

CNG hose and fittings tech literature

# Certified CNG hose and fitting products

**EATON**

*Powering Business Worldwide*



# Hoses

## 35NG

### High pressure CNG hose



Eaton 35NG CNG hoses are designed to meet the rigorous requirements of high pressure CNG applications. A specially designed conductive layer within the hose dissipates static electricity and provides optimum performance. The black polyurethane cover provides industry leading UV resistance allowing for extended life in outdoor applications. The hose is available in single and twin line options where a vent line is necessary.

# Part number	Hose size	DN	Hose I.D.		Hose O.D.		Max. working pressure		Burst pressure		Min. bend radius		Weight		Length	
			mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft	mm	ft
35NG-04-250BX	-04	6	6,4	0.25	16,0	0.63	345	5,000	1,379	20,000	51,0	2.00	0,16	0.11	76,2	250
35NG-06-250BX	-06	10	9,7	0.38	19,5	0.77	345	5,000	1,379	20,000	102,0	4.00	0,22	0.15	76,2	250
35NG-08-250BX	-08	12	12,8	0.50	22,5	0.89	345	5,000	1,379	20,000	140,0	5.50	0,31	0.21	76,2	250
<b>Twin-Line</b>																
35NG-0404-250BX	04, -04	-	-	-	-	-	345	5,000	1,379	20,000	51,0	2.00	0,32	0.23	76,2	250
35NG-0406-250BX	04, -06	-	-	-	-	-	345	5,000	1,379	20,000	51,0	2.00	0,38	0.27	76,2	250
35NG-0408-250BX	04, -08	-	-	-	-	-	345	5,000	1,379	20,000	51,0	2.00	0,47	0.33	76,2	250

#### Construction:

**Tube:** Conductive nylon core

**Reinforcement:** Synthetic fiber

**Cover:** Black perforated polyurethane

#### Temperature range:

Temperature range

-40°C to + 85°C  
(-40°F to + 185°F)

#### Applications:

- CNG refueling dispensers
- CNG transfer lines
- High-pressure CNG lines

#### Features:

- Dissipates static electricity
- Low volumetric expansion
- UV resistant cover
- Twin-line designs available with vent hose
- Designed for electrically conductive fittings

#### Agency listings:

ANSI/CSA NGV4.2-2014 (Class A, D)

ANSI/CSA NGV3.1-2014 (Class B)

Conforms to NFPA 52

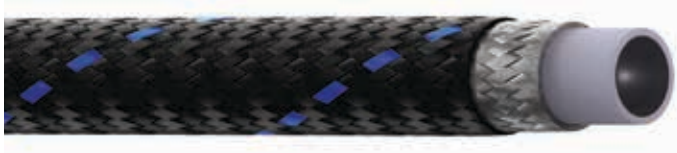
Certified by:



# Hoses

## NG-TW series

### Low pressure CNG hose



Eaton NG-TW CNG hoses are tailored for use in low pressure, on-vehicle CNG applications. The conductive Teflon® inner tube dissipates static electricity for safety. The stainless steel braid and polyester blended outer cover protect against both corrosion and abrasion. In addition, the polyester cover is fire retardant and adds an additional layer of protection.

# Part number	Hose I.D.		Hose O.D.		Max. working pressure		Burst pressure		Min. bend radius		Weight	
	mm	in	mm	in	bar	psi	bar	psi	mm	in	kg/m	lbs/ft
NG-6TW	7.9	0.31	13.6	0.54	30	435	104	1,508	101.6	4.00	0.18	0.12
NG-8TW	10.6	0.42	16.4	0.65	30	435	120	1,740	133.4	5.25	0.24	0.16
NG-10TW	12.7	0.50	19.1	0.75	30	435	104	1,508	165.1	6.50	0.27	0.18

#### Construction:

**Tube:** Conductive Teflon inner tube

**Reinforcement:** 304 stainless steel wire braid

**Cover:** Fire resistant black polyester blend cover with a blue tracer

#### Temperature range:

-40°C to + 120°C  
(-40°F to + 248°F)

#### Application:

- Low pressure CNG lines

#### Features:

- Dissipates static electricity
- Low volumetric expansion
- UV resistant cover
- Designed for electrically conductive fittings

#### Agency listings:

ANSI/CSA NGV 3.1  
(Class C)

Conforms to NFPA 52

Teflon™ is a trademark of The Chemours Company FC, LLC used under license by Eaton.

