

**EATON**

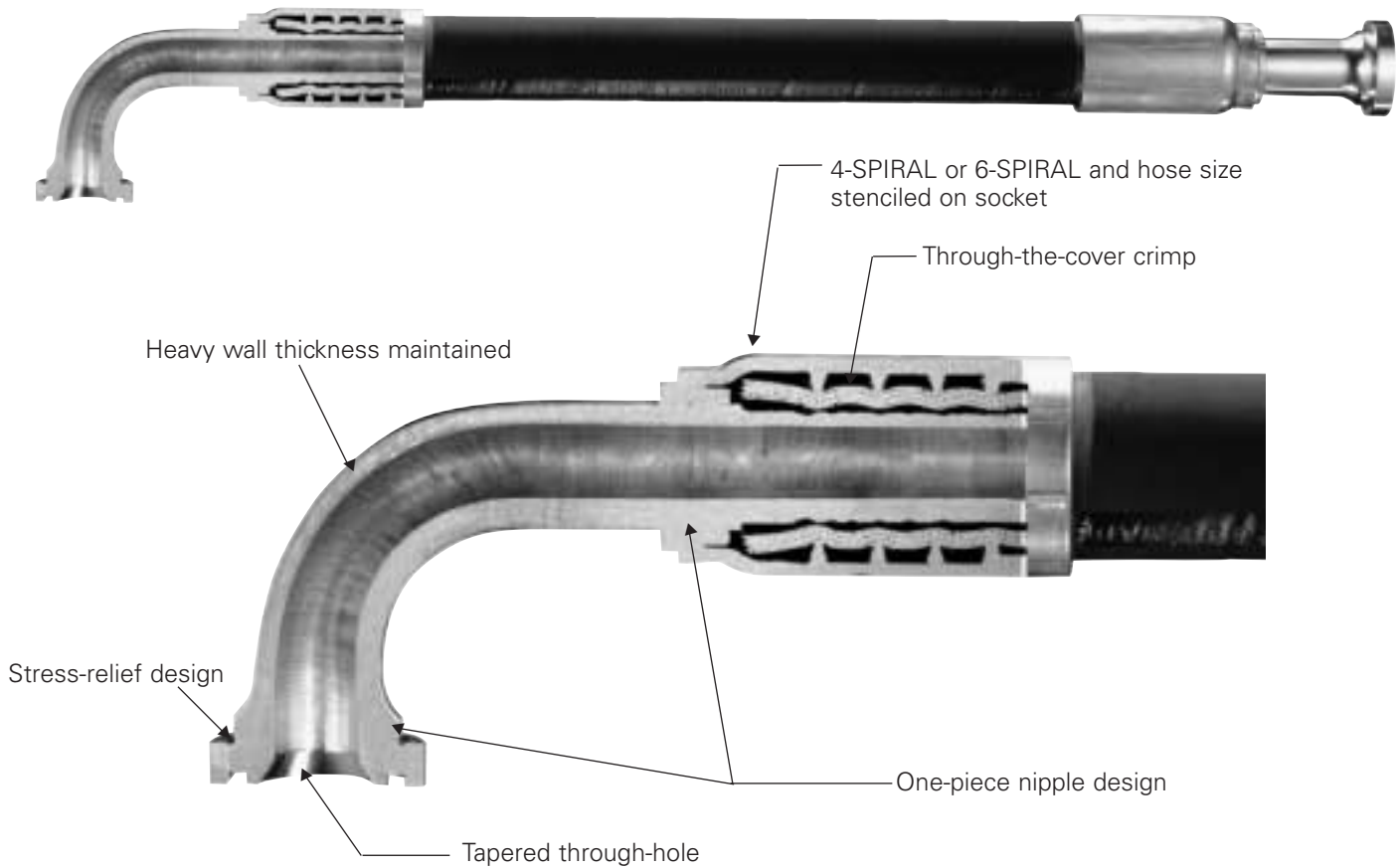
**Aeroquip**

## 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



# Part Number	 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
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.

