

FC800 EverCool™
New Large Bore A/C Hose



Performance that
keeps you cool...
EverCool™

EATON

Powering Business Worldwide

Introducing FC800 EverCool™ Designed for Bus



Exceptional Performance

FC800 EverCool is ten times better!

- Designed to meet the needs of a global bus market FC800 EverCool has the lowest permeation of any large bore hose for the bus industry – anywhere! As much as 10 X better!
- New hose barrier technology gives FC800 a permeation rate of <math><1,0 \text{ kg/m}^2/\text{year}</math> or

FC800 EverCool Benefit/Value

- Lowest permeation supports environmental sustainability, reducing greenhouse gas emissions.
- Eaton's unique o-ring nipple design assures the exceptional performance of the FC800 EverCool hose is not compromised by the traditional hydraulic fitting design. FC800 assemblies virtually eliminate any refrigerant loss.

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FC800 EverCool™ Applications



Large bus applications



Train applications



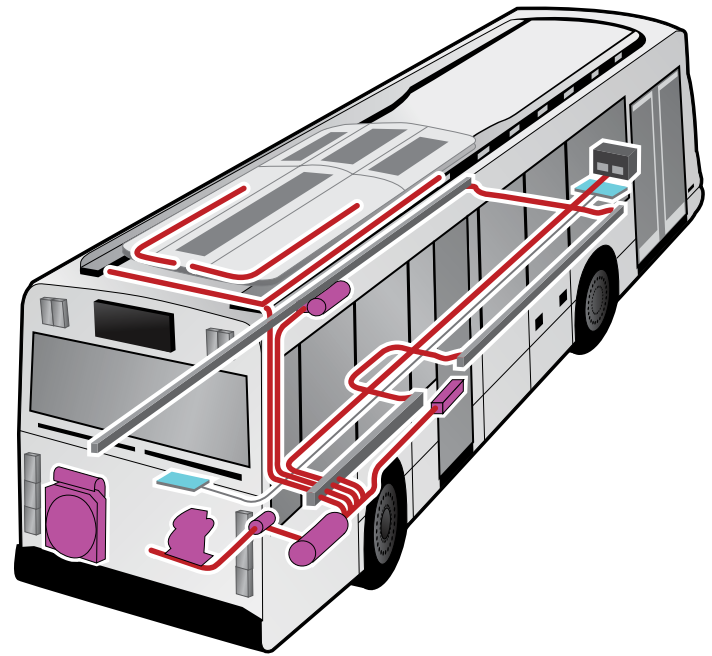
Military applications

FC800 EverCool™ A/C hose, has been tested to SAE J2064 with outstanding permeation rate results. The rating, an average of <math><1.0\text{kg/m}^2/\text{year}</math>, due to a "new to the world", barrier manufacturing technology and hose construction. The highly engineered design of the Eaton FC800 is the right product to significantly reduce the down time and maintenance cost, associated with "topping off the system" after the system has been idle during the cool-temperature months.

FC800 Hose Connectors include a new unique hose nipple, designed with an o-ring for assured sealing of the hose to fitting connection in a screw together type design. In addition, the hose nipple has an improved radius at the hose insert end to significantly improve ease of assembly.

FC800 is qualified with refrigerants R134a, R407C, R22 and others.

FC800 EverCool, is the right hose and connector system for metro, touring and other large bus Air Conditioning applications. In addition, train manufacturers, overhead cranes and large military vehicle manufacturers will appreciate the quality assurance of the Eaton FC800 hose and connector system.



Hose Information

Technical Data

Temperature Range:

-40°C up to +125°C

Permeation Rate:

<math><1,0\text{ kg/m}^2/\text{year}</math>
(for R134a at 80°C)

Moisture Ingression:

<math><0.039\text{ g/cm}^2/\text{year}</math>
according to SAE J2064 Type 1

Coupling Integrity:

Average <math><2\text{g}</math> (tested with 6 cycles) according to SAE J2064 Option 2

Fitting Range:

Reusable fitting with o-ring sealing

Application/Performance

Refrigerant Use:

R134a, R407C, HF01234yf
Additional refrigerants and refrigerant oils upon request.