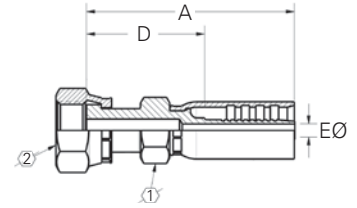
Certified by:



# Fittings

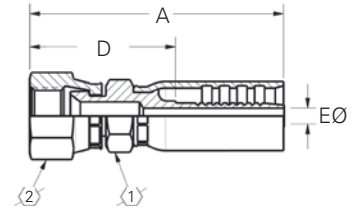
## For 35NG

### Female ORS Swivel (Approved for NGV 4.2, NGV 3.1)



# Part number	Hose size		Terminal end	Thread	A		D Cut off factor		Thru hole Ø		Hex 1	Hex 2
	DN	Dash size			Dash size	in	mm	in	mm	in	mm	in
<b>For plated steel</b>												
90H04-044100-0	6	-04	-04	9/16 - 18	63.0	2.48	38.6	1.40	4.1	0.16	9/16	11/16
90H06-064100-0	10	-06	-06	11/16 - 16	70.1	2.76	36.6	1.52	7.1	0.28	11/16	7/8
90H08-084100-0	12	-08	-08	13/16 - 16	79.0	3.11	39.8	1.62	9.9	0.39	7/8	1 - 1/8
<b>For stainless steel</b>												
90L04-044100-0	6	-04	-04	9/16 - 18	63.0	2.48	38.6	1.40	4.1	0.16	9/16	11/16
90L06-064100-0	10	-06	-06	11/16 - 16	70.1	2.76	36.6	1.52	7.1	0.28	11/16	7/8
90L08-084100-0	12	-08	-08	13/16 - 16	79.0	3.11	39.8	1.62	9.9	0.39	7/8	1 - 1/8

### Female JIC/SAE 37° Swivel (Approved for NGV 4.2, NGV 3.1)

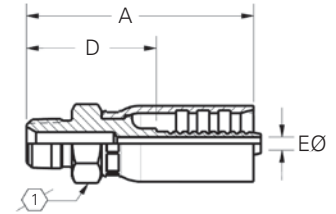


# Part number	Hose size		Terminal end	Thread	A		D Cut off factor		Thru hole Ø		Hex 1	Hex 2
	DN	Dash size			Dash size	in	mm	in	mm	in	mm	in
<b>For plated steel</b>												
90H04-045400-0	6	-04	-04	7/16 - 20	64.3	2.53	36.6	1.44	4.1	0.16	5/8	5/8
90H06-065500-0	10	-06	-06	9/16 - 18	71.6	2.82	39.6	1.56	7.1	0.28	3/4	3/4
90H08-085400-0	12	-08	-08	3/4 - 16	80.0	3.15	41.4	1.66	9.9	0.39	7/8	15/16
<b>For stainless steel</b>												
90L04-045400-0	6	-04	-04	7/16 - 20	64.3	2.53	36.6	1.44	4.1	0.16	5/8	5/8
90L06-065500-0	10	-06	-06	9/16 - 18	71.6	2.82	39.6	1.56	7.1	0.28	3/4	3/4
90L08-085400-0	12	-08	-08	3/4 - 16	80.0	3.15	41.4	1.66	9.9	0.39	7/8	15/16

# Fittings

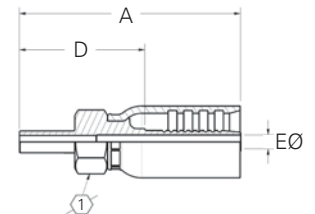
## For 35NG

### Male Pipe (Approved for NGV 4.2)



# Part number	Hose size		Terminal end	Thread	A		D Cut off factor		Thru hole Ø		Hex 1	Hex 1
	DN	Dash size			Dash size	in	mm	in	mm	in	mm	in
<b>For plated steel</b>												
90H04-041000-0	6	-04	-04	1/4 - 18	58.7	2.31	31.2	1.23	4.1	0.16	11/16	--
90H06-061000-0	10	-06	-06	3/8 - 18	65.8	2.59	34.0	1.34	7.1	0.28	3/4	--
90H08-081000-0	12	-08	-08	1/2 - 14	77.0	3.03	38.9	1.53	9.9	0.39	15/16	--
<b>For stainless steel</b>												
90L04-041000-0	6	-04	-04	1/4 - 18	58.7	2.31	31.2	1.23	4.1	0.16	11/16	--
90L06-061000-0	10	-06	-06	3/8 - 18	65.8	2.59	34.0	1.34	7.1	0.28	3/4	--
90L08-081000-0	12	-08	-08	1/2 - 14	77.0	3.03	38.9	1.53	9.9	0.39	15/16	--

