



Pole/Post Building

The materials and construction used in a simple pole/post building are shown in the diagram below.

Again, there is a variety of ways to build a pole building. As you study the pole building and the individual parts shown below, some common choices will be explained.

This wide variation is both a problem and an opportunity. It's a problem because somebody can always build cheaper using lower grades, wider spacings, cheaper species, smaller sizes, etc. This makes it hard to match prices.

It's an opportunity, however, for the same reasons. If you build a better building, and know why it is better and sell those benefits, you have an excellent chance of selling the building at a higher price and a better profit.

People will not pay you more than your competition if they don't see any difference. But most people are willing to pay extra to get additional quality that will let the building operate cheaper, last longer, look better, etc., because the cost of a quality building is usually just a few dollars a week extra over the life of the building.

More than any other chapter, this one is a starting point for your Ag building education. As you study the parts and sizes mentioned in the text, make a point to know, or find out, the equivalent item common in your location.

POSTS—Posts are often 6x6 treated lumber. They are usually not kiln dried because it's difficult to kiln dry thick material. Lengths are to 22' and up. 4x6s are also used, with lengths to 26' and more.

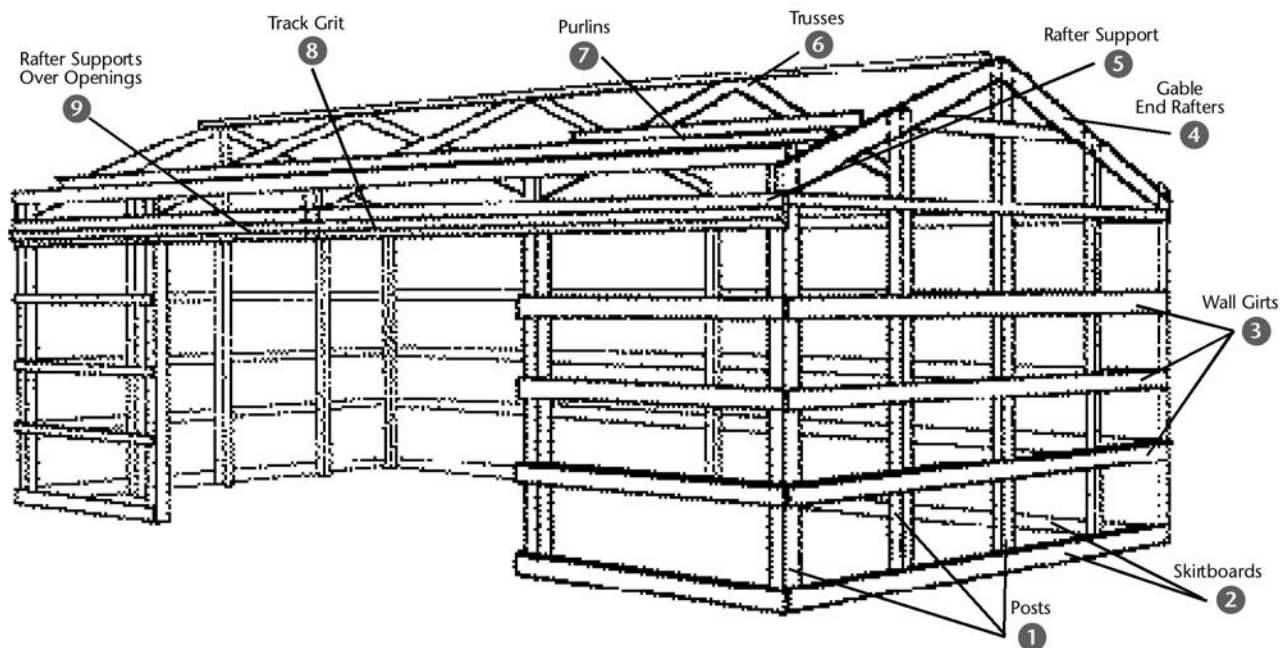
The controlling factor in post spacing is usually the roof design. If trusses are spaced 7', 6" on center, then a post is wanted under each truss, so the posts are also spaced 7', 6" on center.

Post sizes are usually 6x6, with 5x6 and 4x6 also available. Choice is dictated by the wind load design wanted or needed in your area, and/or custom.

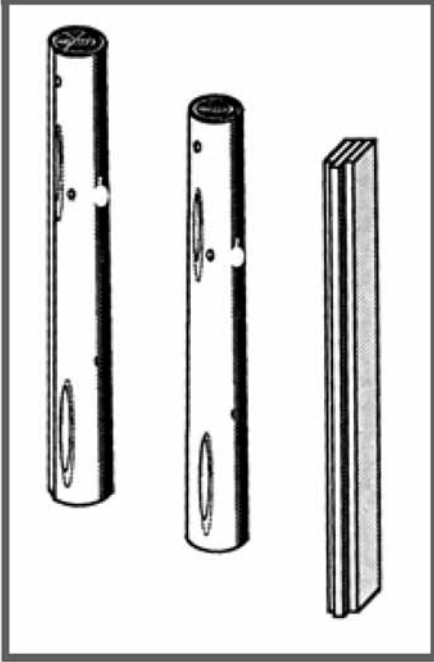
Round poles are common in some areas. These poles are sized by the "top" diameter, as in "a 6" top pole". 5-1/2" and other sizes are available.

Lengths to 26' and longer are used. They are usually treated, though "Penta" poles may still be around. Some people feel the round pole can be treated more

SIMPLE POLE/POST BUILDING



POLES/POSTS



thoroughly and will last longer than the "square" poles.

A variation of the round pole is the "slabbed" round pole. A slab is sawn off one side making it fairly even.

All the poles mentioned so far can be buried in the ground as a means to anchor them. A hole is drilled 3' to 4' deep and a round precast concrete "cookie" may be set into the bottom of the hole to prevent pole penetration, although some soils do not require it.