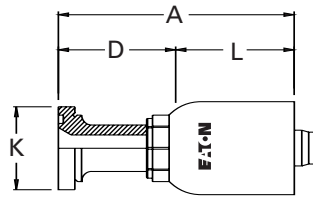
# Global Spiral TTC Fittings

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

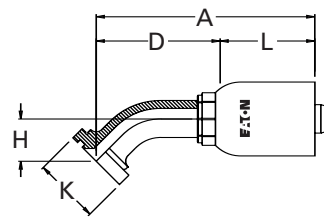
**Spiral TTC Fittings for use  
with hose:** FC254, FC273, FC273B,  
FC606, FC606B, GH466, GH506

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

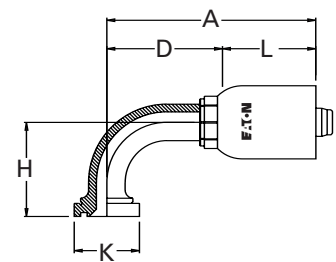
**1Z Fittings** for use on 6-wire  
construction



**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

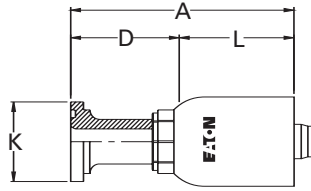
# Global Spiral TTC Fittings

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

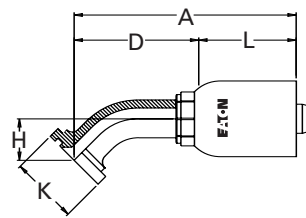
**Spiral TTC Fittings for use  
with hose:** FC254, FC273,  
FC273B, FC606, FC606B,  
GH466, GH506

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

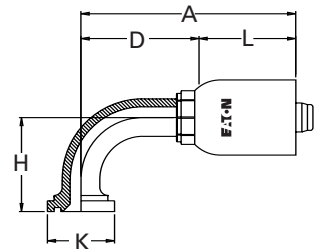
**1Z Fittings** for use on 6-wire  
construction



**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

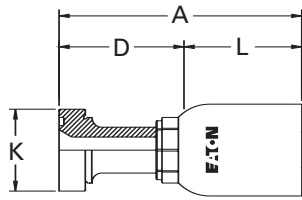
# Global Spiral TTC Fittings

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

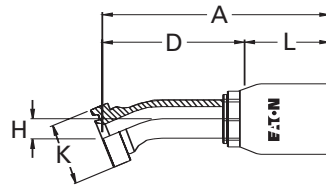
**1E Fittings** for use on 4-wire construction

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

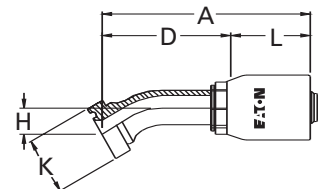
Compatible only with D-rings  
P/N FF90319.



**Cat Flange**  
Straight



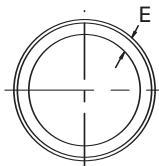
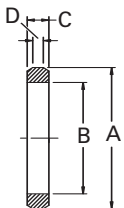
**Cat Flange**  
22.5° Elbow



**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.



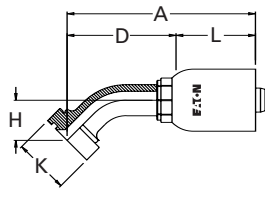
# Global Spiral TTC Fittings

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

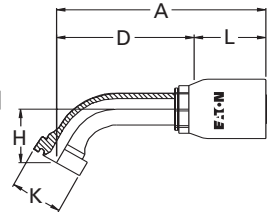
**1E Fittings** for use on 4-wire construction

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

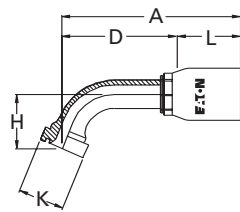
Compatible only with D-rings  
P/N FF90319.



