

# Compressed Natural Gas Vehicle Fueling Products

 *Snap-Tite*



**AGA/CGA NGV1  
CERTIFIED**

ISO-9001 Certified



Snap-tite offers a full line of NGV1 fueling products.

  
*"A World Class Tradition of Quality"*

**F**ounded over 65 years ago, Snap-tite has grown into a corporation producing over 50 product lines in 8 facilities located in the United States and Europe. Starting in the mid 1930's and continuing through the latest developments, Snap-tite is widely recognized for its role in problem solving for the military, aerospace, electronic cooling, mobile equipment, offshore oil and gas, and natural gas appliance industries to name a few.

Snap-tite has taken its expertise in design and manufacturing to develop products for the compressed natural gas vehicle (NGV) market.

Snap-tite's receptacles and patented nozzles fully comply with and are certified to the ANSI/AGA/CGA NGV1 Standard for Compressed Natural Gas Vehicles (NGV) fueling connection devices. Snap-tite has become the first to offer a range of certified products to the market. The test was performed by Snap-tite (in AGA certified Test Lab) and certified by the American Gas Association (AGA).

Snap-tite has been striving for the highest quality standards since our first involvement in the space program in the early fifties. Snap-tite believes in continuous improvement in all aspects of our operation from design and manufacturing to customer service. Through a great deal of dedication and hard work, all of Snap-tite's divisions have become ISO-9001 Certified.

Safety is a prime concern to Snap-tite. Snap-tite has designed a feature into the nozzle that makes it the safest design available. **The nozzle cannot be manually disconnected from the receptacle while under internal pressure greater than 350 psi (24 bar).** Snap-tite has done extensive testing of numerous designs and demonstrated a very unsafe condition with respect to "kick back" of the nozzle which can cause personal injury when disconnected at internal pressures greater than 350 psi (24 bar). In addition, this can cause a "washout" of the receptacle seal. An operator may not know of this failure and when a nozzle is again connected to the receptacle excessive leakage occurs with the possibility of a fire or explosion. This feature of the Snap-tite nozzle exceeds the requirements of the NGV1 specification and has been assigned a world wide patent.

# Snap-tite NGV1 Fueling Nozzle (Type 2 & 3 Class A & B)



Snap-tite's nozzle is designed specifically for the transfer of compressed natural gas (CNG) to natural gas vehicles.

This nozzle can be used for fast fill or time fill in a self depressurizing fueling system or in conjunction with a 3-way valve attached.

Snap-tite's nozzle also allows complete interchangeability to any receptacle conforming to the NGV1 requirements.

## Features

- ▶ Lightweight – .96 lbs. (.435 kgs)
- ▶ The bumper is made of a durable polyurethane to reduce wear and damage to vehicles and to protect the user from the cold temperature of the nozzle
- ▶ The bumper is designed for rugged use, it protects the front engagement bore and provides a very comfortable grip when connecting or disconnecting
- ▶ Color coded bumper visually identifies the service pressure – blue for 3,000 psi (207 bar), yellow for 3,600 psi (248 bar)
- ▶ Connects with single handed operation by pushing together
- ▶ Disconnects with single handed operation by pulling back on the polyurethane bumper
- ▶ The Snap-tite patented nozzle cannot be manually disconnected from the receptacle at an internal pressure greater than 350 psi (24 bar)
- ▶ High reliability ball locking
- ▶ Poppet valve prevents the inadvertent flow of gas when the nozzle is disconnected
- ▶ Keying system prevents higher pressure nozzle from connecting onto lower pressure receptacle
- ▶ Nozzles available in either 316 Stainless Steel
- ▶ When connected to the receptacle the nozzle body extends over the outside diameter of the receptacle thus providing an excellent length to diameter ratio (L/D)
- ▶ All materials utilized by Snap-tite guarantee a very weather resistant device considering ambient temperature, solar radiation, humidity, atmospheric toxins and airborne salt