### Stand Pipe (Approved for NGV 4.2)

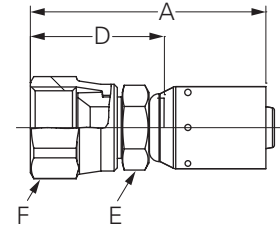


# Part number	Hose size		Terminal end	Thread	A		D Cut off factor		Thru hole Ø		Hex 1	Hex 1
	DN	Dash Size			Dash size	mm	mm	in	mm	in	mm	in
<b>For plated steel</b>												
90H04-04J000-0	6	-04	-04	--	63.4	2.50	36.1	1.42	4.1	0.16	5/8	--
90H06-06J000-0	10	-06	-06	--	69.9	2.75	38.1	1.50	7.1	0.28	3/4	--
90H08-08J000-0	12	-08	-08	--	81.2	3.20	34.2	1.70	9.9	0.39	7/8	--
<b>For stainless steel</b>												
90L04-04J000-0	6	-04	-04	--	63.4	2.50	36.1	1.42	4.1	0.16	5/8	--
90L06-06J000-0	10	-06	-06	--	69.9	2.75	38.1	1.50	7.1	0.28	3/4	--
90L08-08J000-0	12	-08	-08	--	81.2	3.20	34.2	1.70	9.9	0.39	7/8	--

# Fittings

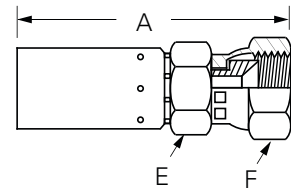
For NG-TW

## Female For-Seal® (ORS) Swivel (Approved for NGV 3.1)



# Part number	Hose size (I.D.)			Terminal end Dash size	Thread	A		D Cut off factor		Thru hole Ø		Hex E in	Hex F in
	mm	in	Dash size			mm	in	mm	in	mm	in		
<b>For plated steel</b>													
05E-J66	7.9	0.31	-06	-06	1 <sup>1</sup> / <sub>16</sub> - 16	42.7	1.68	19.0	0.75	5.6	0.22	1 <sup>1</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>
07E-J68	10.5	0.41	-08	-08	1 <sup>3</sup> / <sub>16</sub> - 16	45.6	1.80	21.6	0.85	7.5	0.30	1 <sup>3</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>
08E-J68	12.7	0.50	-10	-08	1 <sup>3</sup> / <sub>16</sub> - 16	50.8	2.00	24.3	0.96	9.1	0.36	1 <sup>3</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>
<b>For stainless steel</b>													
05ER-J66	7.9	0.31	-06	-06	1 <sup>1</sup> / <sub>16</sub> - 16	42.7	1.68	19.0	0.75	5.6	0.22	1 <sup>1</sup> / <sub>16</sub>	1 <sup>3</sup> / <sub>16</sub>
07ER-J68	10.5	0.41	-08	-08	1 <sup>3</sup> / <sub>16</sub> - 16	45.6	1.80	21.6	0.85	7.5	0.30	1 <sup>3</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>
08ER-J68	12.7	0.50	-10	-08	1 <sup>3</sup> / <sub>16</sub> - 16	50.8	2.00	24.3	0.96	9.1	0.36	1 <sup>3</sup> / <sub>16</sub>	1 <sup>5</sup> / <sub>16</sub>

## Female JIC/SAE 37° Swivel (Approved for NGV 3.1)

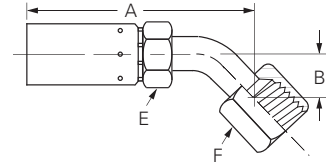


# Part number	Hose size (I.D.)			Terminal end Dash size	Thread	A		D Cut off factor		Thru hole Ø		Hex E in	Hex F in
	mm	in	Dash size			mm	in	mm	in	mm	in		
<b>For plated steel</b>													
05E-606	7.9	0.31	-06	-06	9 <sup>9</sup> / <sub>16</sub> - 18	52.8	2.08	28.7	1.13	5.6	0.22	9 <sup>9</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>
07E-608	10.5	0.41	-08	-08	3 <sup>3</sup> / <sub>4</sub> - 16	55.9	2.20	31.8	1.25	7.6	0.30	1 <sup>1</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>8</sub>
08E-608	12.7	0.50	-10	-08	3 <sup>3</sup> / <sub>4</sub> - 16	60.7	2.39	34.3	1.35	9.9	0.39	3 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>
<b>For stainless steel</b>													
05ER-606	7.9	0.31	-06	-06	9 <sup>9</sup> / <sub>16</sub> - 18	53.8	2.12	30.2	1.19	5.6	0.22	9 <sup>9</sup> / <sub>16</sub>	1 <sup>1</sup> / <sub>16</sub>
07ER-608	10.5	0.41	-08	-08	3 <sup>3</sup> / <sub>4</sub> - 16	55.9	2.20	31.8	1.25	7.6	0.30	1 <sup>1</sup> / <sub>16</sub>	7 <sup>7</sup> / <sub>8</sub>
08ER-608	12.7	0.50	-10	-08	3 <sup>3</sup> / <sub>4</sub> - 16	62.2	2.45	34.3	1.35	9.9	0.39	3 <sup>3</sup> / <sub>4</sub>	7 <sup>7</sup> / <sub>8</sub>

