ENGINEERING
TOMORROW

Catalog

Danfoss A/C and refrigeration **hose and fittings**

ENGINEERING
TOMORROW

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Meet Danfoss' full family of mobile A/C hoses

Setting new standards for hose performance, flexibility, and durability in the mobile A/C industry.

Customers today are demanding more from their vehicles A/C system. Every component and system have to work harder and last longer, delivering consistent results mile after mile. Couple that with evolving environmental standards and you have manufacturers wondering how to design vehicles that are both productive and environmentally sustainable.

The answer, the EverCool™ family of high-performance A/C hoses.

Our complete portfolio of EverCool hoses — including the EC007 barrier hose, industry-leading GH001 veneer hose, and FC800 large bore hose — provides options for the full range of mobile A/C applications, including bus, truck, agricultural, military, and construction vehicles. All three hoses in the portfolio are qualified with multiple refrigerants, including R1234yf.

GH001 Hose packaging specifications

Cleveland stocked part numbers

	WR50 (BOX)			WR200 (-16 = WR250) (BOX)		
BASE PART #	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)
GH001-4	50	1	50	200	3	40
GH001-6	50	1	50	200	3	40
GH001-8	50	1	50	200	3	40
GH001-10	50	1	50	200	3	40
GH001-12	50	1	50	200	3	40
GH001-16	50	1	50	200	3	40

Reeled part number format: GH001-4WR50 or GH001-4WR200

Van Wert stocked part numbers

	RL (REEL)		
BASE PART #	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)
GH001-4	500	8	10
GH001-6	560	3	40
GH001-8	575	3	40
GH001-10	560	3	40
GH001-12	367	3	40
GH001-16	250	3	40

Bulk part number format: GH001-4

For Van Wert bulk ordering only (using base part #): Order the quantity of hose desired, in feet, and that is what will ship from Van Wert (cannot guarantee continuous lengths).

Reeled part number format: GH001-4RL

How to use this catalog

Accurate processing and prompt delivery of your order depends on easy identification of your requirements. Order Danfoss parts using correct part numbers as described in this catalog. Inquiries and orders should be directed to your Danfoss distributor.

EC007 Hose packaging specifications

Cleveland stocked part numbers

	WRL (REEL)			WR100 (BOX)		
BASE PART #	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)
EC007-06	560	5	40	100	2	40
EC007-08	575	5	40	100	2	40
EC007-10	550	5	40	100	2	40
EC007-12	350-375	5	40	100	2	40

Reeled part number format:
EC007-06WRL or EC007-06W100

Van Wert stocked part numbers

	RL (REEL)		
BASE PART #	TOTAL LENGTH (FT)	MAX # OF PIECES	MIN. LENGTH/ PIECE (FT)
EC007-06	560	5	40
EC007-08	5750	5	40
EC007-10	550	5	40
EC007-12	350-375	5	40
EC007-14	350-375	5	40

Bulk part number format: EC007-06

For Van Wert bulk ordering only (using base part #):
Order the quantity of hose desired, in feet, and that is what will ship from Van Wert (cannot guarantee continuous lengths).

Reeled part number format: EC007-06RL

FC800 and specialty hose packaging specifications

Bulk part number format: FC800-16 / FC555-16 / FC802-16

For bulk ordering in Van Wert (using base part #): Order the quantity of hose desired, in feet, and that is what will ship from Van Wert (cannot guarantee continuous lengths).

General information

Flexible hose lines offer many advantages over rigid tubing including routing ease, vibration absorption, sound deadening, and the ability to accommodate movement of connected components. However, hose lines require caution in use not only to provide long service but also to guard against potentially dangerous failure.

Important

Special care should be taken when selecting the proper refrigerant hose and fittings. The information contained in this bulletin is provided as a general guide to assist in making the appropriate product selection. This guide does not address every parameter that must be considered when selecting a product. The user must make the final product selection in consideration of the user's unique requirements.

