## Material

Unless otherwise noted, all material is either:

(CR) Cold-Rolled Steel, High Grade Commercial Quality, Low Carbon, ASTM-A1008
(HR) Hot Rolled Pickled & Oiled Steel, High Grade Commercial Quality, Low Carbon, ASTM-A1011
(GA) Galvanized G60 Steel, High Grade Commercial Quality, Low Carbon, ASTM-A653

Material is purchased to stringent quality standard based on dimensional tolerances for sizes, flatness, squareness, burr, and surface appearance.

## Housing

### Design

Six (6) housing heights are offered as standard. Each height is offered in five (5) standard widths and all housings are 28 1/4" deep (30 standard sizes total). Housings are designed to be lifted fully loaded (7500 lbs. max), by means of standard forklift equipment. Housings can be stacked up to a maximum height of 180", as long as the total load (including cabinet weight) does not exceed 15,000 lbs. on the top of the bottom cabinet.

### Side Panels

18 gauge CR panel, one (1) right-hand, and one (1) left-hand, with wrap around front flanges to form the front of the housing case. They feature offset, interlocking rear flanges, providing for a flush exterior surface. Side panels are the common element to which all housing components are resistance-welded. The 36 wide, 45 wide, and 60 wide housings incorporate an additional 18 gauge filler panel that is resistance-welded between the side panels at the back of the housing. Side panels feature pre-punched holes for the mounting of optional footrests in Workstation applications.

### Top and Bottom Pans

14 gauge CR pan, one (1) top and one (1) bottom, with 1 3/4" flanges and an additional 5/8" return flange on the opening side of the cabinet to form the front housing case. Front and rear corners are wire-welded and ground smooth after the housing is resistance-welded to provide for increased strength and improved racking resistance. The front face of the top pan features a "DD" hole for the cabinet lock while its top surface features four (4) knock-out holes for use in cabinet stacking and worksurface installation. The bottom features pre-punched tool clearance holes for anchoring the unit's base members to the floor.

### Front Frame

Two (2), 16 gauge CR triple formed vertical members wire-welded at their corners to two (2), 12 gauge HR horizontal angles. Front vertical members incorporate square holes that are punched on 20mm (0.7874") centers to accept the locating tabs of the drawer slides. An adjacent round hole is utilized to accept the screws that secure the drawer slides to the housing. Horizontal members incorporate radial notches to accept the lock rod of the locking mechanism. This pre-welded frame is resistance and wire-welded to the inside of the front of the housing case. This design provides the strength, stability, and squareness necessary for the precise operation of the drawer systems.

### Rear Frame

Two (2), 16 gauge CR triple formed members, one resistance-welded to the rear corner of each side panel. Rear vertical members incorporate square holes that are punched on 20mm (0.7874") centers to accept rear locating tabs of drawer slides that precisely match the holes in the front frame. A 12 gauge HR horizontal angle is wire-welded to both the bottom pan and to the base of each rear vertical member, providing additional strength for cabinet lifting.

**Base Members**
Two (2), 12 gauge HR channel-formed members, one wire-welded to each side of the bottom pan, running front to back on the housing. Base members provide the necessary clearance between them for standard forklift access. The Base members have tabs that fit into pre-punched slots in the bottom pan for self-locating during the welding process. Base members feature front and rear full-height return flanges designed to transfer cabinet loading through to the floor, resulting in additional housing capacity. Each return flange features a pre-punched hole for the field attachment of a closure strip. Base members feature pre-punched holes for anchoring housings, and for the attachment of casters. All 45 wide and 60 wide housings feature two (2), 12 gauge HR reinforcing channels running the width of the housing. These channels are wire-welded to the interior of the bottom pan of the housing.

**Closure Strips**
Two (2), 16 gauge CR quadruple-formed channel caps that are field attached to the base members with two each plastic “Tree Clips”. One strip covers the base members at the front and one at the rear.

**Anchoring**
An open ended slot is pre-punched into the ends of each base member to facilitate floor anchoring of the cabinet, utilizing 3/8” fasteners (supplied). Four (4) holes, two (2) on top pan, and tow (2) on bottom pan are located on the right side, back side and left side of housing. These cabinet-to-cabinet ganging holes are punched through the vertical flanges of the top and bottom pans, but are blocked by pre-punched closure tabs on the back side. The holes on the back side are accessed by bending in the closure tabs from inside the housing and through-bolting cabinets together utilizing the 3/8” fasteners (supplied). The holes at the top of the sides are filled with plastic plugs that are easily removed for through-bolting cabinets together side-to-side.

## Locking

**Design**
All cabinets are offered with either Single Drawer Access or Multiple Drawer Access. The Single Drawer Access mechanism locks unopened drawers when one drawer is pulled out. The Multiple Drawer Access mechanism allows for more than one drawer to be opened at a time. Both locking mechanisms consist of a key operated lock cylinder, a lock rod, and a drawer engagement system.