Hose Constructions

Inner Tube: Chloroprene (CR)

Barrier Layer: Polyamide (PA)

Reinforcement: 1 wire braid

Cover: EPDM

Properties and Benefits

FC800 EverCool exceeds the requirements of the SAE J2064 by far. It exceeds the permeations rate (compared to the current Eaton product FC558 by a factor of 10). FC800 has an excellent bend radius, virtually 1/2 of the radius of comparable large bore hoses.

SAE J2064 B Hoses	Qualified Refrigerants	Bend Radius for Size 20 (in/mm)	Temperature Range	Fitting Qualification
FC800 EverCool™	R134a, R407C, R404A, R22	5.0/100	-40°C to (-40°F) +125°C* (248°F)	Reusable screw together with new nipple
Parker 244	R134a	9.0/230	-30°C to (-22°F) +125°C (257°F)	Parker 26 Series
Manuli Refri-Star	R134a, R404A, R407C	7.5/190	-40°C to (-40°F) +125°C (257°F)	100R5 screw together and flat crimp fittings
Manuli Nu-Clima	R134a	7.5/190	-40°C to (-40°F) +130°C (266°F)	100R5 screw together

*130°C intermittent

FC800 EverCool™ Hose Construction



Technical Data

Inner tube	CR Chloroprene offering great fluid compatibility
Reinforcement	1 steel braid
Permeation resistance	Technology Barrier Layer
Hose cover	EPDM
Temperature range	-40°C to +125°C
Permeation rate	<1 kg/m ² /year
Coupling integrity	Total loss rate of < 2g average, (tested to SAE J2064, 6 cycles of coupling integrity)
Moisture ingress	<0.039 g/cm ² /year according to SAE J2064 Type 1
Vacuum service	29.5 in/hg

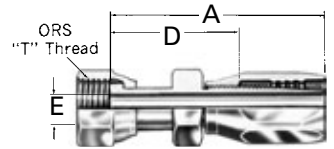
Eaton Part No.	Hose Size	I.D.		O.D.		Bend		Max Operating		Min Burst		Weight kg/	
		mm	in	mm	in	mm	in	bar	psi	bar	psi	m	ft
FC800-12	-12	16,4	.65	27.2	1.071	70	3.0	35	500	140	2000	0.67	.45
FC800-16	-16	22,8	.90	31.5	1.24	80	3.5	35	500	140	2000	0.71	.48
FC800-20	-20	29,3	1.15	38.6	1.52	100	4.0	35	500	140	2000	0.92	.62
FC800-24	-24	35,5	1.40	45.6	1.80	160	6.5	35	500	140	2000	1.16	.78

Summary and Comparison

	FC558	FC800	FC555
Siz/Bend radius (hose size: mm/in)	-12: 65/6.5, -16: 88/7.4, -20: 330/9.0, -24: 270/10.5	-12: 70/3.0, -16: 80/3.5, -20: 100/4.0, -24: 160/6.5	-12: 63.5/2.5, -16: 76.2/3.0, -20: 101.6/4.0
Temperature (°C)	-40°C to +125°C	-40°C to +125°C	-40°C to +125°C
Permeation (R134A) at 80°C in kg/m ² /year	7 kg/m ² /year	<1.0 kg/m ² /year	1.0 kg/m ² /year
Moisture ingress (SAE J2064) in g/cm ² /year	<0,039	<0,039	<0,039
Refrigerant use	R134a only	R134a, R407C, HF0-1234yf, R22	R134a, R22, R407C
Oil type	PAG, Ester based	PAG, Ester based, Mineral oils	PAG, Ester based, Mineral oils
Fitting availability	Reusable fittings	Reusable fittings	Factory crimp