**Certification: ANSI/AGA/CGA NGV1**

**Working Pressure:** 3000 psi (207 bar) and  
3600 psi (248 bar)

**Burst Pressure:**  
Stainless Steel: 20,000 psi  
(1379 bar)

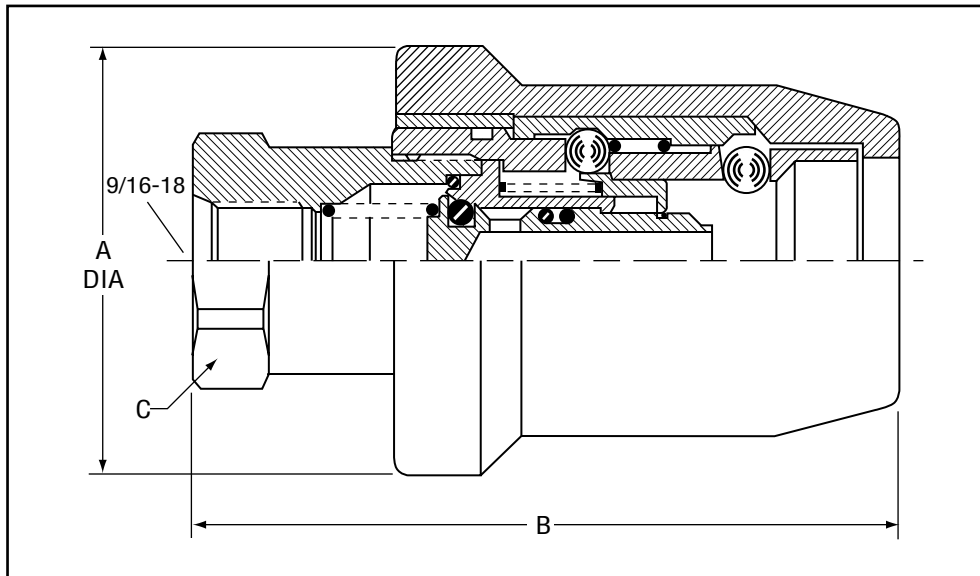
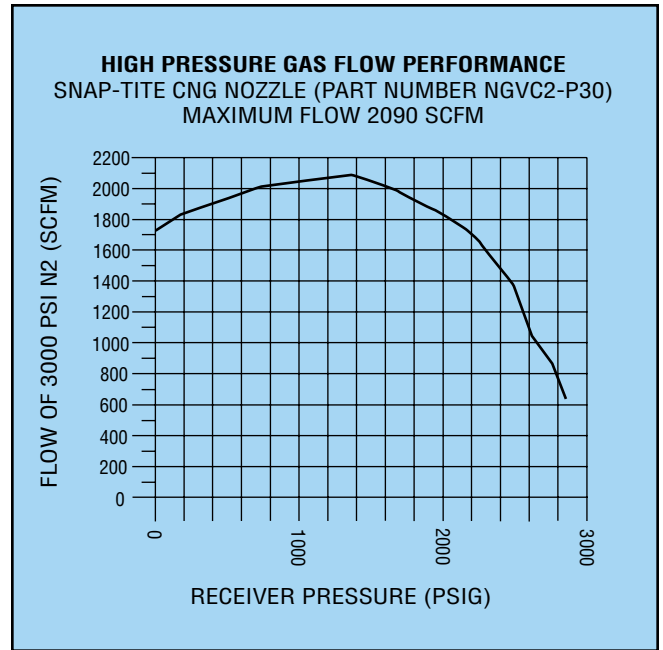
**Temperature Range:** -40°F (-40°C) to  
185°F (80°C)

**Weight:** .96 lbs. (.435 kgs)

**Flow Rate:** 2090 SCFM (3551 Nm<sup>3</sup>/hr)

**Material:** 316 Stainless Steel

**Speed of Fill:** 16 seconds to fill a 14.5 US  
gallon (54.92 liters) container  
from 0 to 3,000 psi (207 bar)



PART NUMBER	A	B	C HEX
*NGVC2-P**	2.13 (54.10)	3.51 (90)	1-1/8 (28.60)

See Page 16 (How to Order)

in (mm)

Pressure or material does not effect dimensions.



# Snap-tite NGV1 Fueling Receptacle



Snap-tite's receptacle is designed for permanent mounting to a natural gas vehicle (CNG).

Snap-tite's receptacle utilizes the NGV1 Profile which allows complete interchangeability to any nozzle conforming to the NGV1 standard.