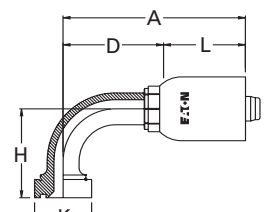
**Cat Flange**  
45° Elbow



**Cat Flange**  
60° Elbow



**Cat Flange**  
67.5° Elbow



**Cat Flange**  
90° Elbow

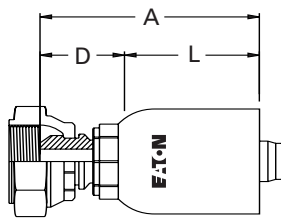
Fitting Part Number	Flange Head Dia. K Ø		Hose Size	A		D		Hose Insertion Length L		H	
	mm	in		mm	in	mm	in	mm	in	mm	in
<b>Caterpillar - 45° Split flange</b>											
1E12CTA12	41,3	1.62	-12	129,2	5.08	84,2	3.31	45,0	1.77	30,9	1.22
1E16CTA12	47,6	1.88	-12	139,8	5.50	94,8	3.73	45,0	1.77	35,3	1.39
1E16CTA16	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

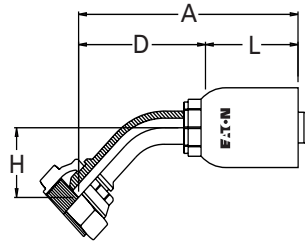
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, GH506

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

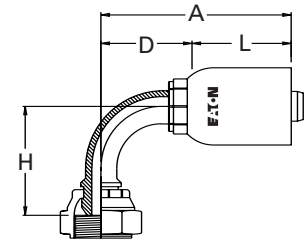
**1Z Fittings** for use on 6-wire construction



**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

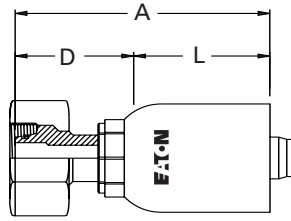
NOTE: The JIS parallel thread and BSPP connection are interchangeable.

# Global Spiral TTC Fittings

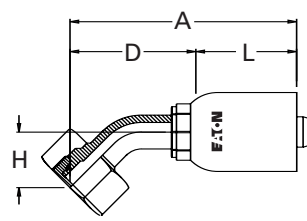
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

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

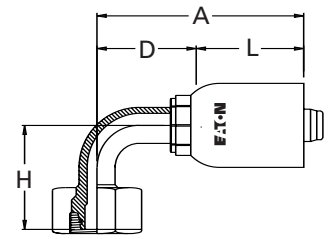
**1Z Fittings** for use on 6-wire construction



**DKOS Swivel**  
Straight



**DKOS Swivel**  
45° Elbow



**DKOS Swivel**  
90° Elbow

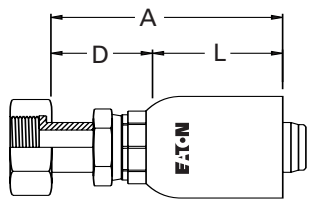
Fitting Part Number	Thd.	Tube O.D.	Hose Size	A		D		Hose Insertion Length L		H	
				mm	in	mm	in	mm	in	mm	in
<b>DKO Female swivel, heavy duty (DS)</b>											
1E20DS12	M36 x 2	25	-12	98,4	2.10	53,4	3.87	45,0	1.77		
1E25DS12	M42 x 2	30	-12	96,6	3.80	51,6	2.03	45,0	1.77		
1E25DS16	M42 x 2	30	-16	121,8	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

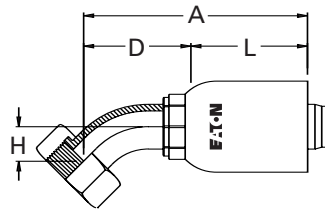
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