Some concrete may be poured around the poles, but it is more common just to tamp the dirt back in the hole.

The square poles may be set on a concrete footing and anchored with special metal base anchoring plates.

Three 2x6s or three 2x8s can be nailed or laminated together to make a post also. This is always set on a footing or foundation wall. It is not buried in the ground. A variation has the middle piece two inches wider than the outside two. The wall girts will butt to it.

SKIRTBOARDS—Sometimes called splashboards, these boards are usually 2x6 or 2x8 treated tongue and grooved (T&G) plank. A building usually has from one to five rows. On a sloping lot, however, there may be as many rows as it takes to level the bottom of the sidewall covering.

A machinery storage building will usually have two rows of skirtboards, and a livestock barn will have five. A livestock barn can have bedding and manure piled up, so more rows of planks are needed to keep the acids away from the sidewall steel.

The skirtboards should splice on a pole, and where more than one row is used, two joints should not be together. With tongue and grooved 2" thick material, some folks don't think it's critical to splice on a post. As stated before, just about anything goes in Ag building construction but it is better to splice on a pole.

If you know what makes up good construction and your buildings are built that way, be sure to point this out to the customer.

WALL GIRTS—These are often 2x6s, though 2x4s are also used. The spacing is from 16" on center to 32" on center, with 24" and 30" being common.

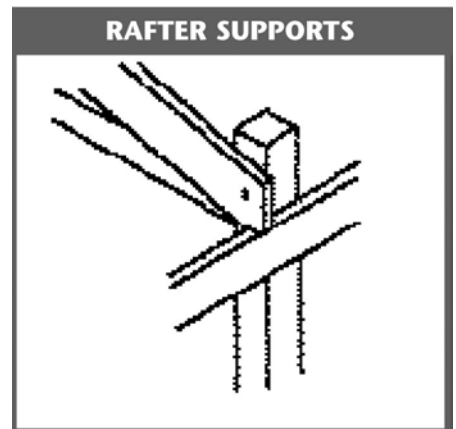
Spacing and size depend both on custom and the wind load design wanted. The wind load design is based on the climatic conditions in your area. But there is usually no building code or official to oversee what is done. So again, you could be pricing a building that is really right for your conditions and get underbid by someone who doesn't know or care about those conditions. Bring this to your customer's attention. The girts are spliced on a pole. Try to offset the splice joints.

GABLE END RAFTERS—Usually a 2x10, but since these rafters are not "clear span" like those in the interior of the building, the size depends on the spacing of the poles on the building end.

These poles are usually spaced evenly across the end but no more than 8 feet apart. There is usually one in the middle, but not always. They are in line with the wall girts and provide the top most nailing surface for the wall covering.

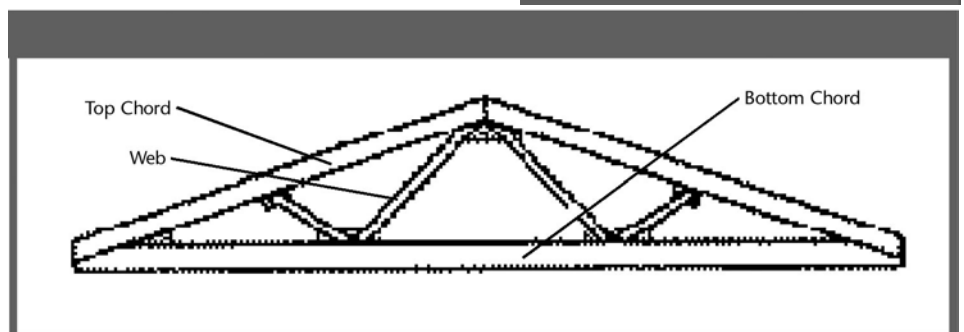
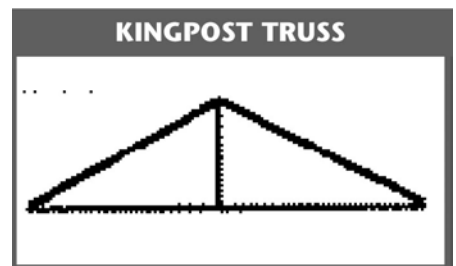
RAFTER SUPPORTS

These help hold up the rafters or trusses. If the truss is next to a post, then the truss is nailed or bolted to the post and only a single 2x6, 2x8, or 2x10 rafter support (sometimes called a ribband) is needed.

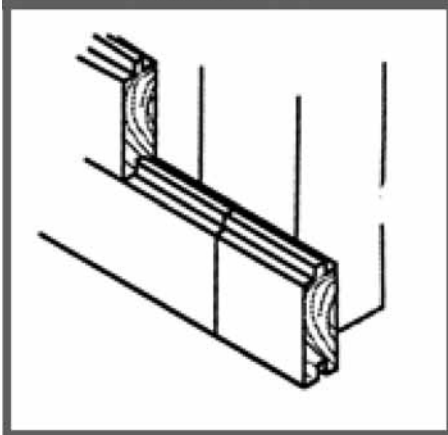


TRUSSES—These are engineered framing members that can span wide distances.

They can be built on the job, in which case an engineered



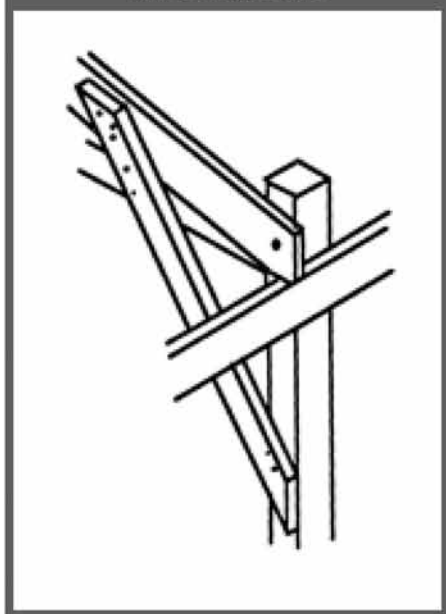
SKIRTBOARDS



drawing should be used. This plan will show sizes of members, where to put the nails, where to put the web members, etc. They also can be built at a truss plant. These people will follow engineering data to build a truss designed for the wind and snow loads in your area.