## Features

- ▶ Superior poppet check valve design:
  - a) Polyurethane crimped seal to eliminate erosion and washout
  - b) Non-barrel type poppet to reduce sticking due to contamination and icing between the outside diameter of the valve and the inside diameter of the body bore
  - c) Self-centering capability of the poppet
- ▶ One-piece receptacle design
- ▶ High strength 316 Stainless Steel valve stop to provide a positive stop for the valve
- ▶ Superior flow characteristics
- ▶ Available in either 316 Stainless Steel

**Certification: ANSI/AGA/CGA NGV1**

**Working Pressure:** 3000 psi (207 bar) and  
3600 psi (248 bar)

**Burst Pressure:**

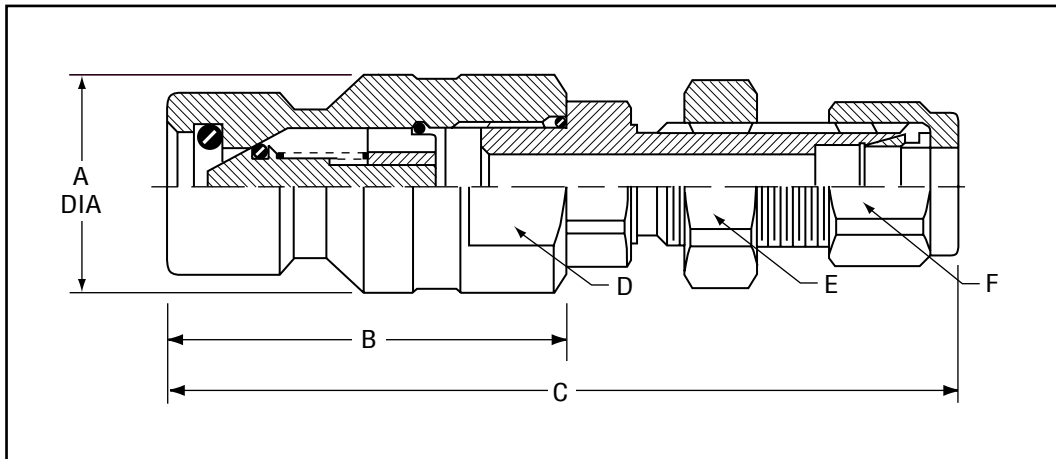
Stainless Steel: 25,000 psi (1724 bar)

**Temperature Range:** -40°F (-40°C) to 250°F (121°C)

**Weight:** .21 lbs (.095 kgs)

**Flow Rate:** 2090 SCFM (3551 Nm<sup>3</sup>/hr)

**Material:** 316 Stainless Steel



PART NUMBER	A	B	C	D FLATS	E HEX	F HEX
NGVN2-P30	.984 (25)	1.78 (45.20)		13/16 (20.60)		
NGVN2-P36	.945 (24)	1.78 (45.20)		13/16 (20.60)		
NGVN3-P30	.984 (25)	1.78 (45.20)	3.40 (86.40)	13/16 (20.60)	11/16 (17.50)	9/16 (14.30)
NGVN3-P36	.945 (24)	1.78 (45.20)	3.40 (86.40)	13/16 (20.60)	11/16 (17.50)	9/16 (14.30)
NGVN4-P30	.984 (25)	1.78 (45.20)	3.53 (89.70)	13/16 (20.60)	3/4 (19.10)	11/16 (17.50)
NGVN4-P36	.945 (24)	1.78 (45.20)	3.53 (89.70)	13/16 (20.60)	3/4 (19.10)	11/16 (17.50)

See Page 16 (How to Order)

in (mm)

# Snap-tite NGV1 Profile High Flow Receptacle



Snap-tite's high flow receptacles are designed for permanent mounting to heavy duty natural gas vehicles (CNG).

Snap-tite's high flow receptacle utilizes the NGV1 profile which allows complete interchangeability to any nozzle conforming to the NGV1 standard.

