

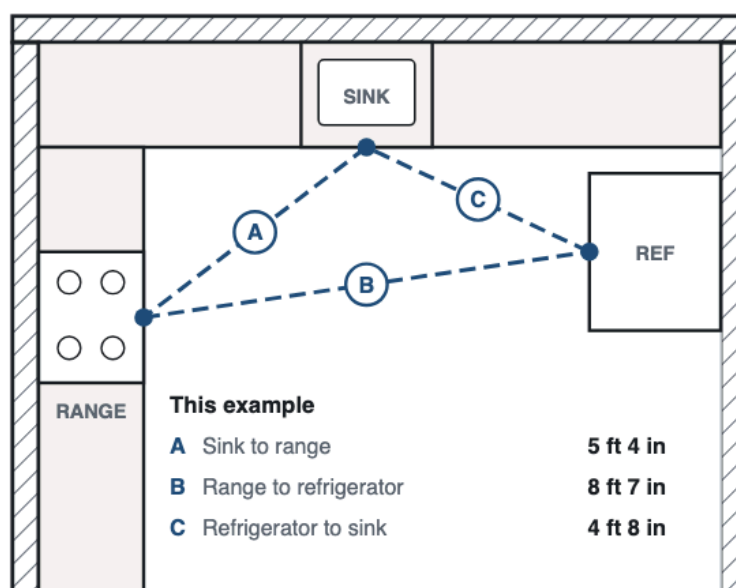
KITCHEN, IN PLAN

The work triangle, and what it does not decide

The triangle is a check on how far you walk between the three things you use most. It is a guideline, it assumes one cook, and a second sink or a second oven changes the picture. It is worth measuring once, and it is not worth losing a layout you like over.

The work triangle, and the three limits on it

Plan view with a worked example. Measure from the front center of the sink, the front center of the cooking surface and the front center of the refrigerator.



The three limits

Each leg at least **4 ft** and no more than **9 ft**

The three legs added up no more than **26 ft** in total

If there is an island no leg crosses it by more than **12 in** (305 mm)

This example adds up to **18 ft 7 in** (178 mm), every leg inside the range. Measure yours the same way before the cabinets are ordered.

 Cabinets

Verify with your professional.

A planning guideline, not a requirement. A second sink or a second cook changes the picture.

File 2, Measurement and Clearance Sheets, figure 2.3.

Figure 2.3 Measured from the front center of the sink, the cooking surface and the refrigerator. The three limits are on the drawing.

PHASE 1, KITCHEN

Layout and scope: the kitchen

These are the answers a designer turns into a drawing. Nothing downstream can be ordered, priced or built until they are settled.

21 Layout type

Locks: wall runs, where the plumbing and the range can go, how many people fit

Depends on: the do not touch list, room dimensions, door and window positions

Final by: before any drawing

22-25 Island, peninsula, or neither

Locks: aisle widths on two sides, seating count, whether power and water run into the floor

Depends on: layout type, room width, whether the floor can be opened

Final by: before any drawing

Guideline. a work aisle of at least **42 in** (1067 mm) for one cook, at least **48 in** (1219 mm) for multiple cooks. (NKBA Kitchen Planning Guidelines)

26-30 Cooking: range, cooktop, ovens, fuel

Locks: cabinet openings, the ventilation decision, the electrical and gas scope

Depends on: budget range, what the house can supply, what your panel can carry

Final by: before the cabinet drawing is priced

Note. Sizes come from the manufacturer spec sheet, not the showroom model. Ask your electrician about panel capacity before you choose induction or a second oven, not after. File 3.

31-36 Refrigerator type and position

Locks: cabinet opening and depth, panel or stainless, door swing, the water line

Depends on: layout type, budget, whether counter depth matters

Final by: before the cabinet order

Guideline. At least **15 in** (381 mm) of landing on the handle side.

37-39 Dishwasher position

Locks: sink base position, door swing conflicts, the panel decision

Depends on: sink position, handedness of the cook

Final by: before the cabinet order

Guideline. Within **36 in** (914 mm) of a cleanup sink, with at least **21 in** (533 mm) of standing space in front.

40-48 Sink count, position and fittings

Locks: the plumbing rough, the sink base width, the countertop cutout, the faucet hole count

Depends on: layout type, whether the drain can move

Final by: before the cabinet order

Guideline. Landing: at least **24 in** (610 mm) one side of the sink, at least **18 in** (457 mm) the other.