The size of the top chord (rafter), bottom chord (ceiling joist), and web members, depends on many things: lumber strength, truss spacing, building width, design loads needed, and more.

KNEE BRACING



It's common to design trusses to be 6" on center. This way a building is built in 15' multiples. Actually, you can build it in any length, and the first or last "bay" can be smaller. Of course, 7', 6" multiples will work economically also. But 15' multiples are very common.

In addition, 16' purlins and wall girts can be used and are lapped on each end and nailed together giving the building a little extra strength. This also gives several inches of leeway during construction.

Another common truss spacing is 8'. When a building is built in 16' multiples, the purlins and girts are butted together. This

allows the building to be a little longer with no additional expense for framing members—though extra siding and roofing is needed.

A possible problem with 16' bays is if they aren't right to the inch, the purlins and/or girts will not butt and may not even reach the rafter to rest on. This sounds like sloppy construction, but a pole building may be several inches out of square and still be a well built building. It doesn't have to be as exact as house construction.

Other spacings used are 2', 4', 6' and 9'. Trusses are based on the principle of a rigid triangle. That is if all the corners are held in place, no leg of the triangle can change shape without breaking. The legs are designed to carry certain loads, the corners are fastened with truss plates, and you have a structural member that can clear span the required distance. A rectangle can change shape with all legs remaining the same length as they were before. The new shape is a parallelogram. A rectangle is not a good load bearing shape.

Common sizes for pole building trusses include 2x10s as the top chord, 2x6, 2x8, 2x10 for bottom chord, and 2x4 or 2x6 for web members. But these should be designed by a qualified designer.

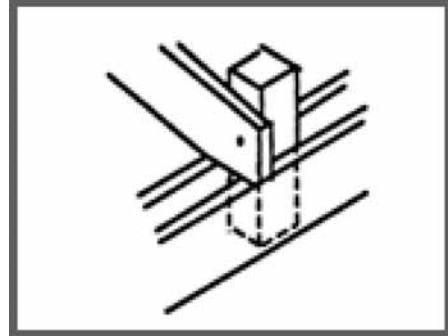
PURLINS—Purlins rest on top of the rafters and are spaced close enough together to carry the metal roofing that covers many pole buildings. The common spacing is 24" on center, but 30" and 36" are also used.

The top purlin is installed about 4" down from the peak, or at the distance needed to nail down the ridge roll or ridge vent properly.

It's common to use 2x4s on edge for purlins, but 2x6s, 2x3s, and 3x3s are also used. Much better strength is obtained by placing the purlins on edge, but it makes it harder to nail the roofing down as there is only a 1-1/2" edge to hit. Some builders will lay the purlins flat as it is easier to nail to, but the purlins usually sag after a bit, and this method is considered poor construction for any truss spacing over 4'.

Purlins can be butted or lapped on top of the truss. It's more work, but some builders will set the purlins down between the trusses, with the purlin top even with the truss top. This eliminates roosting areas for birds and helps keep machinery and cars cleaner. It's a good sales benefit, but not many builders do it.

RAFTER SUPPORTS OVER OPENINGS



TRACK GIRT—See the section on “Tracks, Rollers, Etc.”

RAFTER SUPPORTS OVER OPENINGS—If a truss or rafter rests on a rafter support that is over an opening, then a double rafter support of 2x10s or 2x12s is needed. Notice in the previous drawing there is a little stub post that gives spacing and strength.

Other Bracing

Most roof building design concerns support the roof so the weight of snow or the winds will not collapse it. In open front buildings a big danger is that the winds will lift the roof off. So additional bracing is needed in many open front buildings to keep the roof from blowing off.

These members are often 2x4s or 2x6s. It's a good idea to include these in all open front buildings because even if a “big” wind comes around only once every five years, you'll want your buildings standing when it's over.

If you brace your buildings properly be sure to tell the customer about it.

Nails and Fasteners

Nails and fasteners used on pole buildings are usually ring shanked or spiral shanked for better holding power. Large sizes are common, all the way up to 60d (6" long). Many longer pole/post barn nails are also hardened to keep them from bending easily when driving them in.

It's good construction to use a corrosion resistant nail when driving into treated posts/poles. A common choice is hot-dipped galvanized nails.

Again, they cost more than the plain nail, but are recommended to be used with ACQ treated lumber, which provides a good add-on sale.

Pole/Post Barn Nails

These nails are used to nail framing together. A good choice is a spiral or ring shank hardened nail, preferably galvanized if exposed to the elements or if being driven into ACQ treated wood. Common sizes are 16d (3-1/2"), 20d (4"), 30d (4-1/2"), 40d (5"), and 60d (6"). Spiral shank is also available in 8d (2-1/2").



Washer Nails

Nails with washers slid on are common for nailing metal roofing. The idea, of course, is to seal the nail hole to prevent leaks.

With asphalt shingles, nails are covered by the next courses of shingles and no nail heads are exposed. But application of metal or asphalt sheet roofing is done by nailing in the top ridge of the ridged roofing (see figure above). This exposed nail head leaves an increased chance of leaking.

The washers are various thicknesses and various materials. Some washer choices include silicone, neoprene, and rubber. To increase holding power, these washered nails are either spiral or ring shanked.

Lead Head Nails

A spiral shanked nail with a lead skirt attached to the head is also available for fastening metal sheet roofing. As this nail is driven home, the lead skirt is mashed down, thus sealing the area around the nail. This nail has been largely replaced by the washered nails.

