

Safety Glossary of Terms

Tool Terminology

Activate (operating controls): To move or otherwise engage an [operating control](#) so that it is in a state that allows the [tool](#) to be [actuated](#) or that satisfies a requirement for the tool to be [actuated](#).

Actuate (tool): To cause movement of the tool component(s) intended to [drive](#) a [fastener](#).

Actuation mode selector: Tool control, manually set by the operator, so that the tool operates in a specific actuation mode.

Actuation system: A [trigger](#), [workpiece contact](#) and/or other operating control, used separately or in some combination or sequence, to actuate the tool.

Automatic reversion actuation: An actuation mode capable of contact actuation or continual contact actuation and where the tool becomes inoperable if a trigger is depressed without operation of the workpiece contact within the manufacturer's stated trigger time-out period.

Contact actuation: An actuation mode which allows the tool to operate by operating the workpiece contact while the trigger is continually depressed and held.

Continual actuation: An actuation mode in which the driving operations are carried out for as long as the trigger remains in its operating position (for tools without a workpiece contact).

Continual contact actuation: An actuation mode in which the driving operations continue as long as the trigger and the workpiece contact remain in their operating positions.

Full-sequential actuation: An actuation mode which allows single driving operations via the trigger after the workpiece contact has been operated. Further driving operations are only possible after the trigger and the workpiece contact have been returned to the non-driving position.

Selective actuation: An actuation system that allows discrete selection of two or more of the following actuation systems: single-sequential actuation, full-sequential actuation, contact actuation with automatic reversion, continual contact actuation or contact actuation.

Single actuation: An actuation mode in which the trigger has to be operated for each driving operation (for tools without a workpiece contact).

Single-sequential actuation: An actuation mode which allows single driving operations via the trigger after the workpiece contact has been operated. Further driving operations

are possible via trigger operation if the workpiece contact has remained in the operating position.

Adapter: Fitting, typically installed on the gas container by the user, that allows the gas container to be connected to the gas tool.

Air inlet port: The opening on the tool to which the air hose is connected, usually by means of a threaded fitting. The threaded fitting must allow free flow exhaust when the air hose is disconnected.

ANSI SNT-101: A North American safety standard administered by the American National Standards Institute (ANSI) that is written and maintained by ISANTA for portable hand-held compressed-air-powered tools.

ANSI Z535: A voluntary safety standard administered by the American National Standards Institute that is written and maintained by NEMA for product safety labeling, product manuals and safety symbols.

ANSI Z87: A voluntary safety standard administered by the American National Standards Institute that is written and maintained by ISEA for eye protection.

Battery: Any source of electrical energy generated by direct conversion of chemical energy and consisting of one or more primary battery cells (non-rechargeable) or consisting of one or more secondary battery cells (rechargeable).

Cap nailer: Cap nailers are commonly used in exterior applications. These specialty [nailers](#) operate the same as a regular nailer, but also drive a plastic or metal cap in tandem with the [nail](#). The cap provides greater holding power and offers added protection for the nail. Cap nailers are used for roofing underlayment, house wrap, foam board and other select applications. Nails and caps are stored and dispensed from separate [magazines](#) on the tool. The cap magazine may also be identified as a canister.

Cap stapler: Cap staplers are commonly used in exterior applications. These specialty [staplers](#) operate the same as a regular stapler, but also drive a plastic or metal cap in tandem with the [staple](#). The cap provides greater holding power and offers added protection for the staple. Cap staplers are used for roofing underlayment, house wrap, foam board and other select applications. Staples and caps are stored and dispensed from separate magazines on the tool. The cap magazine may also be identified as a canister.

Coil nailer: A nailer that drives fasteners from a collated coil of nails. The primary application of this tool is production applications. ([fig. 2](#))

Collating material: Material for joining together single fasteners in strips or coils. Typical collating materials for strip nails and coils are paper, plastic and wire. Typical collating material for staples, brad and finish nails is adhesive.

Drive: The process of ejecting a fastener from the tool. This occurs when the operating controls are activated.

Dual trigger: Trigger arrangement comprised of two triggers that work in conjunction with each other such that both triggers require individual activation to actuate the tool.

Extended workpiece contact: Control element or assembly that is extended from the tool and is retracted by pressing on the workpiece, preventing the tool from driving a fastener when not pressed against the workpiece.

Fine wire stapler: A type of [light duty tool](#).

Gas container: Non-refillable container which stores and dispenses, using a release device, combustible gas, compressed or liquified, for the actuation of a gas operated tool.