Additionally, special care must be taken when working with refrigerant systems. Sudden escape of refrigerant gases may result in blindness or severe injury. Danfoss recommends adherence to the guidelines and general practices as defined in SAE J2211 for the service and containment of HFC-134a, as well as all applicable EPA guidelines and procedures concerning the service of refrigerant systems.

Danfoss fitting tolerances are engineered to match Danfoss hose tolerances. The use of Danfoss fittings on hose supplied by other manufacturers and/or the use of EverCool hose with fittings supplied by other manufacturers may result in the production of unreliable and unsafe hose assemblies and is not authorized by Danfoss.

DANFOSS SHALL NOT BE SUBJECT TO AND DISCLAIMS ANY OBLIGATIONS OR LIABILITIES (INCLUDING BUT NOT LIMITED TO ALL CONSEQUENTIAL, INCIDENTAL AND CONTINGENT DAMAGES) ARISING OUT OF BREACH OF CONTRACT OR OF WARRANTY OR ARISING FROM TORT CLAIMS (INCLUDING WITHOUT LIMITATION NEGLIGENCE AND STRICT LIABILITY) OR OTHER THEORIES OF LAW WITH RESPECT TO ANY HOSE ASSEMBLIES NOT PRODUCED FROM GENUINE DANFOSS HOSE FITTINGS, HOSE AND DANFOSS APPROVED EQUIPMENT, AND IN CONFORMANCE WITH DANFOSS PROCESS AND PRODUCT INSTRUCTIONS FOR EACH SPECIFIC HOSE ASSEMBLY.

Chemical compatibility charts

Refrigerant compatibility chart of refrigerant hoses

	Hose style		
Refrigerant	**GH001**	**EC007**	**FC800**
R-1234YF	Y	Y	Y
R134A	Y	Y	Y
R407C	Y	Y	Y
R410A	Y	Y	Y
R404A	Y	•	Y

Y = Compatible N = Non-compatible
• Contact product support for application review

Lubricant compatibility chart

	Hose style		
Lubricant	**GH001**	**EC007**	**FC800**
Mineral oil	Y	•	Y
PAG	Y	Y	Y
Ester oil	Y	Y	Y
Alkylbenzene	•	•	Y

Y = Compatible N = Non-compatible
• Contact product support for application review

Hoses - EverCool and specialty

EverCool hose offerings

GH001

EverCool A/C and Refrigeration

Exceeds: SAE J3062 / J2064 Type E, Class 1

Construction	Operating parameters	Benefits	Application
Tube Dual nylon veneer **Reinforcement** 1 textile braid **Cover** EPDM	-40 °C to +140 °C (-40 °F to +284 °F) **R1234yf effusion** .3 kg/m²/yr at 80 °C **R134a effusion** .5 kg/m²/yr at 80 °C **Oils** POE, PAG, Mineral oil **Moisture ingression** <0.039 g/cm²/year according to SAE J3062, Class 1	• Extremely low permeation • Excellent heat resistance offering a higher functional temperature range than SAE J3062/ J2064 Type C or E hoses • Ozone and UV resistant • Easy to install - significant reduction in potential hose damage; GH001 has maximum kink resistance, temperature resistance • SAE J3062 Type E veneer tube offers excellent oil and refrigerant compatibility	• A/C systems for truck, bus, agriculture, construction equipment, and refrigeration systems

Part #	Hose I.D.			Hose O.D.		Max. Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in
GH001-4	5	5.1	0.20	11.5	0.45	35	500	140	2000	38.1	1.50	0.10	0.07	94,8	28
GH001-6	8	8.1	0.32	15.2	0.60	35	500	140	2000	50.0	2.00	0.15	0.10	94,8	28
GH001-8	10	10.7	0.42	18.3	0.72	35	500	140	2000	63.0	2.50	0.21	0.14	94,8	28
GH001-10	12	13.2	0.52	20.7	0.81	35	500	140	2000	76.2	3.00	0.22	0.15	94,8	28
GH001-12	16	16.5	0.65	25.1	0.99	35	500	140	2000	101.6	4.00	0.34	0.23	94,8	28
GH001-16	19	22.9	0.90	31.4	1.24	35	500	140	2000	177.8	7.00	0.37	0.25	94,8	28