# Fittings

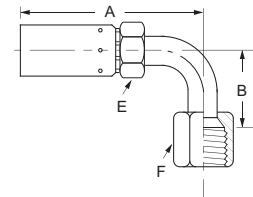
For NG-TW

## JIC 37° Female Swivel, 45° Elbow (Approved for NGV 3.1)



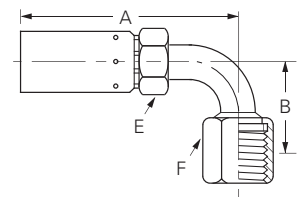
# Part number	Hose size (I.D.)			Terminal end Dash size	Thread	A		B		D Cut off factor		Thru hole Ø		Hex E in	Hex F in
	mm	in	Dash size			mm	in	mm	in	mm	in	mm	in		
05E-686	7.90	0.31	-06	-06	9/16 - 18	67.3	2.65	9.9	0.39	43.7	1.72	5.6	0.22	9/16	11/16
08E-688	12.7	0.50	-10	-08	3/4 - 16	77.2	3.04	14.2	0.56	50.8	2.00	8.5	0.33	3/4	7/8

## JIC 37° Female Swivel 90° Tube Elbow (Approved for NGV 3.1)



# Part number	Hose size (I.D.)			Terminal end Dash size	Thread	A		B		D Cut off factor		Thru hole Ø		Hex E in	Hex F in
	mm	in	Dash size			mm	in	mm	in	mm	in	mm	in		
05E-666	7.9	0.31	-06	-06	9/16 - 18	66.0	2.60	21.6	0.85	41.7	1.64	5.6	0.22	9/16	11/16
08E-668	12.7	0.50	-10	-08	3/4 - 16	71.6	2.82	27.7	1.09	45.2	1.78	8.5	0.33	3/4	7/8

## Female For-Seal® (ORS) Swivel Short Drop 90° Tube Elbow (Approved for NGV 3.1)



# Part number	Hose size (I.D.)			Terminal end Dash size	Thread	A		B		D Cut off factor		Thru hole Ø		Hex E in	Hex F in
	mm	in	Dash size			mm	in	mm	in	mm	in	mm	in		
05E-A26	7.9	0.31	-06	-06	11/16 - 16	66.5	2.62	22.9	0.90	42.9	1.69	5.6	0.22	9/16	13/16
08E-A28	12.7	0.50	-10	-08	13/16 - 16	73.7	2.90	29.2	1.15	47.2	1.86	8.5	0.33	3/4	15/16

## Tools and accessories

For 35NG hose



### Swage adapter kit for FT1380, ET1280, ET4020

**Part no.: FF16423**

The Synflex swage adapter kit was designed with the specific intent to allow swaging of Eaton Synflex fittings to Eaton Synflex thermoplastic hose using existing Synflex pushers and dies and an Eaton Aeroquip® FT1380 or Eaton Weatherhead® ET4020 crimp machine.

The purpose of this manual is to present critical safety information, basic installation, and operating instructions for the Synflex swage adapter kit.



### Mark IX swager

**Part no.: 45J0-05600**

- Fully automatic - opens dies to release completed assembly
- Fast actuation - capable of five-second cycle time
- Three power supply options for a broad range of production needs
- For heavy duty, continuous high-speed production needs the Mark IX can be equipped with a high capacity power unit (see option 3 below)
- Weight: 59.4 kgs (131 lbs)

#### Option 1

**(Part no.: 4530-009S0)**

1HP, 60Hz, 115/208/230V single-phase motor; medium duty

#### Option 2

**(Part no.: 4530-009S1)**

1HP, 60 Hz, 230/460V three-phase motor; medium duty

#### Option 3 - A & B

**(Part no.: 453C-00020,  
Part no.: 4530-009S4)**

- (A) Mark IX machine without standard power supply.  
Part No.: 4530-009S4
- (B) Commercial-duty hydraulic power unit with 5HP, three-phase 230/460V motor, five-gallon reservoir, 4.1 GPM displacement.  
Part No.: 453C-00020



## Tools and accessories

For 35NG hose



### FT1258 Cut off tool

#### Specifications

FT1258 bench mounted cut off tool. A bench mounted cutter for in-plant production of Thermoplastic hose assemblies and other fabric reinforced hose styles.