Gas container chamber: Compartment in the gas tool where the gas container is installed.

Gas operated tool: A power fastening tool that is operated by the expansion of ignited combustible gas.

Heavy-duty finish nailer: A finish nailer capable of driving 2.11.1 fasteners made from wire of 18 gauge (American Steel Wire Gauge) [0.0475-inch nominal diameter (1.2 mm)] or heavier wire. The primary application of this tool is production applications.

Heavy duty stapler: A stapler capable of driving:

- Staples having a nominal thickness of 0.0318 inch (0.8 mm) OR
- Staples having nominal width of 0.0475 inch (1.2 mm) or larger.

The primary application of this tool is [production applications](#).

ISO 11148-13: An international safety standard administered by the International Organization for Standardization for hand-held non-electric fastener driving tools.

Jam: An obstruction in the fastener feed or drive area of a tool.

Light duty tool: A tool designed to only drive fasteners meeting both of these requirements:

[Fastener](#) 1 inch (25.4 mm) or shorter (nominal length)

Made from wire with:

- Cross-sectional area less than 18 gauge (American Steel Wire Gauge) [0.0475-inch diameter (1.2 mm)] OR
- Staples with a nominal thickness less than 0.038 inch (1.0 mm) and a nominal width less than 0.050 inch (1.3 mm)

Magazine: Component of a tool that stores collated fasteners to be driven. ([fig. 1](#))

Maximum air pressure: The maximum allowable pressure of the compressed air, as specified by the manufacturer, for operating a tool.

Metering value: Mechanical or electro-mechanical mechanism designed to control quantity of the combustible gas provided to the gas tool which can be either fitted directly onto the release device, integrated into the release device or be a part of the gas tool.

Multi-blow tool: Fastener driving tool that drives fasteners with more than one stroke of the driving element.

Nailer: A specifically designed tool for driving nails and certain types of [pins](#).

Operating control: A control that separately, or as part of an actuation system, can cause the actuation of a tool.

Palm nailer: A specifically designed tool for driving nails that are loaded individually and are not collated.

Pinner: A tool capable of driving headless fasteners up to 2 inches (51 mm) long and a maximum 23 gauge - .025 inches (0.64mm).

Pneumatic tool: A power fastening tool that is operated by compressed air.

Pressurized section: Chamber(s) of a pneumatic fastener driving tool that is/are pressurized.

Production application: High volume, production-like applications, either at a facility, manufacturing setting or on-site, such as, but not limited to, pallets, furniture, manufactured housing, upholstery, sheathing and roofing.

Recoil (tool): The reactive force when a tool drives a fastener into a workpiece. The reactive force pushes the tool away from the surface of the workpiece.

Release device: Valve mechanism which allows the combustible contents of the gas container to be dispensed and is a part of the gas container.

Retracted workpiece contact: Workpiece contact that is retracted and extends when the trigger is activated, preventing the tool from driving a fastener when not pressed against the workpiece.

Single-blow tool: Fastener driving tool that drives the fastener with a single stroke of the driving element.

Special application tools: Tools without a workpiece contact whose fasteners are formed or clamped during application by devices such as integrated anvils or self-contained clinching anvils which prevent free flight of fasteners.

Stapler: A specifically designed tool for driving staples.

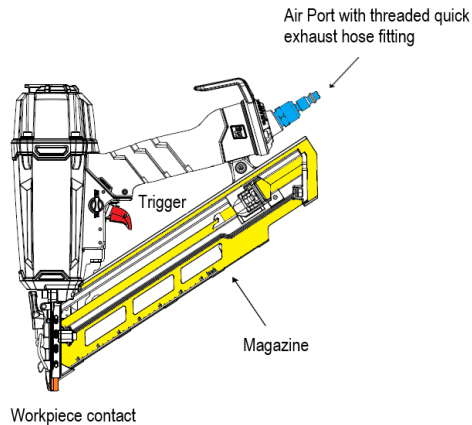
Tool: A portable hand-held device for driving fasteners that is powered by compressed air, electricity, powder or combustible gas.

Trigger: A tool operating control activated manually by a tool operator.

Trigger time-out period: For tools with automatic reversion, the duration of time a trigger can be depressed without operation of the workpiece contact before the tool becomes inoperable.