Fitting reference

EZ Clip fittings – refer to section beginning on page 14
Factory Crimp – for more information, contact Danfoss Customer Service at +1 (952) 937-9800

EverCool hose offerings

EC007

EverCool EC007

Exceeds: SAE J3062 / J2064 Type C, Class 1

Construction	Operating parameters	Benefits	Application
Tube Chloroprene (CR) **Reinforcement** 1 textile braid **Cover** Bromobutyl (BIIR)	-40 °C to +135 °C (-4 °F to +275 °F) **R1234yf effusion** .65 kg/m²/yr at 80 °C **R134a effusion** .8 kg/m²/yr at 80 °C **Oils** POE, PAG **Moisture ingression** <0.039 g/cm²/year according to SAE J3062, Class 1	• Significantly exceeds SAE J3062 and SAE J2064 specifications • Operating temperature range: -40 °C to 135 °C (-4 °F to 275 °F) • Qualified with R134a, R1234yf, R407C, R513a, R404a and R452a • Class 1 moisture ingression rating • Ozone and UV resistant	• Truck, bus, agricultural, and construction vehicles

Part #	Hose I.D.			Hose O.D.		Max. Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in
EC007-06	8	8.10	0.32	15.20	0.60	35	500	140	2000	50	50	2.0	0.14	94,8	28
EC007-08	10	10.70	0.42	17.80	0.70	35	500	140	2000	64	64	2.5	0.17	94,8	28
EC007-10	12	12.90	0.51	19.90	0.70	35	500	140	2000	76	76	3.0	0.19	94,8	28
EC007-12	16	16.30	0.64	24.10	0.95	35	500	140	2000	102	102	4.0	0.34	94,8	28
EC007-14	18	18.80	0.74	28.40	1.12	35	500	140	2000	127	127	5.0	0.43	94,8	28

Fitting reference

Flat crimp fittings – refer to section beginning on page 53
Factory Crimp – for more information, contact Danfoss Customer Service at +1 (952) 937-9800

EverCool hose offerings

FC800

EverCool A/C

Exceeds: SAE J3062 / J2064 Type B, Class 1

Construction	Operating parameters	Benefits	Application
Tube Chloroprene (CR) **Reinforcement** 1 wire braid **Cover** EPDM	-40 °C to +125 °C (-40 °F to +257 °F) **Permeation rate** <1.0 kg/m²/yr (for R134a at 80 °C) **Moisture ingression** <0.039 g/cm²/year according to SAE J3062, Class 1 **Refrigerant use** R134a, R407C, R1234yf; additional refrigerants and refrigerant oils upon request	• FC800 EverCool exceeds the requirements of the SAE J3062 • FC800 has an excellent bend radius, virtually 1/2 of the radius of comparable large bore hoses • Ozone and UV resistant	• Metro, large bus, and rail

Part #	Hose I.D.			Hose O.D.		Max. Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in
FC800-12	16	16.4	0.65	27.2	1.07	35	500	140	2000	70	2.8	0.67	0.45	94,8	28
FC800-16	19	22.8	0.90	31.5	1.24	35	500	140	2000	80	3.2	0.71	0.48	94,8	28
FC800-20	25	28.3	1.15	38.6	1.52	35	500	140	2000	100	3.9	0.92	0.62	94,8	28
FC800-24	31	35.5	1.40	45.6	1.80	35	500	140	2000	160	6.3	1.16	0.78	94,8	28

Fitting reference

Field attachable – refer to section beginning on page 49
FC800 A/C – refer to page 62

Danfoss hose offerings

FC555

Danfoss A/C

Exceeds: SAE J3062 / J2064

Construction	Operating parameters	Benefits	Application
Tube Corrugated nylon **Reinforcement** Textile braid **Cover** Polyester (PET)	-40 °C to +125 °C (-4 °F to +257 °F) **Permeation rate** <1,0 kg/m²/year (for R134a at 80 °C) **Moisture ingression** <0.039 g/cm²/year according to SAE J3062, Class 1 **Refrigerant use** R-134a, R-12, R-22, R-502; additional refrigerants and refrigerant oils upon request	• Optimum sealing at the hose/nipple interface • Polyester outer braid for higher abrasion resistance • Corrugated for increased flexibility	• Metro, large bus, and rail