Self-Drilling Screws

Even spiral or ring shanked nails can work loose over the seasons, leaving gaps for leaking. Some builders prefer to screw the metal sheets down with self-drilling screws. They are available in many sizes, with or without washered heads, but often with a hex-sided head and power equipment can be used to install them.

Roof & Sidewall Coverings

Ag buildings can be covered with any of the traditional roofing or siding used on homes. These items are covered in other chapters. This chapter will mainly cover the siding and roofing materials associated with post/pole barn construction, metal sheets in particular.

Steel Roofing

Steel roofing comes in many widths and lengths, though there are some common sizes. The profile, or end shape, varies with each company that makes it. Each company tries to design a shape that is strong and has good resistance to water penetration at the lap joint. The one standard shape is the corrugated sheet in 1- 1/4" or 2-1/2" corrugations. These sheets usually cover 24" in width. Sheet roofing is about 2" wider than what it covers, to allow for the side lap. The ends should be lapped at least 6".

If you stock this item it probably will be in lengths of from 6' to 16', with 8', 10', and 12' being popular. The 1-1/4" corrugated is the most common.

These profiles are usually furnished in sheets that cover 36" in width. 30" is another common width. Most companies have the sheets available in lengths of 6' to 36' (and longer) and will custom cut to any full inch length you specify.

Of course you may stock some standard lengths for immediate delivery. Some stores will stock the longest pieces they can get, and then cut them to size at the store.

The selling point of one metal roofing over another is often

the design of the lap joint. It may have a “double drain” shape built in. Or a “triple drain,” or an antisiphoning edge. Competition forces all the companies to come up with a superior product design.

Most metal roof covering is 29-gauge steel, though aluminum is often used as well. The steel is galvanized and left with that finish, or painted with a finish coat of paint or enamel. The colors cost more, but they can improve the appearance of the building. There is a variety of top quality finishes for galvanized steel, such as baked-on enamel, siliconized paint, polyester paint, and more.

Though most steel used in Ag buildings is 29 gauge, there are different grades of steel used to make the roofing. Check for tensile strength of steel, and even the hardness. Aluminum roofing is available in many lengths, just like steel. Common widths (net coverage) are 24”, 36”, and 48”.

If you are using top-of-the-line sheet steel products, let your customer know about it. Find out more by reading manufacturer’s product literature

Fiberglass Roof Panels

Almost all roofing suppliers have fiberglass roof panels the same shape as their roofing. You can substitute a fiberglass panel for part of the regular roofing panel and allow some natural light in through the roof. They are also used in the sidewall.

Lengths are usually limited to 8’, 10’, and 12’, though others may be available.

Onduline®

We generally don’t talk specific brands in a generic course like this, but Onduline seems to be the only product of its kind. It is a corrugated asphalt sheet, available in many colors, used for roofing or siding. It comes in sheets that are 6’-7” long, and 42-1/2” (net coverage) wide. With a 7’ head lap, purlins are put 24” on center. Skylights, roof ventilators, ridge units, and more, are available. Some advantages include the ability to withstand a corrosive atmosphere (such as is found in fertilizer and salt sheds) less condensation and the ability to be installed right over existing roofing.

Other

There are many other choices in specialty roofing and siding for Ag and similar buildings. For example there is a product that has a sheet steel core, asphalt sprayed on both sides that is covered with embossed aluminum, and covered with baked-on enamel. It’s like a sandwich. It has less condensation, a good R value, and more. Of course it costs a lot more than ordinary steel roofing, but sometimes it might be appropriate.

Inside, some Ag buildings are lined with a fiberglass or similar covering over plywood or waferboard sheets. These come in 4’ x 8’ sheets of various thicknesses. Their purpose is to make a sanitary, easy to clean wall or ceiling surface.

Accessories

Putting the wall and roof covering on isn’t as simple as it looks. There are many accessories used to make the installation easy and proper. See page 8 for the many accessories and their uses. Take some time to look them over. Of course, some companies have more, some less, and some are shaped differently, but this will give you some basic information.

Tracks, Hangers, Etc.

Many Ag buildings have doors in them. Overhead garage doors are common, as are entry doors. Entry doors are common to house building and will not be covered here.

Tracks

Rolling or sliding doors are common with pole/post buildings. A door track, single or double, and the appropriate hangers are used to make the door operate.

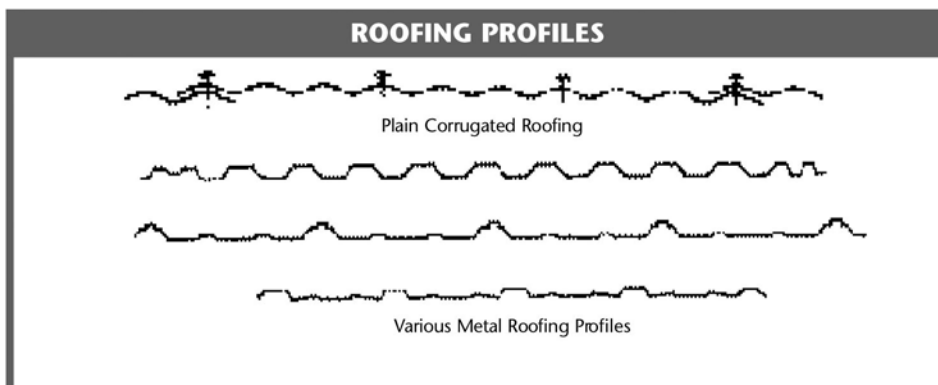
A single door track is used where the door is split and each section rolls away from the center. Also a single track is used when the door is small enough so there is just one piece.

A double track is used when the layout is such that a door will slide over another door. For example, if an entire front or side were all doors, then some doors would have to be closed as other doors have to slide over them depending on which bay was to be open at the time.