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

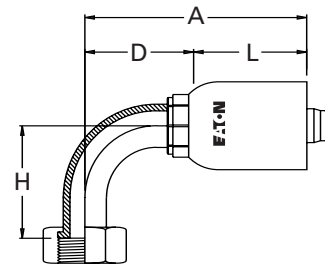
**1Z Fittings** for use on 6-wire construction



**ORS Swivel**  
Straight



**ORS Swivel**  
45° Elbow



**ORS Swivel**  
90° Elbow

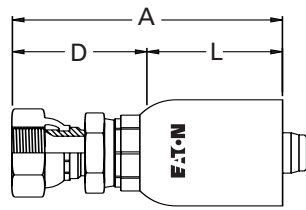
Fitting Part Number	Thd.	Hose Size	A		D		Hose Insertion Length L		H	
			mm	in	mm	in	mm	in	mm	in
<b>Female ORS swivel, straight</b>										
1EA12FR12	1 <sup>3</sup> / <sub>16</sub> -12	-12	95,9	3.77	50,9	2.00	45,0	1.77		
1EA16FR12	1 <sup>7</sup> / <sub>16</sub> -12	-12	84,6	3.33	39,6	1.56	45,0	1.77		
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

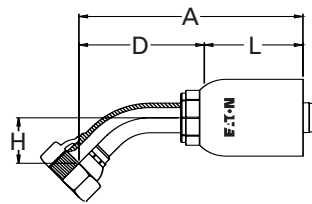
**Spiral TTC Fittings for use with hose:** FC254, FC273, FC273B, FC606, FC606B, GH466, GH506

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

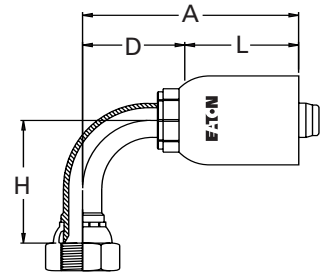
**1Z Fittings** for use on 6-wire construction



**SAE 37° (JIC) Swivel**  
Straight



**SAE 37° (JIC) Swivel**  
45° Elbow



**SAE 37° (JIC) Swivel**  
90° Elbow

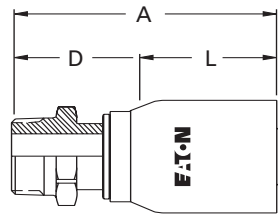
Fitting Part Number	Thd.	Hose Size	A		D		Hose Insertion Length L		H	
			mm	in	mm	in	mm	in	mm	in
<b>SAE 37° (JIC) Swivel</b>										
1EA12FJ12	1 <sup>1</sup> / <sub>16</sub> -12	-12	104,2	4.10	59,2	2.33	45,0	1.77		
1EA16FJ12	1 <sup>5</sup> / <sub>16</sub> -12	-12	106,6	4.20	61,6	2.43	45,0	1.77		
1EA16FJ16	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

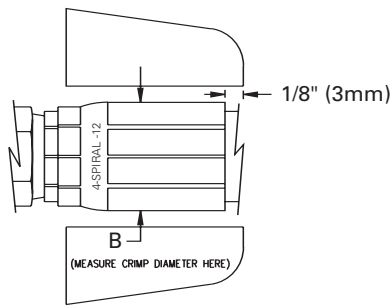


Fig. 1

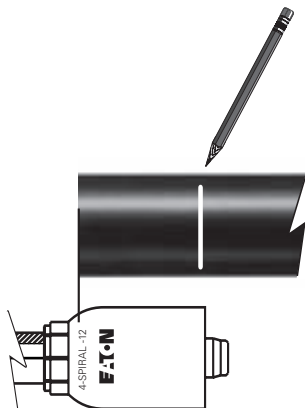
**Note:** These target settings for Aeroquip crimp machines are provided to aid in establishing actual settings. While the settings on this chart will give crimp diameters close to, or at the specified value, the machine operator must check to verify the actual diameter. Before using these target settings,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



- 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.
- 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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