## Features

- ▶ Heavy duty construction
- ▶ Superior poppet check valve design prevents gas flow when the nozzle is disconnected
- ▶ Leak free regardless of temperature and pressure
- ▶ Connects to any NGV1 compliant nozzle
- ▶ Quick and efficient performance
- ▶ Excellent flow characteristics
- ▶ Polyurethane crimped seal eliminates erosion and washout



**Working Pressure:** 3000 psi (207 bar) and  
3600 psi (248 bar)

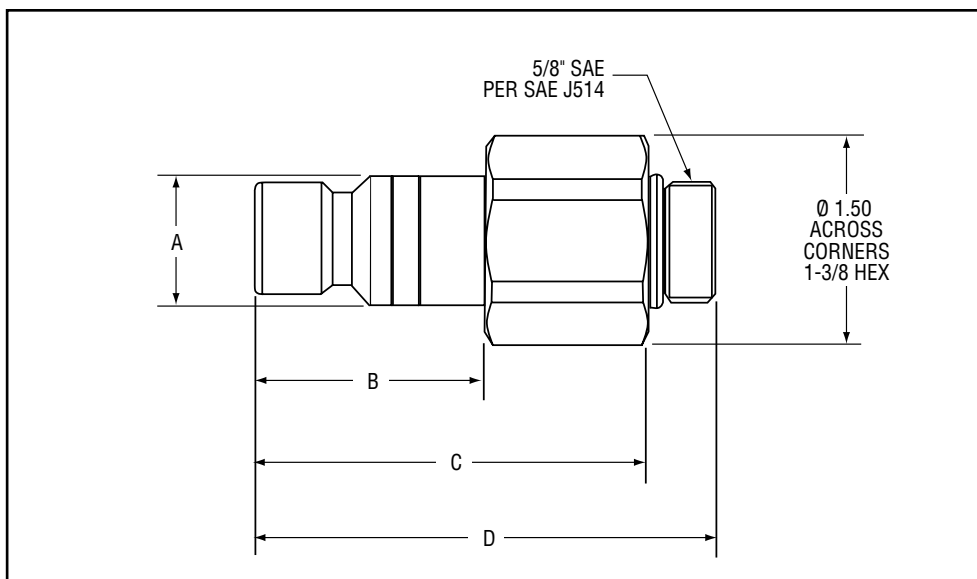
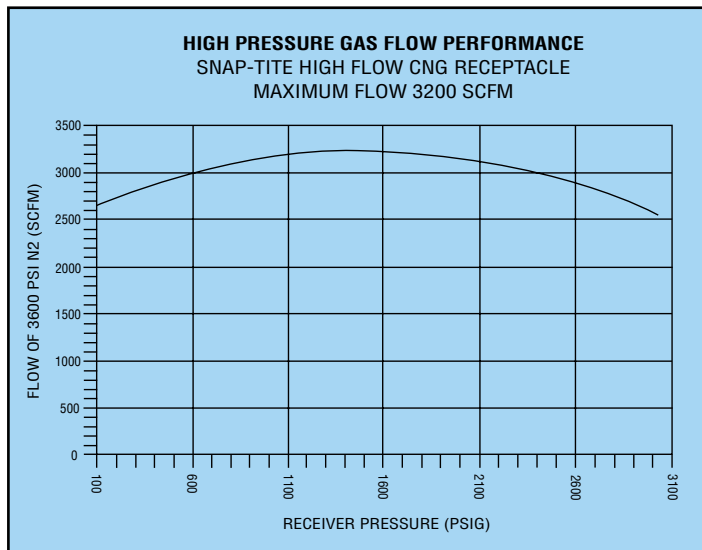
**Burst Pressure:** 25,000 psi (1724 bar)

**Temperature Range:** -40°F (-40°C) to  
250°F (121°C)

**Weight:** .70 lbs. (.32 kgs)

**Flow Rate:** 3200 SCFM (5400 Nm<sup>3</sup>/hr)

**Material:** 316 Stainless Steel



PART NUMBER	A	B	C	D
HNGVN5-P30	.984 (25)	1.69 (43)	2.88 (73.2)	3.38 (85.9)
HNGVN5-P36	.945 (24)	1.69 (43)	2.88 (73.2)	3.38 (85.9)

See Page 16 (How to Order)

in (mm)

# Compressed Natural Gas (CNG) Inline Hose Breakaway



Snap-tite's inline breakaway is designed specifically for compressed natural gas fueling systems. When properly installed, this inline breakaway allows for the safe disconnection from the fueling system without damage to the dispenser in the event of an accidental disconnect (drive-off). The inline breakaway was designed to replace the traditional tripod leverage towers used in conjunction with the ISO B style coupling as the breakaway connection for the fueling hose from the dispenser.