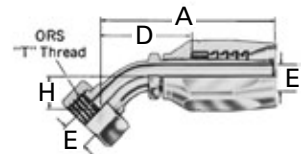
FC800 EverCool™ Reusable Fittings

Female ORS Swivel



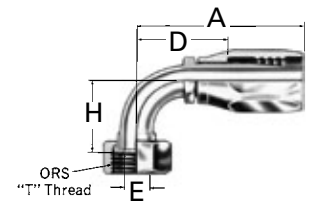
Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Hole Dia.		Hex	O-ring Ref
				mm	in.	mm	in.	mm	in.		
12	12	EJ5305-1212S	1-3/16-12	93,0	3.66	54,4	2.14	11,9	.47	1-1/4	FF91026-12
16	16	EJ5305-1616S	1-7/16-12	85,9	3.38	56,4	2.22	17,5	.69	1-5/8	FF91026-16
20	20	EJ5305-2020S	1-11/16-12	92,3	3.63	58,8	2.31	24,2	.95	1-7/8	FF91026-20
24	24	EJ5305-2424S	2-12	96,2	3.79	61,2	2.41	29,5	1.16	2-1/4	FF91026-24

Female ORS Swivel 45° Tube Elbow



Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.	Hex	O-ring Ref	
				mm	in.	mm	in.	mm	in.				
12	12	EJ5361-1212S	1-3/16x12	97,5	3.84	57,4	2.26	21,0	.83	11,9	.47	1-3/8	FF91026-12
16	16	EJ5361-1616S	1-7/16x12	91,9	3.62	59,6	2.35	24,0	.94	17,5	.69	1-5/8	FF91026-16
20	20	EJ5361-2020S	1-11/16x12	103,6	4.08	69,1	2.72	25,0	.98	24,2	.95	1-7/8	FF91026-20
24	24	EJ5361-2424S	2x12	109,8	4.32	72,6	2.86	27,0	1.06	29,5	1.16	2-1/4	FF91026-24

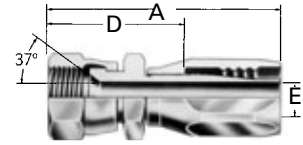
Female ORS Swivel 90° Tube Elbow



Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.	Hex	O-ring Ref	
				mm	in.	mm	in.	mm	in.				
12	12	EJ5362-1212S	1-3/16x12	95,0	3.74	55,1	2.17	48,3	1.90	11,9	.47	1-3/8	FF91026-12
16	16	EJ5362-1616S	1-7/16x12	90,2	3.55	57,9	2.28	56,4	2.22	17,5	.69	1-5/8	FF91026-16
20	20	EJ5362-2020S	1-11/16x12	102,1	4.02	67,3	2.65	63,5	2.50	24,2	.95	1-7/8	FF91026-20
24	24	EJ5362-2424S	2x12	112,3	4.42	75,4	2.97	68,6	2.70	29,5	1.16	2-1/4	FF91026-24

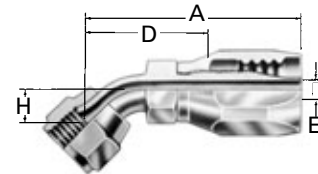
FC800 EverCool™ Reusable Fittings

Female SAE 37° JIC Swivel



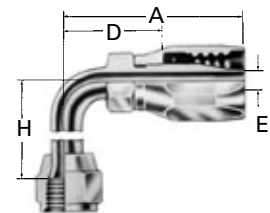
Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Hole Dia.		Hex	O-ring Ref
				mm	in.	mm	in.	mm	in.		
12	12	EJ5306-1212S	1-1/16-12	76,9	3.03	38,3	1.51	11,9	.47	1-1/4	FF91026-12
16	16	EJ5306-1616S	1-5/16-12	70,6	1.78	41,1	1.62	17,5	.69	1-1/2	FF91026-16
20	20	EJ5306-2020S	1-5/8-12	80,1	3.15	46,6	3.15	24,2	.95	2	FF91026-20
24	24	EJ5306-2424S	1-7/8-12	84,5	3.33	49,5	1.95	29,5	1.16	2-1/4	FF91026-24