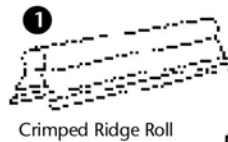
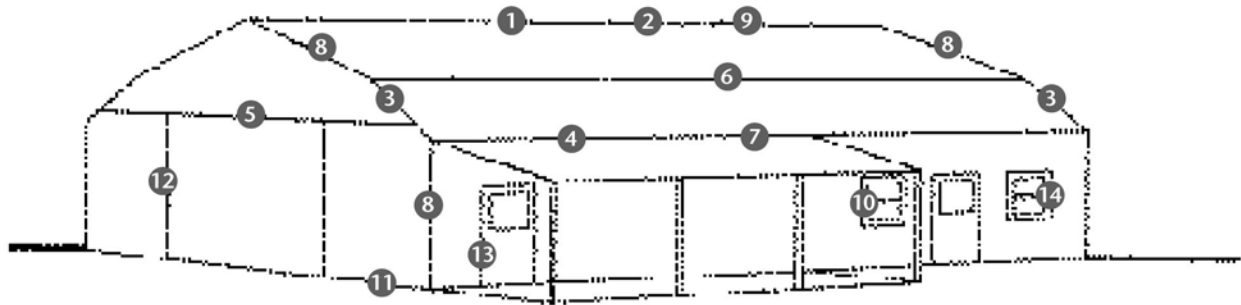
Sometimes flashing is needed above the track to direct water away from the track. Sometimes it is not. Some tracks have it built-in as part of the track.

One thing to check on when selling door track and hangers is the weight they are rated to carry. Some are rated to carry doors weighing up to 450 lbs., some up to 600 lbs., and more. This tells a little about the quality.

Many sliding door systems feature four main parts.



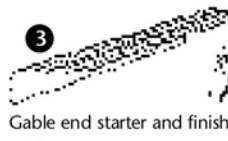
METAL ROOF ACCESSORIES



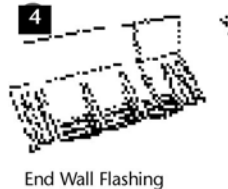
Crimped Ridge Roll



Two-piece Adjustable Ridge Roll



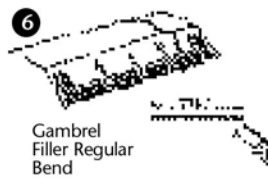
Gable end starter and finisher



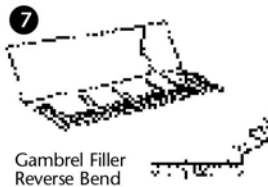
End Wall Flashing



Door Track Cover



Gambrel Filler Regular Bend



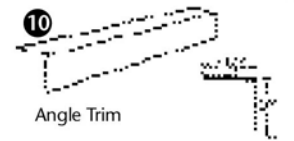
Gambrel Filler Reverse Bend



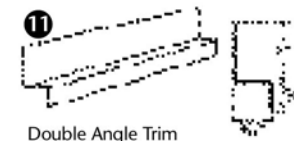
Rake and Corner Trim



Ridge Cap



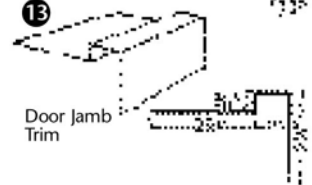
Angle Trim



Double Angle Trim



Door Post Trim



Door Jamb Trim



Framing Closure

The track is often available in 6' to 24' lengths (as always, this varies with supplier). Usually 2 or 3 main kinds of track will do many different door setups.

The rail brackets are what holds the track in place. They are available in several shapes, including a single mount for one rail, double mount for a by-passing setup, and triple mount for triple by-passing doors. Ceiling mounting brackets are also available. They are usually installed on 2' centers.

Flashing that snaps on, or fastens easily, to the rail is common for the trolley rails that do not have the flashing as part of the rail. It usually comes in 10' lengths.

Rollers, usually called trolley door hangers, are made just to fit certain track, but the manufacturer's literature makes that plain. Most are adjustable and some swivel.

This door hardware is often available in 3 or 4 grades according to carrying ability. Lightweight carries doors up to 200 lbs. Then there is usually a series for doors weighing up to 450 lbs., another for doors up to 600 lbs. and the heavy-duty for doors up to 1,000 lbs. or more.

While there is no sense in selling something oversized, selling something that is too light is even more foolish.

With good product knowledge you can sell the right track, hangers, etc., to do the job correctly and economically.

AG FENCING

Many kinds and sizes of fencing, panels, and gates are used for agricultural purposes, such as to keep livestock in and/or to keep other animals out.

Fencing is made from galvanized wire and is made into fence in two common ways. Some fence has the vertical wires (stays) and the horizontal wires welded together at their joints. The general term for this fence is welded wire fencing. The other method is to tie a knot at the joint. This type fence is called woven wire fencing.