**Single Drawer Access Mechanism**
The Single Drawer Access locking mechanism is a unique device that provides for single drawer operation. This locking mechanism is pre-engineered and can only be assembled at the factory. It is fastened with #6 self-tapping screws to a 16 gauge CR multi-formed channel that is resistance-welded vertically to the right-rear corner of the housing. A 12 gauge GA latch clip is fastened to the right-rear zee rail of each drawer in the cabinet with two (2) 3/16” steel rivets. As a drawer is opened, it is this clip that interacts with the pawl of the interlock mechanism. As this pawl pivots, it forces a ball-bearing between the edges of a series of bullets in the mechanism. These bullets become displaced on either side of that particular ball-bearing, forcing them behind the remaining pawls, locking them and their respective drawers in place. When the key of the lock cylinder is rotated to the locked position, the lock rod rotates the Interlock Actuator of the mechanism, displacing the bullets and locking all pawls and their respective drawers.

**Multiple Drawer Access Mechanism**
The Multiple Drawer Access locking mechanism is a unique device that provides for multiple drawer operation. The mechanism consists of a 14 gauge GA formed locking channel, a 14 gauge GA attachment plate, and a 14 gauge GA channel-formed lock support. The attachment plate is slid into a slot along the length of the locking channel and both this assembly and the lock support are fastened with #6 self-tapping screws to a 16 gauge CR multi-formed channel that is

resistance-welded vertically to the right-rear corner of the housing. A 12 gauge GA latch clip is fastened to the right-rear zee rail of each drawer in the cabinet with two (2) 3/16" steel rivets. This clip interacts with notches in the locking channel. When the key of the lock cylinder is rotated to the locked position, the lock rod rotates to lift the locking channel to position flanges behind each latch clip, locking all drawers.

**Lock Cylinder**
The heavy-duty lock cylinder features a dust shutter, an internal O-ring, and bronze wafers for superior quality and resistance to harsh environments. Two (2), 0.086" thick brass keys are supplied with each lock cylinder. The lock is operated by 180 degree rotation and the key is removable in either the locked or unlocked positions. Key coding is chosen randomly from 250 different combinations (M750 through M1091, with specific numbers missing). The key code number is stamped on the face of the cylinder to aid in identification. The lock cylinder is common between Single Drawer Access and Multiple Drawer Access locking mechanisms.

**Lock Rod**
9/32" diameter bright basic steel wire, ASTM 1008 that is machined on one end to fit inside the core of the lock cylinder and into the radial cutout of the top horizontal member. The Single Drawer Access lock rod is machined on its opposing end to fit inside the core of the Interlock Actuator. The Multiple Drawer Access lock rod is offset formed on its opposing end to fit inside the hole of the lock support and into the slot of the locking channel.

## Drawer

**Design**
Fifteen (15) drawer heights are offered as standard. Each height is offered in five (5) standard widths, and all drawers feature a clear depth of 25 1/8" (75 standard sizes total). The perimeter of a typical drawer features slots for locating partitions and dividers to segment the drawer's interior into smaller compartments. Segments are on 0.799" centers, and all drawers feature 32 segments front-to-rear. 22 wide drawers have 23 segments side-to-side, 30 wide has 32, 36 wide has 40, 45 wide has 50, and 60 wide drawers have 69 segments side-to-side. The drawer consists of a body, front, back, two side ribs, two front/back ribs, a handle, and two zee rails.

**Body**
Drawer bodies are offered in four (4) different heights within a specific drawer width. The body is an 18 gauge CR box-formed pan for 22, 30, and 36 wide drawers, and a 16 gauge CR box-formed pan for 45 and 60 wide drawers. The body is pre-punched to accept the self-tapping screws for the attachment of partitions and dividers. The body features flanges at the front and rear that are resistance-welded to the drawer front and back.

**Front**
14 gauge CR flat, corner-chamfered plate for 22, 30, and 36 wide drawers, and a 12 gauge HR flat, corner-chamfered plate for 45 and 60 wide drawers. The front is pre-punched to accept the self-tapping screws of the drawer handle and the dimples of the handle end caps. The front is resistance-welded to the front, horizontal and vertical flanges of the drawer body.

**Back**
18 gauge CR formed strip for 22, 30, and 36 wide drawers and a 16 gauge CR formed strip for 45 and60 wide drawers. The back is resistance-welded to the rear, horizontal and vertical flanges of the drawer body.

**Side Ribs**
20 gauge CR multi-formed strips that are slotted on 0.799" centers to accept the flanges of partitions and dividers. One

(1) side rib is resistance-welded to each side of the drawer body, creating a unique double-walled construction to provide increased drawer strength.