#### Ordering instructions

**FT1258** Cut-off tool

**FT1258-2-2** Blade kit

Package of three replacement blades for FT1258 tool which are designed to cut all fabric reinforced hose including Kevlar.\*

\*Kevlar is a trademark of E.I. DuPont.



### Twin-line hose separation tool

**Part no.: 4574-01000**

- Designed for separating Twin-Line hose

#### Replacement blade

**Part no.: 4523-04005**

**4574-03000-026 (-4-4)**

**4574-03026-012 (-4-6)**

**4574-0326-015 (-4-8)**



### Hand-held hose cutter

**Part no.: 4523-04006**

- Handy tool for cutting Synflex hose 1/8-inch to 1/2-inch in diameter. Blades are replaceable. Vinyl cushioned grips.

#### Replacement blade

**Part no.: 4523-04005**

## Tools and accessories

### For 35NG hose

#### Swaged fitting info

Hose	Fitting part number	Die part number	Insertion depth (ref) mm (inch)	Swage diameter mm (inch)	Bell length mm (inch)	Thru hole (min) mm (inch)
35NG-04	90H04-04XXX 90L04-04XXX	4540-H0400	27.7 (1.09)	17.25 ± 0.13 (0.679 ± 0.005)	19.05 ± 0.76 (0.750 ± 0.030)	3.05 (0.120)
35NG-06	90H06-06XXX 90L06-06XXX	4540-HP600	33.3 (1.31)	19.46 ± 0.13 (0.766 ± 0.005)	24.54 ± 0.76 (0.966 ± 0.030)	6.10 (0.240)
35NG-08	90H08-08XXX 90L08-08XXX	4540-H0800	39.6 (1.56)	22.99 ± .013 (0.905 ± 0.005)	19.05 ± 0.76 (0.750 ± 0.030)	8.38 (0.330)

#### Required assembly components dispensing (NGV 4.2 only)

Hose	Conductive media part number	Spring guard part number	Spring guard retainer	Warning tag part number	Metal hose tag part number
35NG-04	45J0-04209	4521-92005	Not used	0112-23085	FF91358-04
35NG-06	45J0-04211	4521-AA005	45J0-00407 or 45J0-00409	0112-23085	FF91358-06
35NG-08	45J0-04215	4521-AB007	45J0-00408	0112-23085	FF91358-08

#### Required assembly components vehicle (NGV 3.1 only)

Hose	Conductive media part number	Metal hose tag part numbers
35NG-04	45J0-04209	FF91357-04
35NG-06	45J0-04211	FF91357-06
35NG-08	45J0-04215	FF91357-08

## Tools and accessories

For NG-TW hose

### Coll-o-crimp tooling

Hose	Fitting part number	Crimp dies	Spacer ring
NG-6TW	05E-XXX 05ER-XXX	T-400-32C	Tan (T-400-112)
NG-8TW	07E-XXX 07ER-XXX	T-400-33C	Yellow (T-400-62, ET1000SR-M115D)
NG-10 TW	08E-XXX 08ER-XXX	T-400-34C	Green (T-400-37)

### Variable crimp machines

Hose	Fitting part number	Crimp dies
NG-6TW	05E-XXX 05ER-XXX	T-400-32C
NG-8TW	07E-XXX 07ER-XXX	T-400-33C
NG-10 TW	08E-XXX 08ER-XXX	T-400-34C

### Required assembly components

Hose	Metal hose tag part numbers
NG-6TW	FF91356-06
NG-8TW	FF91356-08
NG-10 TW	FF91356-10

Eaton  
Hydraulics Group USA  
14615 Lone Oak Road  
Eden Prairie, MN 55344  
USA  
Tel: 952-937-9800  
Fax: 952-294-7722  
[www.eaton.com/hydraulics](http://www.eaton.com/hydraulics)

Eaton  
Hydraulics Group Europe  
Route de la Longeraie 7  
1110 Morges  
Switzerland  
Tel: +41 (0) 21 811 4600  
Fax: +41 (0) 21 811 4601

Eaton  
Hydraulics Group Asia Pacific  
Eaton Building  
No.7 Lane 280 Linhong Road  
Changning District,  
Shanghai 200335  
China  
Tel: (+86 21) 5200 0099  
Fax: (+86 21) 2230 7240