Part #	Hose I.D.			Hose O.D.		Max. Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in
FC555-12	12	15.9	0.62	29,7	1.17	35	500	175	2500	63.5	2.5	0.30	2.40	94,8	10
FC555-16	16	22.2	0.88	35,6	1.40	35	500	175	2500	76.2	3.0	0.40	3.00	94,8	10
FC555-20	25	28.6	1.12	42,4	1.67	35	500	175	2500	101.6	4.0	0.49	0.33	94,8	10

Fitting reference

Factory Crimp ONLY– For more information, contact Danfoss Customer Service at +1 (952) 937-9800

Danfoss hose offerings

FC802

Danfoss A/C

Exceeds: SAE J3062 / J2064

Construction	Operating parameters	Benefits	Application
Tube Nylon lined **Reinforcement** Textile braid **Cover** EPDM	-40 °C to +121 °C (-40 °F to +250 °F) **Permeation rate** 1.21 kg/m²/yr (for R134a at 80 °C) **Moisture ingression** <0.039 g/cm²/year according to SAE J3062, Class 1 **Refrigerant use** R134a, R407C, R1234yf; additional refrigerants and refrigerant oils upon request	• FC802 exceeds the requirements of the SAE J3062 / J2064 • Large selection of fitting configurations, using 100R5 field attachable	• Metro, large bus, and rail • Overhead cranes and stationary equipment

Part #	Hose I.D.			Hose O.D.		Max. Operating Pressure		Min. Burst Pressure		Min. Bend Radius		Weight		Vacuum Service	
	DN	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	kPa	in
FC802-04	4	5.10	0.20	13.2	0.52	35	500	175	2500	50.8	2.0	0.16	0.11	94,8	10
FC802-06	6	8.38	0.33	17.3	0.68	35	500	175	2500	63.5	2.5	0.24	0.16	94,8	10
FC802-08	8	10.67	0.42	19.6	0.77	35	500	175	2500	76.2	3.0	0.27	0.18	94,8	10
FC802-10	10	13.20	0.52	23.4	0.92	35	500	175	2500	88.9	3.5	0.42	0.28	94,8	10
FC802-12	12	16.51	0.65	27.4	1.08	35	500	175	2500	114.3	4.5	0.51	0.34	94,8	10

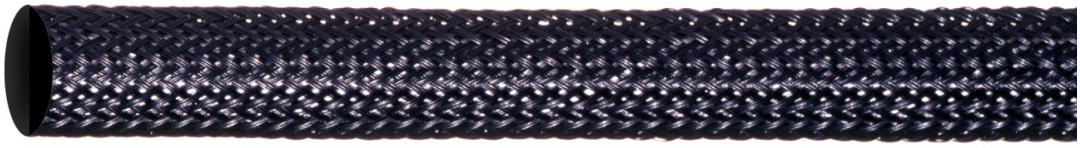
Fitting reference

FC802 utilizes 100R5 field attachable fittings.

Accessories

Accessories

Nylon sleeving



Designed for abrasion protection of air conditioning hoses

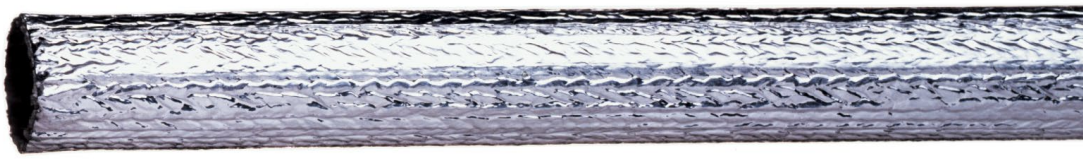
Features and Benefits

- Easy to cut and assemble
- Tight fit for tight spaces
- Nylon tie straps will hold in place (FF9349-22-150 for all sizes of sleeve)