## Features

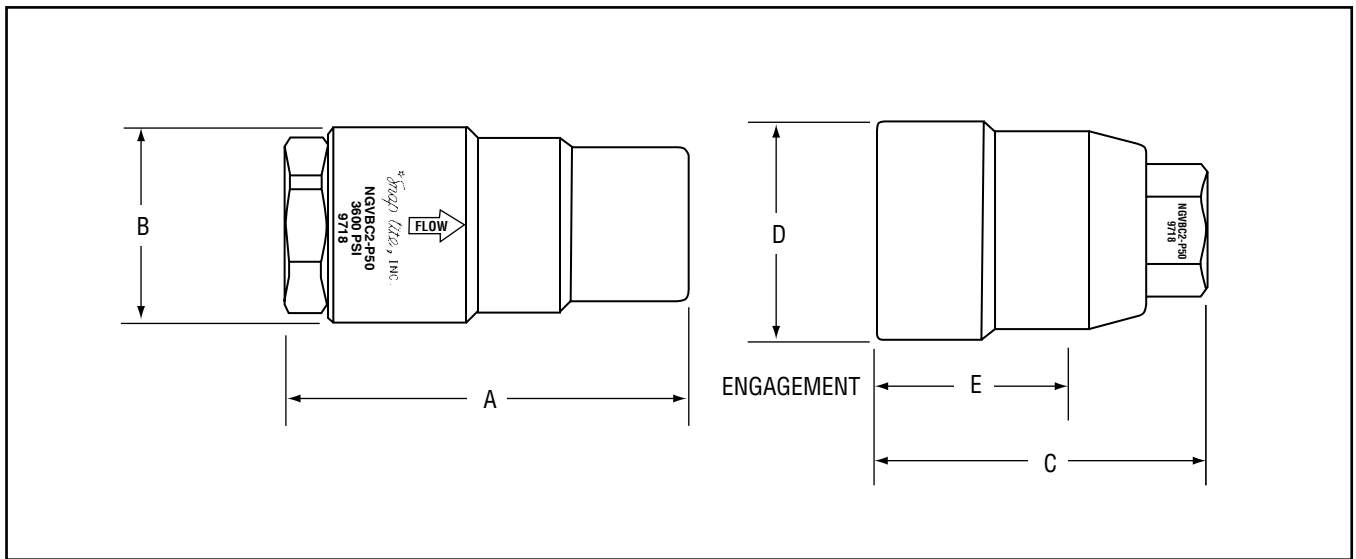
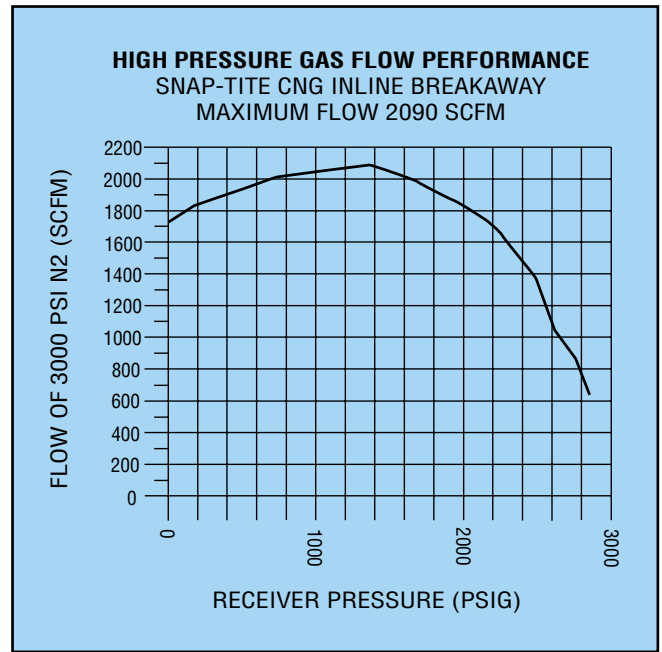
- ▶ Corrosive resistant stainless steel (303 & 316) construction
- ▶ Nipple is equipped with durable polyethylene bumper to protect the nipple form in the event of a breakaway
- ▶ Disconnect force: 60-140 lbs. (266.9 – 622.7 N) at any pressure up to operating
- ▶ Superior flow characteristics
- ▶ Compact envelope
- ▶ Balanced design assures positive connection until a breakaway cycle is required
- ▶ Lightweight design - .95 lbs. (.431 kgs)
- ▶ Easy installation
- ▶ Reusable following breakaway with minimal repair