49-54 Ventilation route

Locks: hood width and type, duct size and run, soffit depth, the cabinet above the cooktop, and whether a make up air system is needed

Depends on: cooktop position and fuel, whether an exterior wall or roof run exists

Final by: before the cabinet order

Guideline. Many US jurisdictions require make up air for hoods above **400 cfm**; verify locally.

63-65 Pantry, food storage, trash and recycling

Locks: cabinet count, door swings, the cabinet next to the sink

Depends on: layout type, sink and dishwasher positions

Final by: before the cabinet order

KITCHEN

Refrigerator

What to find on the spec sheet	Why it is the one that bites
Case depth, and depth with the doors and handles	One maker publishes 29-5/8 in (752 mm) of case depth on its standard depth model and 24-5/8 in (625 mm) on the counter depth one, and 36-1/4 in (921 mm) and 31-1/4 in (794 mm) once the doors and handles are counted (GE, French door refrigerator dimensions). Counter depth is a case dimension, not a finished one.
Depth with the doors open	Another maker publishes 43-1/4 in (1099 mm) with the doors open to 90 degrees (Whirlpool, counter depth refrigerator dimensions). That is the number that meets your aisle, and File 2 has the aisle.
The clearances the maker asks for	One sheet asks for 1/8 in (3 mm) at the sides, 1 in (25 mm) above the hinge cover and 2 in (51 mm) behind (GE, French door refrigerator dimensions). An opening built to the case width alone is an opening the machine does not go into.
Water line, if it has one	Where the sheet says the connection comes in, and whether the line is run. It is a rough-in question, and File 6 is the file for it.

Your own product

MODEL, EXACTLY AS PRINTED	STANDARD OR COUNTER DEPTH	CASE WIDTH
CASE DEPTH, NO DOORS	DEPTH WITH DOORS AND HANDLES	DEPTH, DOORS OPEN 90 DEGREES
HEIGHT TO THE TOP OF THE HINGE COVER	CLEARANCE ASKED FOR: SIDES, TOP, BACK	OPENING ON THE CABINET DRAWING
WATER LINE: RUN, OR TO BE RUN	MATCHES THE CABINET ORDER? Y OR N	REVIEWED WITH THE CONTRACTOR ON

THE AISLE, NOT THE OPENING

A refrigerator that fits its opening can still fail the kitchen: with the door open it takes the aisle. Check the depth with the door open against the aisle in File 2 before the order, not after.

BATH

The valve: three numbers, and the one nobody checks

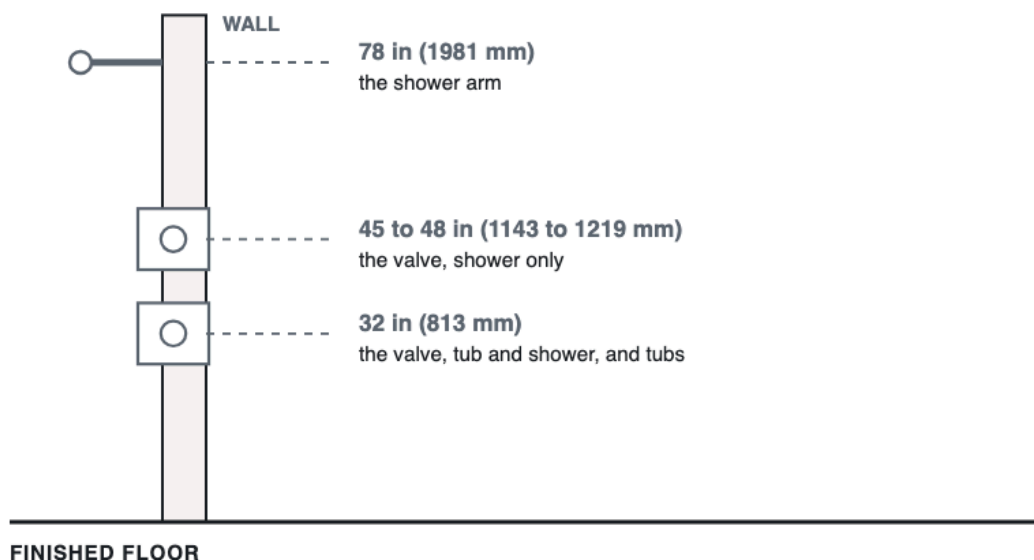
A shower valve is set once, at a height and at a depth. The height is the one everybody discusses. The depth is the one that comes back.