Hose Sizes	Sleeve Size used for GH001 (Part Number)
GH001-6	FF90224-16
GH001-8	FF90224-16
GH001-10	FF90224-24
GH001-12	FF90224-24

Part Number	Sleeve Will Accept a Maximum O.D. of	Hose with a Minimum O.D. of
FF90224-16	1.12	0.68
FF90224-24	1.93	1.18

Heat sleeving



Designed for heat deflection of air conditioning hoses

Features and Benefits

- Fiberglass reinforced
- Wall thickness .025
- Protects from radiant heat to plus 400 ˚C (review application with Danfoss Sales Representative)
- Nylon tie straps will hold in place (FF9349-22-150 for all sizes)

FF90356 Reflective Heat Sleeve	Cross Diameter Size (inches)	For GH001 Hose Size
FF90356-01	1.00	-6 and -8
FF90356-02	1.25	-10 and -12
FF90356-04	0.75	-6
FF90356-05	0.62	-4
FF90356-06	1.50	-16

Accessories

Retaining bracket

Mechanical tube brackets

Danfoss' tube brackets have been designed specifically for a customer's unique bracketing requirements. The three-piece design begins with an EPDM grommet (figure 4), which minimizes tube friction, and "locks" the bracket onto the tube. This design withstands vibration in the toughest of environments, without slippage, and offers ease of fit up, that is often difficult with welded brackets. To complete the assembly, the bracket connection is the customer's design, and the bracket retainer, or bracket top, is sized for a specific tube O.D.

To install the assembly, the bracket top and bracket bottom, lock into place, with the ease of a flange screw.

Part numbers for the grommet, bracket top and flange screw are shown in the chart below. A sample of the connecting bracket, is shown in figure A.

Contact your Danfoss Sales Representative, or Danfoss Applications Team to discuss additional designs that are currently available, or the opportunity to support a new design for your specific application.

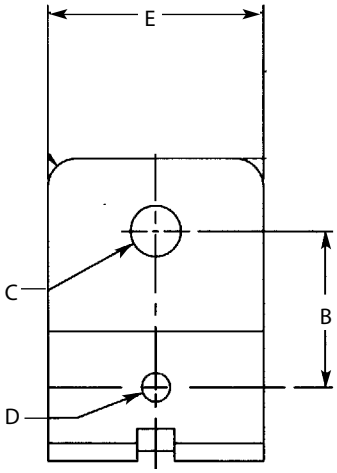


Figure 1 Bracket Top

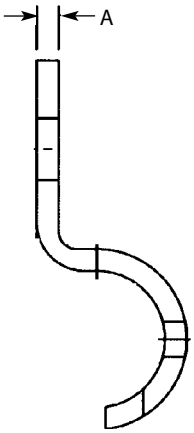


Figure 2 Bracket Top

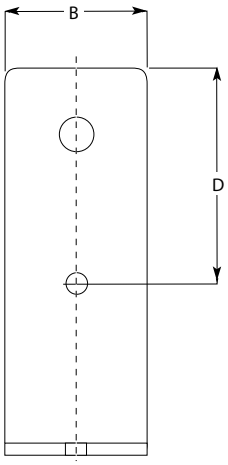


Figure 3 Base Bracket

Figure 4 Grommet

Description	Part #	Tube Size Used On	"A" Bracket Thickness	"B" Bracket Retainer Width	"C" Bracket Retainer Height	"D" Base Bracket Length
Tube Grommet	FF90420-06	6	—	—	—	—
Tube Grommet	FF90420-08	8	—	—	—	—
Tube Grommet	FF90420-14	14	—	—	—	—
Flange Screw	FF90453	All	—	—	—	—
Bracket Top*	FF90421-06	6	2.5/.098	30/1.181	7/.276	—
Bracket Top*	FF90421-08	8	2.5/.098	30/1.181	7/.276	—
Bracket Top*	FF90421-14	14	2.5/.098	30/1.181	7/.276	—
Base Bracket**	FF90422-14	14	2.5/.098	30/1.181	—	54/2.13

** Figure 1 and 2*

*** Figure 3*

Additional **resources**

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