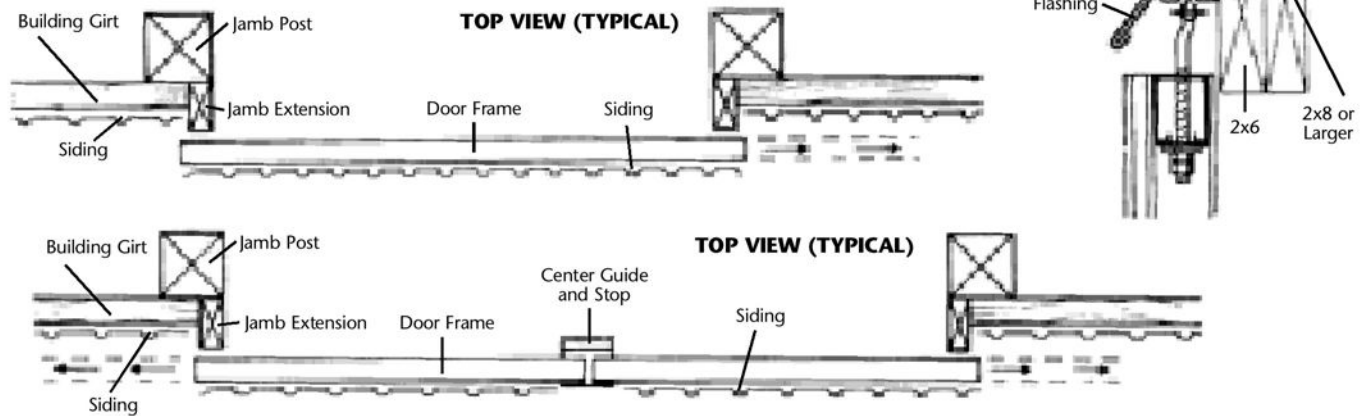
Fence manufacturers make a wide variety of sizes, wire thicknesses, finishes, etc. The fence material used in an area is very much local. One area favors a certain quality and size of fence, but another area may not even have it available.

There are many wire gauges (thicknesses) available, from 9 to 20 (the smaller the number, the larger the wire). You and your competitors probably will just stock one quality.

SINGLE AND BI-PARTING SLIDING DOORS

OPERATION:

A single sliding door, or two sliding doors meeting at the center of the opening (bi-parting), allow maximum doorway access to the building. This system requires a single run of trolley rail approximately twice the width of the door opening running along the door side of the building to carry the door(s).



When competing on price, you may be quoting a price of a higher quality fence (judged by wire thickness) than your competitor. On each kind of fence, check what the manufacturer has available. Check what you stock so you know if it's high, medium, or lowest grade. Then find out what quality your competitor is advertising and selling, and sell your extra quality to the customer.

A store in a rural area will have different choices than a store in a suburban area, which may not have any fence for Ag use in stock.

As before, use this section as a starting point, then check the specifics of what you have available.

Woven Field Fencing

This is the bread-and-butter farm or ranch fence. It is used to separate grazing lands, to confine large animals economically, etc.

With the combinations of spacings, heights, and wire thicknesses available, there could be over 30 choices of woven field fencing. Heights are 26", 32", 39", and 47", with 39" being the most common. Common wire gauges are 12-1/2 and 14-1/2. Most rolls are 330' long. Vertical wires are either 6" or 12" apart. There are up to 4 choices of horizontal wire spacing. First, the wires can be equally spaced from top to bottom, usually at 6". Then there are 3 kinds of spacing where the bottom horizontal wires are close together, with the spacing increasing toward the top.

Horse Fence

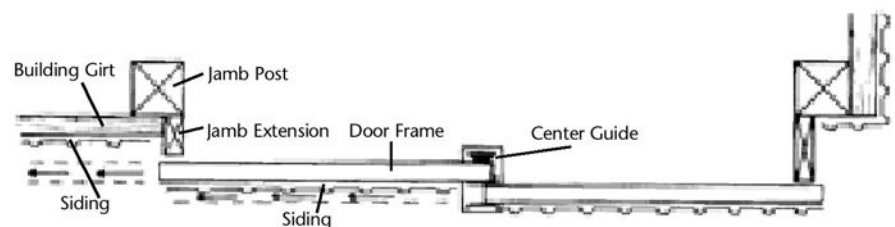
This is a woven wire field fence with the special precaution of no rough ends at the wire joints on either side of the fence. This protects horses from scratches, snags, and blemishes. It is available in a 2" x 4" mesh, 3', 4', 5', and 6' tall and in 100', and sometimes 200' rolls. There are two qualities to choose from—11 gauge, or 12-1/2 gauge wires.

SINGLE AND BI-PARTING SLIDING DOORS

OPERATION:

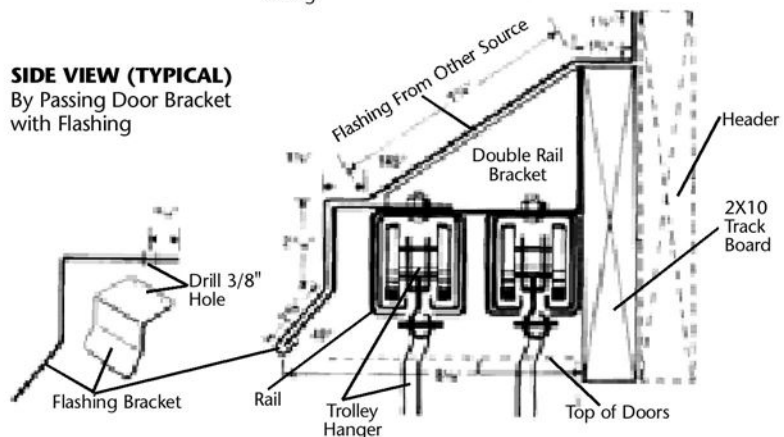
Two runs of trolley rail carry two or more door panels. When open, the inner panel(s) store behind the outer panel(s). Triple brackets are also available for triple runs of trolley rail.

TOP DOOR, TOP VIEW (TYPICAL)



SIDE VIEW (TYPICAL)

By Passing Door Bracket with Flashing



SLIDING DOOR ACCESSORIES



17 Door Bumper—Strong, sturdy, steel barn door bumper. Has extra heavy ribs for strength. Easy to attach. For 2" thick doors.



19 Door Bumper—For 2-3/4" thick doors. A rugged, heavy-duty doorstop.



316 Adjustable Door Bumper—Heavy-duty adjustable for single sliding or bi-parting door from 2-1/2" to 3-1/8" thick.



317 Adjustable Door Bumper—For by-passing or single sliding doors of greater thickness than No. 316 will accommodate. For 4-1/2" to 6" thick doors.