One manufacturer's own rough-in sheet for one trim: the shower arm at **78 in (1981 mm)** off the floor, the valve between **45 to 48 in (1143 to 1219 mm)** for a shower, and at **32 in (813 mm)** for a tub and shower combination (Moen, shower rough-in dimensions). The same sheet calls the depth the critical measurement, sets the finished wall, tile included, at **1-3/4 in (44 mm)** from the face of the plaster ground, and puts the supply piping center line between **1 to 2 in (25 to 51 mm)** behind the wall surface.

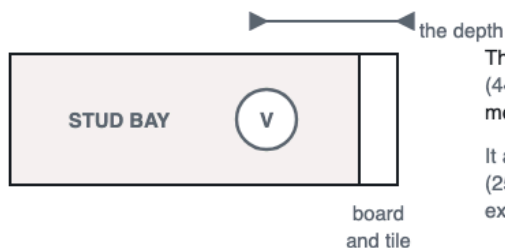
One valve, three heights and one depth

One manufacturer's own rough-in sheet for one of its trims. Your valve has its own sheet, and the numbers on it are the ones your plumber works to.

The heights everybody discusses



The depth, which is the one that comes back



The sheet sets the finished wall, tile included, at **1-3/4 in (44 mm)** from the face of the plaster ground, and calls the depth measurement the critical one.

It asks for the supply piping center line to sit between **1 to 2 in (25 to 51 mm)** behind the wall surface, and publishes two handle extension kits for walls that came out thicker than planned.

Verify with your professional.

Ask what finished wall thickness this valve was set for, tile included, and compare it with the tile drawing before the wall closes.

File 6, Before the Walls Close, figure 6.2.

Figure 6.2 One manufacturer's own heights and depth, drawn in one elevation. Another maker publishes its own.

ALLOWANCES

The allowances every bidder carries

An allowance is a placeholder for something you have not chosen yet. It only makes quotes comparable if every bidder carries the same one, which is why it is set here and not by them.

Item	Allowance to carry	What the allowance includes	Who buys it
Tile, per square foot			
Plumbing fixtures			
Faucets and trim			
Lighting fixtures			
Cabinet hardware			
Countertop, per square foot			
Appliances			
Flooring, per square foot			
Anything else			

Fill in the allowance before you send this document, so that the same number appears in every quote. Ask each bidder to state a unit price for each allowance item as well.

WHAT TO ASK ABOUT EVERY ALLOWANCE

What exactly does this allowance buy, by product and by name, and what happens to the price if I choose something else. A bidder who answers that question clearly has told you something about the whole job.

WHERE THE NUMBERS COME FROM

Sources

Every figure in this file comes from one of the documents below, or is written as a typical range to confirm with your own professional.

GUIDELINE, CODE, AND THE DIFFERENCE

A planning guideline is a recommendation published by an industry body. It is not law. Where a figure comes from a building code the text says so, and it still has to be checked where you live.

Source	Published by	Address	Read on
NKBA Kitchen Planning Guidelines	National Kitchen and Bath Association	https://media.nkba.org/uploads/2022/05/Kitchen-Planning-Guidelines.pdf	2026-09-22
Broan - NuTone, wall hood installation manual	Broan - NuTone LLC	https://broan-nutone.com/getmedia/a425d444-0ebf-49bd-bcdb-b826c591bedb/Installation-Guide-BW5030SSL-BW5036SSL.pdf	2026-09-22
Zephyr, island hood installation manual	Zephyr Ventilation LLC	https://docs.zephyronline.com/docs/manuals/milanoc_is_manual.pdf	2026-09-22
NKBA Bathroom Planning Guidelines	National Kitchen and Bath Association	https://media.nkba.org/uploads/2022/05/Bath-Planning-Guidelines.pdf	2026-09-22
Kohler, two piece toilet specification	Kohler Co.	https://resources.kohler.com/webassets/kpna/catalog/pdf/en/K-31621-RA_spec_US-CA_Kohler_en.pdf	2026-09-22
Kohler, alcove bath specification	Kohler Co.	https://resources.kohler.com/webassets/kpna/catalog/pdf/en/K-1123-RA_spec_US-CA_Kohler_en.pdf	2026-09-22
2010 ADA Standards, sections 608 and 609	US Department of Justice	https://www.ada.gov/assets/pdfs/2010-design-standards.pdf	2026-09-22