Female SAE 37° JIC Swivel 45° Tube Elbow



Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.		Hex	O-ring Ref
				mm	in.	mm	in.	mm	in.	mm	in.		
12	12	EJ5359-1212S	1-1/16-12	96,1	3.78	56,2	2.21	19,7	.78	11,9	.47	1-1/4	FF91026-12
16	16	EJ5359-1616S	1-5/16-12	95,2	3.75	63,0	2.48	27,1	1.07	17,5	.69	1-1/2	FF91026-16
20	20	EJ5359-2020S	1-5/8-12	106,9	4.21	72,4	2.85	31,0	1.22	24,2	.95	2	FF91026-20

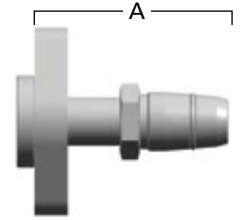
Female JIC/SAE 37° Swivel 90° Tube Elbow



Hose Size	Tube Size	Part Number	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.		Hex	O-ring Ref
				mm	in.	mm	in.	mm	in.	mm	in.		
12	12	EJ5360-1212S	1-1/16-12	95,0	3.74	55,1	2.17	46,3	1.82	11,9	.47	1-1/4	FF91026-12
16	16	EJ5360-1616S	1-5/16-12	90,3	3.56	58,2	2.29	60,7	2.39	17,5	.69	1-1/2	FF91026-16
20	20	EJ5360-2020S	1-5/8-12	102,1	4.02	67,3	2.65	69,8	2.75	24,2	.95	2	FF91026-20

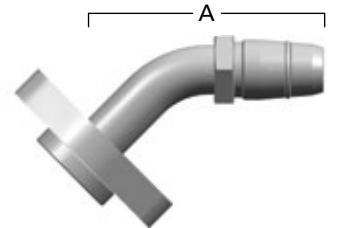
FC800 EverCool™ Reusable Fittings

The following BOCK Fittings are MTO.
The Nipple and the Socket must be ordered separately.
Please contact Eaton Customer Service to determine leadtime.



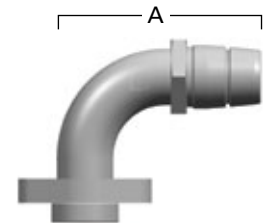
BOCK, Straight

Hose Size	Tube Size	Part # for Hose Nipple	Thread Size	A		Hose Cut-off Factor		Hole Dia.		Nipple Hex (Metric)	Part# Socket	Socket Hex (Metric)
				mm	in.	mm	in.	mm	in.			
16	16	GA25126-16	-	96,0	3.78	66,5	2.62	17,5	.69	24	G1212-16K	36
20	20	GA25126-20	-	101,5	4.00	68,0	2.68	24,2	.95	36	G1212-20K	46
24	24	GA25126-24	-	96,0	3.78	53,4	2.10	29,5	1.16	46	G1212-24K	50



BOCK, 45° Tube Elbow

Hose Size	Tube Size	Part # for Hose Nipple	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.		Nipple Hex (Metric)	Part # Socket	Socket Hex (Metric)
				mm	in.	mm	in.	mm	in.	mm	in.			
16	16	GA25127-16	-	114,1	4.49	84,6	3.33	46,1	1.81	17,5	.69	24	G1212-16K	36
20	20	GA25127-20	-	122,6	4.83	89,1	3.51	46,1	1.81	24,2	.95	36	G1212-20K	46
24	24	GA24127-24	-	134,7	5.30	99,7	3.93	38,0	1.50	29,5	1.16	46	G1212-24K	50



BOCK, 90° Tube Elbow

Hose Size	Tube Size	Part # for Hose Nipple	Thread Size	A		Hose Cut-off Factor		Drop Dim.		Hole Dia.		Nipple Hex (Metric)	Part # Socket	Socket Hex (Metric)
				mm	in.	mm	in.	mm	in.	mm	in.			
24	24	GA25128-24	-	109,5	4.31	74,5	2.93	90,5	3.56	29,5	1.16	46	G1212-24K	50

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