20 Single Door Guide—Adjustable to maximum 3" door.



20-2 By-passing Door Guide—Adjustable to maximum 3" door.



322 Door Guide—Heavy-duty center floor guide for bi-parting and single sliding metal or wood doors. Smooth ramp on each side prevents tire cutting. Mounts on concrete floors with lag screws and shields or on a 6" X 6" post. A 1/2" rod or bolt inserted through hole in each side serves as a center stop for bi-parting doors.



324/325 Door Guides—Extra wide guides ideal for corrugated metal-clad doors. Easy to install. Fasteners not furnished, but guides have holes for spikes as well as larger holes for 3/8" lag-screw mounting. No. 324 Guides, for doors from 3-1/2" to 4" thick, may also be used as door stops when mounted sideways. No. 325 Guide is adjustable for doors 5" to 5-1/2" thick. Curved section of guide may be turned sideways allowing straight access when installing screws.

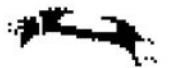


318 Stay Roller—For heavy-duty use. Slots in frame provide adjustment for holding sliding doors against wood walls or posts. Sturdy steel frame. Reversible. For doors up to 3-3/4" thick.



319-Heavy-Duty Stay Roller with Derlin® wheel and 3/8" X 4-1/2" lag screw with expansion shield. For doors of any thickness.

18 Stay Roller—Embossed frame with two wings provide greater bracing and holding strength than conventional single-support, corner-iron frame. Derlin® wheel assures rust-free operation. Adjustable. For doors up to 2-1/4" thick.



6 Door Pull—Extra heavy for variety of applications. White vinyl coated, zinc, galvanized or black. Length 6-3/4".



1135 Latch—Sturdy, easy-operating, all purpose latch. Handle serves as a pull; latches right or left. The latch bar securely attached with two sets of guides and back plates, which provide a bearing surface for the bar and eliminate "grooving" of the wood as bar is moved back and forth. Extra strong bar strike has rounded edges. Ideal for horse barns and livestock enclosures.



25 Swinging Door Latch—Heavy-duty self-latching. Designed for installation on 3/4" to 2-1/4" thick doors. Bolt has rounded face to insure easy latching. Handle designed to prevent flattening when door swings back against building. Available for 3" door thickness. Illustration show how padlock can be inserted to lock. Packed with hold-open catch.



28A Sliding Door Latch—Heavy-duty latch designed to operate sliding doors inside and outside of building. Opens from either side of door. Unlatch from outside, using "S" ring to pull out bar; from inside, lift trip lever. For Doors 1-1/2" to 2-1/4". Latch is reversible for right- and left-handed openings. Used on single metal, metal-clad, or wood doors; also bi-parting metal doors.



28B Sliding Door Latch—Similar to No. 28A but has a flat strike for heavy bi-parting wood and metal-clad doors 1-1/2" to 2-1/4" thick.

13 Door and Gate Latch—Sturdy all-purpose latch. Used on wood or metal sliding or swinging doors or gates. Packed with surface and mortise strikes. Latch has one-half inch thick steel handle which is reversible for mounting on left- or right-hand doors. Padlock holes provided at each end of handle for added security.

13A-Door and Gate Latch—Same as No. 13 with two adapter plates packed with each latch unit. Plates allow latch to be used on corrugated siding or ribbed metal-clad buildings.

13B Latch—Similar to No. 13 but furnished with extra strong bar strike with rounded edges. Sturdy one-half inch thick bar strike eliminates breakage. Can be padlocked. Cam action between handle and bar strike holds door tightly closed preventing door rattle.

13R/13L Latch—Ideal for use on sliding and swinging horse barn doors and livestock enclosures. Heavy handle has rounded edges and is free of sharp projections preventing injury to animals. No. 13R is for right-hand application, and No. 13L for left-hand application.

V-29A Thumb Latch—Heavy-duty latch for doors up to 2-1/4" thickness, opening out.

2180 Turnbuckle Gate Hook and Eye—Designed to draw large doors tight by twisting turnbuckle after door is hooked. Ideal for heavy warehouse, grain bin, or machine shed doors.



Stockade Panels

Sometimes called livestock panels, these are 1/4" galvanized wire welded together to make 16' long panels. They are assembled by pinning on posts, fastening to buildings, or wiring together to make stock pens for hogs

and cattle. Other uses include flatbed sides, portable farrowing pens, portable feeding areas, temporary confinement to allow feedlots to dry out, and more. Two heights are available—34" for hogs, and 52" for cattle. Horizontal wire spacing is graduated from 2" at the bottom to 6" at the top. Vertical wires are usually 8" apart.

Poultry Netting

Poultry netting is a lightweight, 20 ga. galvanized fencing used for making pens for pets, protecting gardens from rabbits, craft and hobby work, as well as poultry confinement. It has a hexagon pattern with 1" and 2" mesh sizes available. Heights are from 12' to 36" in 6" increments and then 4', 5', and 6'. Lengths are 25', 50', and 150' rolls. Common sizes are 1" mesh in 2', 3', and 4' heights. 25' rolls are common in urban areas and 150' more likely in rural areas.

Barbed Wire

Galvanized wires are twisted, with either 2-point or 4-point barbs. The wire is usually available in two gauges— 12-1/2 (or 12-3/4), or 13-1/2. Some manufacturers may have a 15-1/2 gauge also. Rolls are 80 rods long (1/4 mile). Again, since there is a choice of gauges, make sure you are pricing the same item as your competitor, and, if not, sell your customer on your higher quality.

Electric Fence Wire

A thin galvanized wire, either 14 or 17 gauge, through which an electric current will go. One strand is strung on posts, and attached to an electric fence controller. This is used for temporary livestock control, such as rotational pasturing programs, or as a top wire over a woven wire fence to keep livestock from pushing it down. Lengths are 1/4 mile or 1/2 mile.

