGS | FT1340 AND FT1360 TARGET SETTINGS | FT1390 TARGET SETTING | GT9050 DIE NUMBER | GT9050 TARGET SETTING |
|-------------------------|----------------------------|---|---------------|------|-----------------------------------|-----------------------------------|-----------------------|-------------------|-----------------------|
| <b>FC254</b>            |                            |   |               |      |                                   |                                   |                       |                   |                       |
| -12                     | 1E12                       | 36.5 (1.437)                            | FT1209-200-82 | 1    | 0.552                             | 756                               | 281                   | M360              | 064                   |
| -16                     | 1E16                       | 45.4 (1.787)                            | FT1209-200-46 | 1    | 0.655                             | 815                               | 252                   | M450              | 050                   |
| -20                     | 1E20                       | 53.2 (2.094)                            | FT1209-200-14 | 1    | 0.023                             | 453                               | 430                   | M510              | 220                   |
| -24                     | 1E24                       | 61.2 (2.409)                            | FT1390-200-20 | 1    | 0.325                             | 626                               | 345                   |                   |                       |
| -32                     | 1E32                       | 73.6 (2.898)                            | FT1390-200-23 | 1    | 0.467                             | 707                               | 305                   |                   |                       |
| <b>FC273 and FC273B</b> |                            |   |               |      |                                   |                                   |                       |                   |                       |
| -12                     | 1E12                       | 36.7 (1.445)                            | FT1209-200-82 | 1    | 0.524                             | 740                               | 289                   | M360              | 084                   |
| -16                     | 1E16                       | 45.4 (1.787)                            | FT1209-200-46 | 1    | 0.655                             | 815                               | 252                   | M450              | 050                   |
| -20                     | 1Z20                       | 57.1 (2.248)                            | FT1209-200-15 | 1    | 0.328                             | 628                               | 344                   | M550              | 204                   |
| -24                     | 1Z24                       | 64.1 (2.524)                            | FT1390-200-16 | 1    | 0.382                             | 658                               | 329                   |                   |                       |
| -32                     | 1Z32                       | 79.1 (3.114)                            | FT1390-200-21 | 1    | 0.417                             | 679                               | 319                   |                   |                       |
| <b>FC606 and FC606B</b> |                            |   |               |      |                                   |                                   |                       |                   |                       |
| -16                     | 1Z16                       | 49.1 (1.933)                            | FT1209-200-46 | 1    | 0.108                             | 502                               | 406                   | M480              | 100                   |
| -20                     | 1Z20                       | 56.2 (2.213)                            | FT1209-200-15 | 1    | 0.470                             | 709                               | 304                   | M550              | 120                   |
| -24                     | 1Z24                       | 64.1 (2.525)                            | FT1390-200-16 | 1    | 0.376                             | 654                               | 330                   | M550              | 120                   |
| <b>GH466</b>            |                            |   |               |      |                                   |                                   |                       |                   |                       |
| -20                     | 1Z20                       | 56.9 (2.240)                            | FT1209-200-15 | 1    | 0.371                             | 652                               | 332                   | M550              | 184                   |
| -24                     | 1Z24                       | 64.3 (2.531)                            | FT1390-200-16 | 1    | 0.343                             | 636                               | 340                   |                   |                       |
| <b>GH506</b>            |                            |   |               |      |                                   |                                   |                       |                   |                       |
| -12                     | 1E12                       | 36.2 (1.425)                            | FT1209-200-82 | 1    | 0.595                             | 780                               | 269                   | M360              | 034                   |
| -16                     | 1E16                       | 44.9 (1.768)                            | FT1209-200-46 | 1    | 0.726                             | 855                               | 232                   | M420              | 272                   |
| -20                     | 1E20                       | 53.5 (2.106)                            | FT1209-200-14 | 1    | 0.059                             | 474                               | 420                   | M510              | 250                   |
| -24                     | 1E24                       | 60.4 (2.378)                            | FT1390-200-20 | 1    | 0.453                             | 699                               | 309                   |                   |                       |
| -32                     | 1E32                       | 73.6 (2.898)                            | FT1390-200-23 | 1    | 0.467                             | 707                               | 305                   |                   |                       |

## Assembly Instructions



1. Cut hose to proper length by subtracting appropriate fitting "D" dimensions from overall assembly length.
  - To determine hose insertion length (L), align end of hose to top of stenciled part number (located on the socket taper) and mark hose where the socket ends.
  - Install fittings onto hose until socket edge aligns with mark.
2. Select proper crimp cage and machine settings, then crimp to specified diameter.
  - To achieve full flat crimp locate back edge of socket approximately 1/8" (3mm) from back edge of crimp jaws as shown in Figure 1.



**FT1390 Crimp Machine**

Requires FT1209-200 and FT1390-200 series crimp cages for Global Spiral TTC Fittings

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**Aeroquip**

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