**Working Pressure:** 3600 psi (248 bar)  
**Burst Pressure:** 20,000 psi (1379 bar)  
**Temperature Range:** -40°F (-40°C) to 150°F (66°C)

**Weight:** .95 lbs (.431 kgs)

**Flow Rate:** 2090 SCFM (3551 Nm<sup>3</sup>/hr)

**Material:** 303 & 316 Stainless Steel



PART NUMBER	A	B	C	D	E
*NGVBCN2-P50NR	2.79 (70.87)	1.38 (35.05)	2.28 (57.91)	1.53 (38.86)	1.34 (34.04)
*NGVBCN2-P50	2.79 (70.87)	1.38 (35.05)	2.28 (57.91)	1.53 (38.86)	1.34 (34.04)

Nipple type is determined by customer's system. If system has a separate vent line, use part number **NGVBCN2-P50NR** in (mm) (non-relieving). If system vents back through supply hose, use part number **NGVBCN2-P50**. Above part numbers will provide a complete unit consisting of one coupler and one nipple.

# Snap-tite Compressed Natural Gas (CNG) Check Valves



Snap-tite's Check Valve is designed specifically for zero leakage control of compressed natural gas (CNG). Free flow in one direction and blocked flow in the reverse.

This Check Valve utilizes the same internal construction and parts as the Snap-tite NGV1 Receptacle.

## Features

- ▶ Superior poppet check valve design:
  - a) Polyurethane crimped seal to eliminate erosion and washout
  - b) Non-barrel type poppet to reduce sticking due to contamination and icing between the outside diameter of the valve and the inside diameter of the body bore
  - c) Self-centering capability of the poppet
- ▶ One-piece body design
- ▶ High strength 316 Stainless Steel valve stop to provide a positive stop for the valve
- ▶ Superior flow characteristics
- ▶ 316 Stainless Steel construction

**Certification: AGA 7-93**

**Working Pressure:** 3600 psi (248 bar)

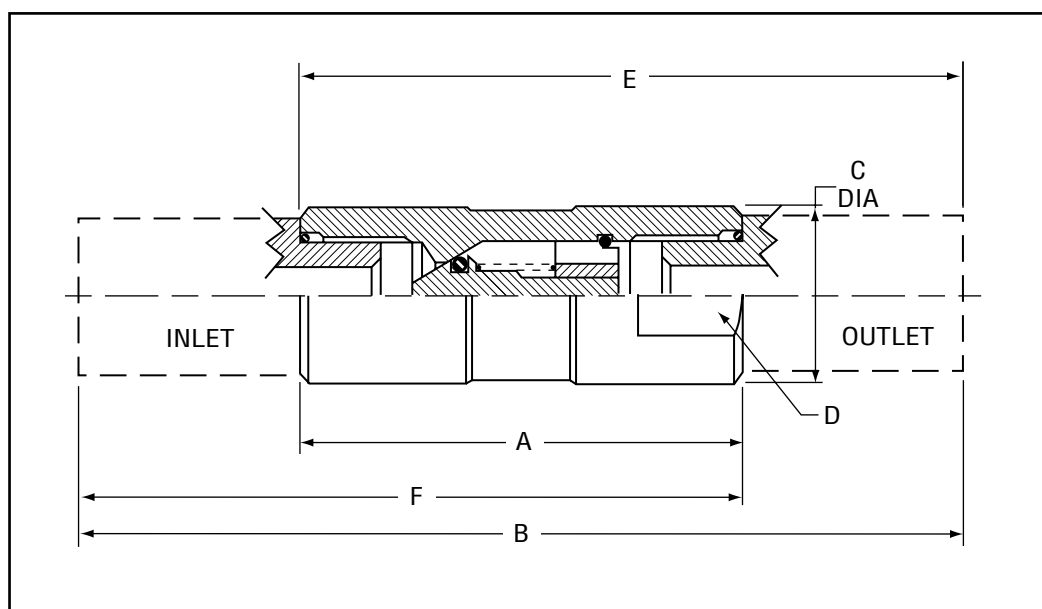
**Burst Pressure:** 25,000 psi (1724 bar)