Other

There are many other kinds of fencing used on the farm, ranch, and home. Most are a variation of the main ones just described. There is border fencing, tiny tot fencing, kennel fencing, plastic safety fencing, and more. There are hi-polymer fences and posts made from polyvinyl chloride in round or plank design. These fences are mostly maintenance free. Ask your supplier what's new and popular, and check the advertisements in the trade magazines and you'll keep up to date.

Farm Gates

These are available in a tubular steel frame or a panel type frame.

The tubular steel gates are 48" or 50" high, and made of 1-3/4" tubular steel, which has 5 bars, or 2" tubular steel, which has 6 bars. Widths are from 4' to 18', in even foot lengths. Common sizes are 12' and 16' in both 1-3/4" and 2" (often called extra heavy duty).

The non-tubular, or panel gates, are made from 24 gauge galvanized steel riveted to vertical supports. Widths are from 4' to 18' in even foot increments. Height is either 48" or 52" with 5 panels in all but the 2 or 3 largest gate sizes (they have 6).

Most gates include the required hinges, latches, and hooks.

Posts

Steel Fence Posts

Regular galvanized and coated steel fence posts are used to install woven wire, fencing panels, barbed wire, and more. The studded "T" shaped post is most common.

Lengths often are 5' to 8' in 6" increments, with 5-1/2' and 6' being common. Since they are usually set 24-30" in the ground, add this amount to your fence height to get the length post needed. Spacing is commonly 8' to 10' apart.

Some manufacturers vinyl coat one or two sizes, such as the 4' post. This makes it more attractive for uses around the home.

Electric fence posts are usually 5/16" round and 4' tall with anchor plates to hold them in the ground.

Most places that stock metal fence posts will have a heavy-duty "U" shaped post available in 6' lengths for heavy duty use, possibly in corners, or at a gate opening.

Wood Posts

Wood posts are used for permanent fencing, just as the metal "T" posts are. Generally, in the round shape, poles are 10' and longer and posts are shorter than 10'. If rectangular shape, any length is often called a post.

They are available in a wide choice of sizes. Several common sizes include 3"x6'-6", 4"x7', 5"x8', and more. The first number shows the diameter of the top of the post. It gets thicker nearer the bottom. All the posts are treated to resist decay.

Creosote treated posts are rare. They are not good to be used around people. Penta treated posts are common, but many posts today are CCA or ACQ treated.

Confinement Buildings & Ventilation Equipment

A major type of Ag building is confinement buildings for hogs, cattle and poultry. This is a type of building that takes more knowledge than is in the scope of this course.

Even buildings designed by professionals have problems. Improper design has caused many animal deaths, mainly through poor ventilation caused by improperly sized equipment and/or building design. The building must be designed to allow enough natural ventilation to keep the animals alive, in case the electricity goes off. Other problems include excess condensation and the resultant rotting of building parts.

The point is that many building centers do sell confinement buildings, and some even sell the ventilation systems and the other accessories such as slats, cleaners, etc., but you must know what you are doing. The liability, if a whole building full of animals suffocates, is serious.

Selling Ag Buildings and Supplies

All through the chapter we've been reminding you about how important it is to be knowledgeable of the products you are selling. It is especially true with farm buildings because there is such a wide choice of materials and construction methods.

For example, there is not total agreement on how high a 10' (for example) building is. Some builders measure to the top of the post/pole. Others measure to the top of the rafter support, others to the rafter support bottom, others to the bottom of the door opening, etc.

There are two big things to watch for. First, make sure you, your competitor, and your customer are all bidding on the same "real" height building. Secondly, check with the customer on what they want to accomplish. They may have a piece of machinery that takes a full 10' clearance to get in and out of the building. They may assume (rightly or wrongly) that a 10' building will give them a full 10' door opening. They may not ask that question directly, though, and only find out after the building is completed that the finished door height is too low.

There is a lack of enforceable standards in Ag buildings, as compared to houses. This is not necessarily bad, but it does mean some pretty "cheap" buildings have been built in rural areas. It also means that honest mistakes have caused problems.

If you have to bid a decent building against a low quality building you'll lose most of those jobs unless you have good product knowledge and use good selling tools. There are really two losers when somebody buys a building (or any product) that doesn't do what it's supposed to do: the prospect and the retailer.

The way to keep your prospect from having a disappointing experience with their Ag building (or any) purchase is the same way you make a profit. You need to find out what they want to get out of their purchase and help them to get it. You do that by having a thorough knowledge of your products in stock and what is available.

Use that knowledge to show your customer how the extra money (if that's the case) they will spend with you is well worth it because of the extra strength, life, looks, peace of mind, convenience, etc., they get in return. You point out that there are people (use no names) who may build with smaller members, and/or spaced further apart, and/or lower grades, thinner wires, and/or lower tensile strength, and on and on.

Never assume that the customer knows that there are many quality choices and that they can figure out for themselves whether the extra they have to spend is worth it. Even if they do know it, and that is doubtful, it often does not hit home until an expert (you) helps bring it in the open.

Wire fencing, farm gates, and the like are included. You have building material store competitors for these items, as well as many rural "discount" stores, and the "farm & fleet" type stores. Most of these competitors probably stock the same quality of items as you do. But not always.

Even a 1/2 gauge difference in the wires used in fencing is noticeable. And 28 gauge metal roofing is not the same as 29 gauge. And hot dipped galvanizing is better than electroplated galvanizing. Ask the manufacturer's rep what makes your brand a superior brand.

When the products and construction methods of your competitors are equal to your quality, at least the playing field is level. The advantage then goes to the person who best helps the customer get what they want.

You need to start with good product knowledge. After that, if you ask questions, sell benefits, show value, demonstrate benefits, handle objections from a human relations viewpoint, and know how to close a sale, you'll get more than your share of Ag business.