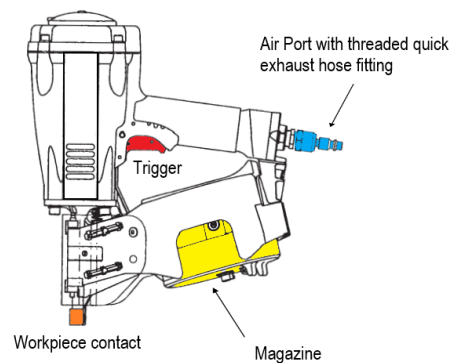
Workpiece: The object into which a fastener is intended to be driven by a tool.

Workpiece contact: An operating control element or assembly on the tool intended to be activated by the material to be fastened before a fastening operation can be performed.



Pneumatic Nailer with magazine for strip collated nails

Fig. 1



Pneumatic Nailer with magazine for coil collated nails

Fig. 2

Fastener Terminology

Fastener: A staple, pin, brad, nail or other fastening device that is designed and manufactured for use in the tools within the scope of ISANTA and is used for securing fixings to surfaces or joining materials together.

Nail: A slender fastener, designed to be driven into a surface (workpiece) to attach two or more materials together. The three major components of a nail are [head](#), [shank](#) and [point](#). ([fig. 3](#)).

Length (nail): For flat head nails, the distance from the bottom of the nail head to the tip of the point. For non-flat head nails (e.g., brads, finish nails, etc.), the distance from the top of the head to the tip of the point. ([fig. 3](#))

Heads: Upset or deformation of the shank, usually at or near end of the shank, opposite the point end that is formed during manufacturing of the nail to provide an area for the tool to drive against and to provide bearing resistance on the workpiece.

Full round head: A nail head that is flat round head with a diameter that is concentric to the diameter of the shank. ([fig.5](#))

Offset round head: A nail head that is flat, round or slightly ovalized with a diameter that is offset to the diameter of the shank. ([fig. 5](#))

Clipped head: A flat altered nail head, typically D-shaped or notched whose center point is typically in line with the centerline of the shank. ([fig. 5](#))

Brad head: A small diameter, deep, barrel shaped head with flat or concavely cupped top surface as found on finish nails and brads for countersinking where concealment is important. ([fig. 6](#))

Point: The end of the nail shank, opposite the head, that is driven into the workpiece. Point shapes typically used with nailers include but are not limited to tapered, chisel and blunt.

Pin: A headless driven fastener with a length under 2 inches (51 mm) and a maximum diameter of 23 gauge (0.025 inches) or (.64 mm).

Shank: The long slender portion of the nail which performs the holding power designed to connect multiple materials together. The shank may be smooth or deformed (ring, screw, barbed) and coated or uncoated.

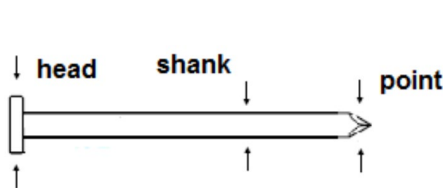
Staple: A two-pronged piece of wire or metal with pointed ends for driving into a workpiece to attach two or more materials together. Typical referenced dimensions of a staple are the [crown width](#) (leg), length, [thickness](#) and [width](#). (Fig. 4)

Crown Width (staple): The distance between the outside of the two staple legs.

Length (staple): The distance from the top of the staple (crown) to the tip of the legs. (Fig. 4)

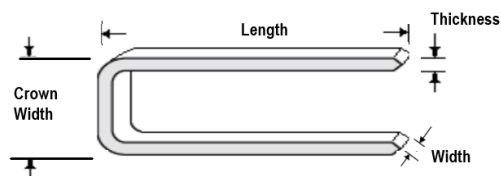
Thickness (staple): Maximum dimension of staple leg cross section measured parallel to the staple crown axis. (Fig. 4).

Width (staple): Maximum dimension of staple leg cross section measured perpendicular to the staple crown axis. (Fig. 4).



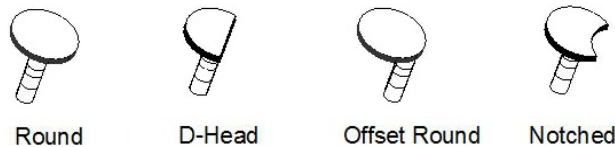
Nail

Fig. 3



Staple

Fig. 4



Round

D-Head

Offset Round

Notched

Fig. 5

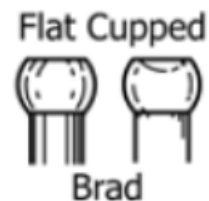


Fig. 6