PRODUCT SPECIFICATIONS

Welded Aluminum Duct



Welded aluminum duct and fittings

Lightweight Custom Ductwork

TIG welded aluminum duct and fittings for lightweight custom HVAC, exhaust, process, and equipment connection work.

- Best for custom duct packages where reduced weight, aluminum material, or specialty equipment geometry is required.
- 5052 is typical for welded aluminum duct; 3003 can be quoted for formed components or project-specific requirements.
- Confirm alloy, gauge, finish expectations, connection style, and field-fit dimensions before release.

MATERIAL	**5052 or 3003 Aluminum**
WELDING	**TIG welded**
FINISH	**Mill finish**

Construction Standard

Application	Custom welded aluminum ductwork and fittings for lightweight exhaust, process, rooftop equipment, equipment connection, or specialty fabricated duct systems.
Material grade	5052 aluminum is typical for welded duct fabrication; 3003 aluminum is available when project specifications or forming requirements call for it.
Gauge range	Welded aluminum duct is supplied as quoted based on size, application, pressure, alloy, reinforcement, and project requirements.
Welding process	Aluminum duct is TIG welded unless another weld process, joint detail, or finish requirement is specifically quoted.
Straight sections	Produced in 5'-0" nominal lengths, less end flange allowance. Shorter sections and coordinated field-fit pieces can be fabricated when required.
End preparation	1/2" flanges are standard. Angle rings, custom flange types, special bolt patterns, collars, and companion flange details can be fabricated as shown or quoted.
Finish handling	Mill finish aluminum is standard unless another finish or handling requirement is quoted. Confirm visible faces, protective film needs, and scratch-sensitive surfaces before release.
Quality check	Weld seams receive visual inspection before release. Leak testing, pressure testing, NDT, or certified inspection are by others unless quoted.

Welded Aluminum Duct

Build Quality

Made to spec	Built tough	Quality checked	Weight conscious
Built to released alloy, gauge, finish, and connection details.	Lightweight TIG welded aluminum with coordinated reinforcement.	Welds and fabricated openings receive visual inspection.	Good for equipment packages where reduced duct weight matters.

Fabrication Capabilities

Duct sections	Rectangular and round aluminum straight duct, field-fit pieces, risers, drops, and custom lengths.
Fittings	Aluminum elbows, radius bends, offsets, tapers, reducers, transitions, branches, and tees.
Connections	1/2" flanged duct systems are typical for fully welded connections. Equipment transitions, collars, curb adapters, wall/shaft connections, and roof penetration fittings are available.
Field-fit work	Short sections, piece-marked runs, and coordinated connection faces.
Shop details	Tabs, brackets, companion flanges, reinforcement, and special flange details when requested.
Release support	Built from released dimensions with alloy, gauge, finish handling, piece marks, and connection faces confirmed before fabrication.

Material Notes

5052 or 3003

5052 is commonly used for welded aluminum duct; 3003 is available for formed components or project-specific requirements.

Lightweight duct

Aluminum reduces duct weight compared with steel, making it a good fit for custom equipment connections, rooftop packages, and specialty exhaust systems.

TIG welded seams

Aluminum duct is TIG welded for clean, controlled welds at seams, transitions, and connection details.

Material fit

Confirm aluminum is acceptable for the service environment; use stainless when corrosion exposure or cleaning requirements call for stainless material.

Connection Options

Couplings	1/2" flange	TDC / Ductmate	Rings / flanges
Raw ends	**Field welded**	**Bolted seal**	**Custom pattern**
Raw ends with couplers for screw assembly.	1/2" flanges for field welded assembly.	Bolted connections with butyl sealant.	Vanstoned or welded angle rings, frames, and bolt flanges.

Optional Accessories

Access

Aluminum doors, cleanout openings, inspection panels, and drain fittings.

Finish

Mill finish handling, visible faces, protective film, and scratch-sensitive surface requirements.

Connections

Flexible connectors, companion flanges, tabs, brackets, angle rings, and piece marks.

Custom details

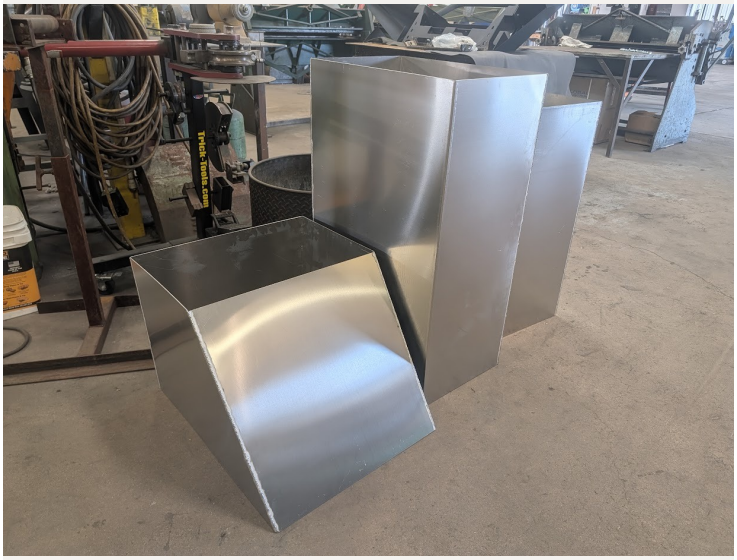
Custom bolt patterns, aluminum reinforcement, special hardware, liner/insulation, or finish requirements.

Required for Quote / Release

- 5052 or 3003 alloy, gauge, duct size, quantity, and required nominal or field-fit lengths.
- Approved drawing, sketch, or verified field dimensions with airflow/orientation noted.
- Flange type, bolt pattern, companion flange needs, and connection face details.
- Mill finish, visible faces, protective film needs, scratch-sensitive areas, and handling requirements.
- Piece marks, access openings, reinforcement, pressure class, liner/insulation needs, and any testing requirements.

Welded Aluminum Duct

Applications & details



Lightweight welded duct

Aluminum welded duct is useful when light weight, corrosion resistance, or non-ferrous construction matters. It can serve rooftop, equipment, process, and specialty airflow applications where standard galvanized construction is not the preferred material.

Applications & details



TIG welded aluminum

5052 or 3003 aluminum can be quoted; seams and fittings are TIG welded unless another process is listed. Gauge, alloy, weld appearance, reinforcement, connection faces, and any finish requirements should be coordinated before release.

Welded Aluminum Duct

Applications & details



Custom transitions

Round, rectangular, offset, and equipment transition details can be built from released dimensions and openings. Orientation, adjoining sizes, flange patterns, access needs, and field-fit dimensions can be incorporated into the approved fabrication package.

Not Included Unless Quoted

- Installation, field welding, hoisting, rigging, roofing, or roof penetration work.
- Engineering, permits, inspections, balancing, cleaning, anodizing, painting, fire wrap, fire-rated enclosure, or listed-system certification.
- Leak testing, pressure testing, gaskets, sealant, special hardware, companion flanges, or rework from changed release dimensions unless quoted.

Scope & Responsibility

Code note: Applicable codes, project specifications, material compatibility, and AHJ direction govern the completed system. Legacy fabricates to released dimensions and quoted scope. System design, material selection, installation, field welding, sealing, clearances, and acceptance remain by others unless quoted.

Ready to Quote?

Let's get your project moving.

Send drawings, sketches, photos, or field measurements. Legacy is ready to go to work for you.

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