

GCN150 *Gas-Actuated Concrete Nailer*

The GCN150 gas-actuated concrete nailer is a portable fastening tool for attaching light-duty fixtures such as drywall track, furring strips, hat track and angle track to concrete, steel, CMU and metal deck. The GCN150 has a portable gas fuel supply that does not require electrical cords or hoses. The GCN150 sets up quickly and offers maximum productivity. With a 500 shot-per-hour capacity and a pin jam release door, the GCN150 makes fastening pins fast and easy. Additional attributes include 2-step pin loading into the magazine, light and well-balanced weight, a battery indicator light and a sure-grip rubber handle pad.

FEATURES:

- Fast: 40 pin magazine and 1,300 shot fuel cell for reduced loading time
- Easy to use: Automatic piston reset
- Easy open jam release door
- No operators license required
- Portable: No hoses, cords, or external energy source required
- Convenient: Simple 2-step pin loading, and open-blade guide-jam release
- Easy-load fuel compartment
- No possibility of firing with no pins - when tool is down to last 2 pins in the pin magazine a "lock off" occurs

SPECIFICATIONS:

- Tool dimensions: Length – 17.3", Width – 4.2", Height – 15.3"
- Weight: 8.3 lbs
- Magazine capacity: 42
- Average number of fastens per fuel cell: 1,300
- Average number of fastens per battery charge: 3,300
- Average battery charge time: 2 hours
- Fastener type: Length – ½" to 1½", Diameter – .102" to .109"

KEY FASTENING APPLICATIONS:

- Drywall track to concrete, steel, CMU or metal deck
- Furring strips to concrete, steel or CMU
- Plywood to concrete, steel or CMU
- Angle track to concrete, steel or metal deck

TOOL IS SOLD IN RUGGED FIXTURED TOOL BOX AND INCLUDES:

- 2 Batteries
- 1 Charger
- Safety glasses
- Ear protection
- Operators manual
- Tool schematic
- Tool cleaning instructions

Replacement Parts:

Model	Description
GCN-APP012	Adaptor
GCN-CHG007	Charger (U.S.)
GCN-PPA020	Battery (U.S.)



Easy open jam release door



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Fuel Cell

The GFC34 fuel cell is designed to work with the GCN150 gas-actuated concrete nailer as well as with most major brand gas concrete-nailer tools. The fuel cell offers 1,300 shots and can operate at temperatures as low as 20° F. Fuel cells are offered in 2 pack clamshells, and 1 fuel cell is included with each pack of 1,000 pins.

Gas Fuel Cells for the GCN150

Model No.	Description	Pack Qty	Packs/ Carton	Compatible with these Tools
GFC34-RC2	(2) 34 gram fuel cells	2	6	Simpson Strong-Tie GCN150 Others: TF1100, C3



GFC34

Pins

GDP concrete pins are designed to work with the GCN150 gas-actuated concrete nailer tool as well as with most major brand gas concrete-nailer tools. The 10 strip patent-pending collation is design with break-away plastic. The pins are designed for use in A36 and A572 steel, concrete and CMU block.

.106 Diameter Shank Drive Pins for the GCN150

Model No.	Length	Qty Pins / pack +1 Fuel Cell	Packs/ Carton	Compatible with these Tools
GDP-50KT	½"	1,000	5	Simpson Strong-Tie GCN150 Others: TF1100, C3
GDP-62KT	⅝"	1,000	5	
GDP-75KT	¾"	1,000	5	
GDP-100KT	1"	1,000	5	
GDP-125KT	1¼"	1,000	5	
GDP-150KT	1½"	1,000	5	



GDP
(Patent Pending)

Note: All installations are limited to dry, interior environments.

Tension Loads in Normal-Weight Concrete



Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads			
				$f'_c \geq 2000$ psi (13.8 Mpa)	$f'_c \geq 3000$ psi (20.7 Mpa)	$f'_c \geq 4000$ psi (27.6 Mpa)	$f'_c \geq 5000$ psi (34.5 Mpa)
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
0.106 (2.7)	⅝ (15.9)	3 (76.2)	4 (102)	25 (0.11)	30 (0.13)	45 (0.20)	50 (0.22)
	¾ (19.1)			30 (0.13)	30 (0.13)	30 (0.13)	

1. The fasteners must not be driven until the concrete has reached the designated minimum compressive strength.
2. Minimum concrete thickness must be three times the fastener embedment into the concrete.
3. The allowable shear values are only for the fasteners in the concrete. Members connected to the concrete must be investigated in accordance with accepted design criteria.

Shear Loads in Normal-Weight Concrete



Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Shear Loads			
				$f'_c \geq 2000$ psi (13.8 Mpa)	$f'_c \geq 3000$ psi (20.7 Mpa)	$f'_c \geq 4000$ psi (27.6 Mpa)	$f'_c \geq 5000$ psi (34.5 Mpa)
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
0.106 (2.7)	⅝ (15.9)	3 (76.2)	4 (102)	25 (0.11)	25 (0.11)	25 (0.11)	25 (0.11)
	¾ (19.1)			45 (0.20)	55 (0.24)	75 (0.33)	80 (0.36)

1. The fasteners must not be driven until the concrete has reached the designated minimum compressive strength.
2. Minimum concrete thickness must be three times the fastener embedment into the concrete.
3. The allowable shear values are only for the fasteners in the concrete. Members connected to the concrete must be investigated in accordance with accepted design criteria.

