



SHOP-FABRICATED DUCTWORK

CUSTOM WELDED DUCTWORK

Fully welded G90 galvanized duct and fittings for heavier-gauge HVAC, exhaust, process, and custom equipment connection work.

- Best for custom geometry, heavier gauges, or duct runs where mechanical lock seam construction is not the right fit.
- Round, rectangular, transitions, offsets, field-fit sections, and coordinated connection faces can be fabricated from released dimensions.
- Confirm gauge, G90 coating requirement, liner, connection style, and touch-up expectations before release.

MATERIAL	G90 Galvanized Steel
GAUGE RANGE	20 ga - 10 ga
STANDARD CONNECTIONS	1/2" flange

CONSTRUCTION STANDARD

Application	Custom welded galvanized ductwork and fittings for HVAC, exhaust, process, outdoor equipment connections, and industrial airflow applications.
Material	G90 galvanized sheet steel is standard unless another coating requirement is listed on the quote.
Gauge range	Welded galvanized duct is available from 20 gauge through 10 gauge, supplied as quoted based on size, pressure, and project requirements.
Welding process	Galvanized duct is typically MIG welded; longitudinal seams and fitting seams are shop welded for continuous welded construction.
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.
Liner options	Fiberglass liner, rigid duct board insulation, and Armaflex can be quoted for acoustic or thermal protection when required.
Coating note	G90 galvanized steel has a zinc coating for corrosion resistance. Welded areas are cleaned and touch-up painted with rust-proof paint.
Quality check	Weld seams receive visual inspection before release. Leak testing, pressure testing, NDT, or certified inspection are by others unless quoted.

BUILD QUALITY



Made to spec

Built from released dimensions, gauges, and connection details.



Built tough

Heavier-gauge duct for custom welded galvanized systems.



Quality checked

Weld seams receive visual inspection before release.



Release ready

Piece marks and field-fit faces coordinated before fabrication.

FABRICATION CAPABILITIES

Duct sections	Rectangular and round straight duct, field-fit pieces, risers, drops, and custom lengths.
Fittings	Rectangular and round 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, angle frames, reinforcement, and special flange details when requested.
Release support	Built from released drawings, verified field dimensions, or approved sketches; piece marks and coordinated connection faces can be included when supplied before fabrication.

MATERIAL NOTES

G90 coating

G90 galvanized sheet is zinc-coated steel, commonly specified as 0.90 oz/sq ft total coating weight across both sides.

Welded construction

Use this product when the project needs heavier material, continuous welded seams, or custom shapes beyond normal lock seam ductwork.

Liner available

Internal liner or insulation can be included when acoustic, condensation, or thermal protection is part of the released scope.

Welded areas

Heat from MIG welding can discolor or burn back galvanizing near seams. Welds are cleaned and touch-up painted with rust-proof paint.

CONNECTION OPTIONS



COUPLINGS

Raw ends

Raw ends with couplers for screw assembly.



1/2" FLANGE

Field welded

1/2" flanges for field welded assembly.



TDC / DUCTMATE

Bolted seal

Bolted connections with butyl sealant.



RINGS / FLANGES

Custom pattern

Vanstoned or welded angle rings, frames, and bolt flanges.

OPTIONAL ACCESSORIES

Liner

Fiberglass liner, rigid duct board insulation, Armaflex, liner pins, adhesive, and exposed-edge details.

Access

Doors, cleanout openings, inspection panels, and drain fittings.

Sealing

Fire-rated gasket, gasketed access hardware, or seal details where specified.

Custom details

Angle rings, custom bolt patterns, special hardware, reinforcement, or special coating requirements.

REQUIRED FOR QUOTE / RELEASE



Gauge, duct size, quantity, material coating, 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.



Liner or insulation type, thickness, exposed edges, access needs, and any acoustic or thermal requirements.



Piece marks, access openings, reinforcement, pressure class, and any testing requirements.



Hardware, gasket, sealant, liner, insulation, touch-up paint, or special coating requirements if included.

APPLICATIONS & EXAMPLES



COORDINATED DUCT RUNS

Rectangular welded sections

Built from released sizes with coordinated section lengths, flanges, and piece marks for efficient field fit-up. Raw ends, formed flanges, and custom connection details can be incorporated to match the approved assembly.

Released dimensions

Custom flanges

Piece marked



LARGE-DIAMETER FABRICATION

Round and heavy-gauge work

Suited to larger diameters, heavier gauges, and custom duct requiring welded seams. Rings, bolt patterns, reinforcement, and section lengths can be coordinated around the released project requirements.

Heavy gauges

Bolt flanges

Welded seams



CUSTOM GEOMETRY

Transitions and equipment connections

Round-to-rectangular transitions, equipment connections, and custom openings can be fabricated to match the release. Orientation, connection faces, and adjoining dimensions follow the approved drawing or verified field information.

Custom openings

Connection faces

Verified orientation



NOT INCLUDED UNLESS QUOTED

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

SCOPE & RESPONSIBILITY

Code note: Welded galvanized duct systems may be governed by mechanical code, local code, project specifications, pressure class, liner requirements, material/coating requirements, and AHJ requirements. Empire fabricates duct and fittings to released dimensions and quoted scope; final system design, material selection, installation method, field welding, field coating repair, sealant/gasket requirements, clearances, and acceptance remain the responsibility of others unless expressly included.

READY TO QUOTE?



Let's get your project moving.

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

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