**Temperature Range:** -40°F (-40°C) to 250°F (121°C)

**Weight:** .235 lbs (0.107 kgs)

**Flow Rate:** 2090 SCFM (3551 Nm<sup>3</sup>/hr)

**Material:** 316 Stainless Steel



PART NUMBER	A	B	C	D FLATS	E	F
NGCV6EF-EF	2.14 (54.40)		.86 (21.80)	3/4 (19.10)		
NGCV4A-4A	2.14 (54.40)	4.14 (105.20)	.86 (21.80)	3/4 (19.10)		
NGCV6A-6A	2.14 (54.40)	4.29 (108.10)	.86 (21.80)	3/4 (19.10)		
NGCV6EF-4A	2.14 (54.40)		.86 (21.80)	3/4 (19.10)	3.14 (79.80)	
NGCV6EF-6A	2.14 (54.40)		.86 (21.80)	3/4 (19.10)	3.22 (81.80)	
NGCV6MOS-EF	2.14 (54.40)		.86 (21.80)	3/4 (19.10)		2.81 (71.40)

See Page 16 (How to Order)

in (mm)

# Compressed Natural Gas (CNG) Coupling



Snap-tite's 72 Series may be used in a break-away harness for compressed natural gas (CNG) fueling systems due to the "superior poppet sealing" designed specifically for compressed natural gas. These couplings feature superior pressure and flow characteristics over other manufacturers while meeting or exceeding the ISO-7241-1 Series B specifications.

## Features

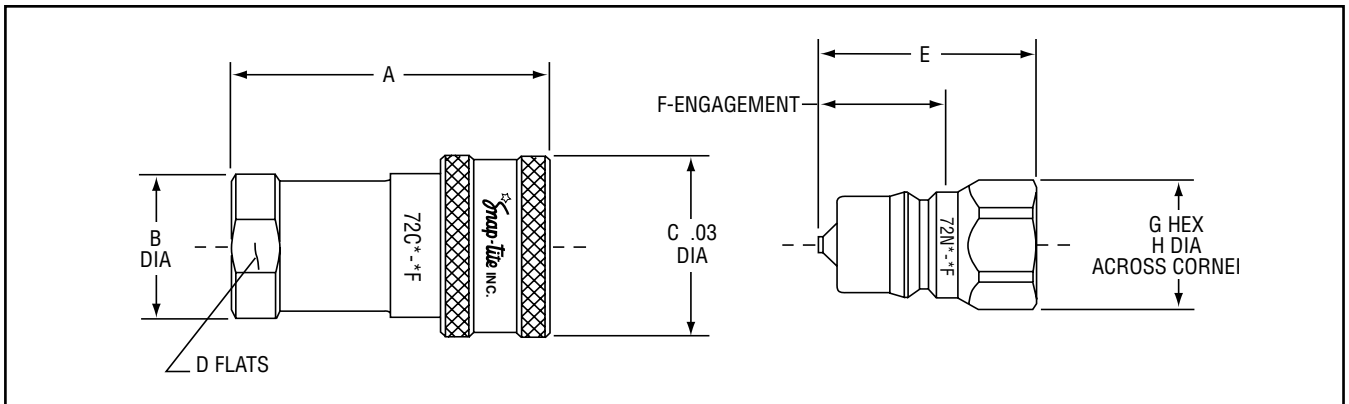
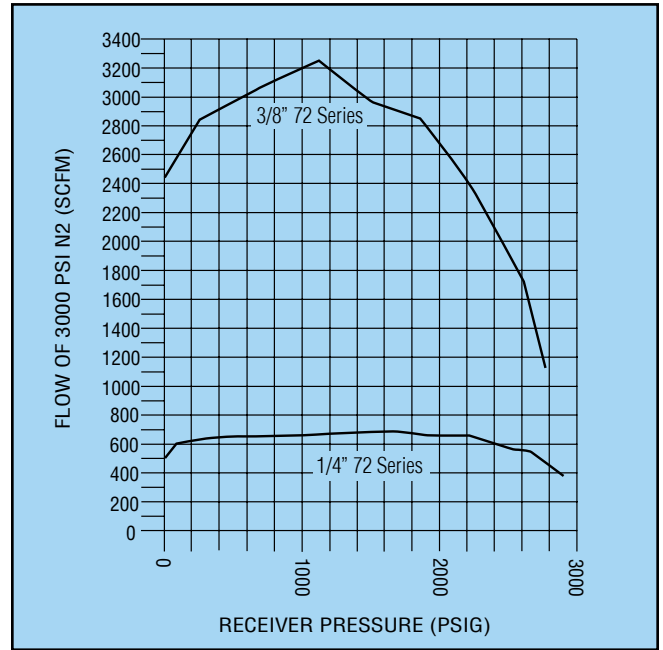
- ▶ Corrosive resistant stainless steel (303) construction
- ▶ Meets or exceeds ISO-7241-1 Series B
- ▶ Superior poppet valve design:
  - a) Polyurethane crimped seal to eliminate erosion and washout
  - b) Self-centering capability of the poppet
- ▶ Superior flow characteristics
- ▶ Proven ball-lock design