*See page 10 for an explanation of the load table icons

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Tension and Shear Loads in Sand-Lightweight Concrete

Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads		Shear Loads	
				$f'_c \geq 3000$ psi (20.7 Mpa)		$f'_c \geq 3000$ psi (20.7 Mpa)	
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
0.106 (2.7)	5/8 (15.9)	3 (76.2)	4 (102)	75 (0.33)	35 (0.16)	105 (0.47)	140 (0.62)
	3/4 (19.1)						

* See page 10 for an explanation of the load table icons

Note: All installations are limited to dry, interior environments.

1. The fasteners must not be driven until the lightweight concrete has reached the designated minimum compressive strength.
2. Minimum lightweight concrete thickness must be three times the fastener embedment into the lightweight concrete.
3. The allowable shear and tension values are only for the fasteners in the lightweight concrete. Members connected to the lightweight concrete must be investigated in accordance with accepted design criteria.



Tension and Shear Loads in Sand-Lightweight Concrete over Metal deck

Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads – Thru 1.5" "B" Deck		Shear Loads – Thru 1.5" "B" Deck		Tension Loads – Thru 3" "W" Deck		Shear Loads – Thru 3" "W" Deck	
				$f'_c \geq 3000$ psi (20.7 Mpa)		$f'_c \geq 3000$ psi (20.7 Mpa)		$f'_c \geq 3000$ psi (20.7 Mpa)		$f'_c \geq 3000$ psi (20.7 Mpa)	
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)		
0.106 (2.7)	5/8 (15.9)	1 (25.4)	4 (102)	65 (0.29)	195 (0.87)	60 (0.27)	180 (0.80)	60 (0.27)	180 (0.80)		
	3/4 (19.1)			130 (0.58)	270 (1.20)						

1. The fasteners must not be driven through the steel deck and into the lightweight concrete until the lightweight concrete has reached the designated minimum compressive strength.
2. The allowable shear and tension values are only for the fasteners driven through the steel deck and into the lightweight concrete. Members connected by the fastener, driven through the steel deck and into the lightweight concrete, must be investigated in accordance with accepted design criteria.
4. The steel deck must have a minimum thickness of 20 gage and a minimum yield strength of 38 ksi.
5. The fasteners must be installed through the steel deck and into the concrete at the lower flute. The fastener must be a minimum of 1 inch from the edge of the lower flute and 3 inches from the end of the deck. The minimum fastener spacing is 4 inches.

Tension and Shear Loads in 8" Lightweight, Medium-Weight and Normal-Weight Hollow CMU

Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads		Shear Loads	
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
				0.106 (2.7)	5/8 (15.9)	3 (76.2)	8 (203)

1. The tabulated allowable load values are for the fasteners only. Members connected to the CMU receiving elements shall be designed in accordance with the applicable code and accepted design criteria.
2. The tabulated allowable load values are for fasteners installed in hollow CMUs conforming to ASTM C 90. The minimum allowable nominal size of the CMU must be 8 inches high by 8 inches wide by 16 inches long, with a minimum, 1/4"-thick face shell thickness, Grade N, Type II, lightweight, medium-weight and normal weight concrete masonry units.
3. The tabulated allowable load values are for fasteners installed in the center of a hollow CMU face shell.



Tension and Shear Loads in A36 Steel

Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads			Shear Loads		
				1/8" Thick	3/16" Thick	1/4" Thick	1/8" Thick	3/16" Thick	1/4" Thick
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
0.106 (2.7)	Thru	1/2 (12.7)	1 (25.4)	125 (0.56)	210 (0.93)	220 (0.98)	285 (1.27)	225 (1.00)	205 (0.91)

1. The entire pointed portion of the fastener must penetrate through the steel to obtain the tabulated values. See Detail A.
2. The allowable tension and shear values are for the fastener only. Members connected to the steel must be investigated separately in accordance with accepted design criteria.
3. Steel must conform to ASTM A36 specifications, with $F_y = 36$ ksi, minimum.



Tension and Shear Loads in A572 Steel

Shank Diameter in.	Minimum Penetration in. (mm)	Minimum Edge Distance in. (mm)	Minimum Spacing in. (mm)	Tension Loads		Shear Loads	
				3/16" Thick	1/4" Thick	3/16" Thick	1/4" Thick
				Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)	Allow. Load lbs. (kN)
0.106 (2.7)	Thru	1/2 (12.7)	1 (25.4)	225 (1.00)	185 (0.82)	250 (1.11)	145 (0.64)

1. The entire pointed portion of the fastener must penetrate through the steel to obtain the tabulated values. See Detail A.
2. The allowable tension and shear values are for the fastener only. Members connected to the steel must be investigated separately in accordance with accepted design criteria.
3. Steel must conform to ASTM A572 specifications, with $F_y = 50$ ksi, minimum.

