Construction Details

Metal

Trays are available in any formable, weldable sheet metal material. The most common materials for trays are:

- Carbon steel
- Stainless steel, Ferritic, Austenitic, Duplex, Martensitic
- Nickel alloys
- Copper alloys
- Titanium, Zirconium

Trays are not normally stress relieved or annealed and typically do not conform to pressure vessel standards.

Trays fabricated from sheet metal materials are typically supplied in "as-sheared" condition.

Bolting

Standard bolting conforms to AISI specifications. Bolting conforming to ASME® specifications is available upon request.

Certification

Material certification is available for all fabricated internals. Positive Material Identification (PMI) testing is available upon request.

Gasketing

For multi-piece trays requiring gasketed joints, many choices of gasket material are available. Where gasketing is required, braided fiberglass tape is supplied as the standard for linear joints. Depending on the service, KLINGERSIL® C-4401, expanded PTFE or spiral wound stainless steel with flexible graphite filler gaskets are supplied as the standard for flanged connections. Other gasket materials are available upon request.

Manway Access

All trays are designed in sections to pass through vessel manways. Tower internals are designed to pass through a vessel manway of 18 in [450 mm] minimum inside diameter, unless otherwise specified. Larger manways often provide the ability to optimize the design of components for faster, easier installation. Please provide manway locations and inside diameters at the time of inquiry.

Scope of Supply

For the trays in this brochure, Koch-Glitsch supplies all removable parts.

The trays do not include vessel attachments for connection or support, unless specifically stated in the item description. Vessel attachments may be quoted/supplied separately. Examples of attachments that may be required are:

- Support rings
- Sump frames
- Internal flanges at feed inlet nozzles
- Wall clips for support
- Downcomer clamping bars
- Beam seats

Minimum Support Ring Widths

All dimensions are expressed as inches (millimeters)

TOWER ID	Trays Resting on or Clamped to Support Ring	Trays Through-Bolted or Using Leveling Screws
Up to 18 (Up to 457)	0.75 (20)	1.5 (40)
18.1 - 24.24 (458 - 615)	1.0 (25)	1.5 (40)
24.25 - 48.24 (616 - 1225)	1.5 (40)	2.0 (50)
48.25 - 72.24 (1226 - 1835)	2.0 (50)	2.0 (50)
72.25 - 96.5 (1836 - 2450)	2.5 (65)	2.5 (65)
96.6 - 144.5 (2451 - 3670)	3.0 (75)	3.0 (75)
144.6 - 168.7 (3671 - 4285)	3.5 (90)	3.5 (90)
168.8 - 216.3 (4286 - 5495)	4.0 (100)	4.0 (100)
216.4 - 240.5 (5496 - 6110)	4.5 (115)	4.5 (115)

If the support ring size is other than these listed above, special consideration must be given to the plate diameter and vessel tolerances.