**Certification: Texas Railroad Commission**

**Temperature Range:** -40°F (-40°C) to 250°F (121°C)

**Material:** 303 Stainless Steel



SIZE	A	B	C	D	E	F	G	H
1/4	2.25 (57.15)	.88 (22.35)	1.12 (28.45)	.75 (19.05)	1.51 (38.35)	.95 (24.13)	.75 (19.05)	.83 (21.08)
3/8	2.57 (65.28)	1.13 (28.70)	1.37 (34.80)	1.00 (25.40)	1.74 (44.20)	1.13 (28.70)	.88 (22.35)	.96 (24.38)

in (mm)

PART NUMBER	COUPLING HALF	END FITTING	WORKING PRESSURE	BURST PRESSURE
S72C4-4F UR	COUPLER	1/4 NPTF	5500 PSI (379 BAR)	22,000 PSI (1517 BAR)
S72N4-4F UR	NIPPLE	1/4 NPTF	5500 PSI (379 BAR)	22,000 PSI (1517 BAR)
S72C6-6F UR	COUPLER	3/8 NPTF	3750 PSI (259 BAR)	15,000 PSI (1035 BAR)
S72N6-6F UR	NIPPLE	3/8 NPTF	3750 PSI (259 BAR)	15,000 PSI (1035 BAR)

# How to Order

## Nozzles and Receptacles\*\*

### PART NUMBER

	<b>B</b>	<b>NGV</b>	<b>N</b>	<b>2-</b>	<b>P30</b>
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	MATERIAL	SERIES	COUPLING HALF	END FITTING	WORKING PRESSURE
H*	NO LETTER – 316	NGV	C – NOZZLE	2 – 3/8 FEMALE SAE (9/16 - 18)	P30 – 3000 PSI
HIGH	STAINLESS STEEL		N – RECEPTACLE	3 – 1/4 TUBE DOUBLE FERRULE BULKHEAD	(207 BAR)
FLOW				4 – 3/8 TUBE DOUBLE FERRULE BULKHEAD	P36 – 3600 PSI
				5* – 5/8 MALE O-RING SEAL (7/8-14)	(248 BAR)

\*Available option for 316 stainless steel receptacle only.

## Natural Gas Check Valves\*\*

### PART NUMBER

<b>NGCV</b>	<b>6EF-</b>	<b>6EF</b>
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SERIES	INLET END FITTING	OUTLET END FITTING
NGCV	6EF – 3/8 FEMALE SAE (9/16 - 18)	6EF – 3/8 FEMALE SAE (9/16 - 18)
	6MOS – 3/8 MALE O-RING SEAL (9/16 - 18)	6MOS – 3/8 MALE O-RING SEAL (9/16 - 18)
	4A – 1/4 TUBE DOUBLE FERRULE	4A – 1/4 TUBE DOUBLE FERRULE
	6A – 3/8 TUBE DOUBLE FERRULE	6A – 3/8 TUBE DOUBLE FERRULE

\*\*Consult factory for: Additional end fitting requirements or filter requirements

## Accessories

PART NUMBER	DESCRIPTION
NGVNC	RECEPTACLE DUST CAP
NGVND	STORAGE RECEPTACLE DUMMY

### ! WARNING !

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND/OR PROPERTY DAMAGE.

*This document and other information from Snap-tite, Inc., its subsidiaries and authorized distributors, provides product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operation conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection of the products and systems and assuring that all performance, safety and warning requirements of the application are met.*

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