**Front and Back Ribs**
20 gauge CR multi-formed strips that are slotted on 0.799" centers to accept the flanges of partitions and dividers. One (1) rib is resistance-welded to the drawer front and one (1) rib is resistance-welded to the drawer back.

**Handle**
A clear anodized aluminum extrusion that features a unique "snagless" end cap design. The handle, without end caps, measures 13-3/16" in length for 22 wide drawers, and 20 3/8" in length for 30, 36, 45, and 60 wide drawers. Handle end caps are molded from polyethylene material, are handed, and are colored to match the handle. These components interlock as a unit, and are pre-assembled to the drawer front at the factory using three (3), #10 self-tapping screws. The right-hand end cap features a slot through which both a rigid, 1" wide, 0.03" thick paper label and a 0.01" thick clear plastic strip can be inserted. Once fully inserted, they drop down and are held in place by a step inside the right-hand end cap. The paper label and clear plastic strip are shipped loose, and are labeled and inserted by the customer.

**Zee Rails**
14 gauge CR zee-formed members, one (1) right-hand and one (1) left-hand, that travel on the Delrin rollers of the drawer slide, and are resistance-welded to the underside of the drawer body. The zee rails feature pre-punched holes for attachment of drawer latch clips, and formed tangs that act as drawer stops.

## Suspension

**Design**
The suspension system is designed to provide for full extension of any drawer at full rated load capacity. The suspension system consists of the drawer and drawer slide. The drawer slide is made of two (2) components; the cabinet profile, and the middle profile. Drawer stopping is accomplished by formed tangs that are located at specific points along the lengths of the drawer and drawer slide. Drawers can easily be removed, without the need of tools, by releasing the safety catch at the front of the middle profile of the drawer slide and lifting up on the leading edge of the drawer at full extension.

**Performance**
The drawer suspension system, under a full rated load of 400 pounds, will experience 3000 cycles without failure. A cycle is defined as full extension and return, with a maximum pull force no greater than 50 pounds. Full rated loading is defined as an equally displaced weight on the drawer body, having two (2) partitions screwed in place and located front to rear.

**Drawer Slide**
12 gauge CR full-extension, progressive-action drawer slide consisting of two (2) components; the cabinet profile, and the middle profile. The cabinet profile features two (2) mounting tabs which engage into the front and rear vertical members of the cabinet housing, a formed tang which acts as a drawer stop, and a pre-punched hole to allow for a #8, countersunk-head screw which secures the cabinet profile into position. The middle profile features six (6) self-lubricating Delrin rollers, integral drawer stops, and a safety catch which prevents the drawer from bypassing the drawer stops. Both the cabinet profile and middle profile are finished with a gray powder coating.

## Finish

After fabrication, all steel parts are thoroughly cleaned, given a bonding and rust inhibitive phosphate treatment and then electrostatically sprayed with powder coat. All fasteners are zinc-plated.

## Housing Options

**Retainer Top**
A series of components for the application of a flanged cap to the top of any size cabinet. The 14 gauge CR pan features a 3/4" vertical flange at all four sides. It is attached with four (4), 1/4" fasteners to the top of the cabinet through the knock-out holes in the cabinet top pan. The retainer top is sized to be flush with the edges of the cabinet. A black, "Duraflex" vinyl mat is included to protect the surface of the retainer top.

**Hardwood Top**
A series of components for the application of a laminated, hardwood panel to the top of any size cabinet. It is attached with four (4), 1/4" lag screws through the knock-out holes in the cabinet top pan. Pilot holes must be field-drilled into the hardwood top for ease of attachment. The hardwood top is 1-3/4" thick, is the same width as the cabinet, is 28" deep, and features 3/16" rounded edges. It is made by laminating hard birch, maple or beech woods, is then kiln-dried, and finished with two coats of moisture resistant sealer.

**Housing Reinforcement**
Additional welding and reinforcements are applied to a typical housing to increase its stacking capacity from 15,000 lbs. to 28,000 lbs. and from 180" to 240" overall height. A 14 gauge HR hat-formed member is resistance-welded, vertically to the mid-point of both side panels of the housing.
***NOTE:*** *This option is factory installed only*

**Deduct Forklift Base**
A cabinet housing without base members or closure strips. This option reduces the overall height of the cabinet by 2-1/8".
***NOTE:*** *This option is factory installed only*

**Pallet Truck Base**
A style of base that is applied to a typical cabinet housing in place of the base members. This base increases the overall height of the cabinet by 2". It increases the vertical clearance from the floor to the bottom of the housing from 2-1/8" to 4-1/8". It also increases the side-to-side clearance between the base members by 5 3/4". A pallet truck base consists of two (2), 12 gauge HR triple-formed members, one wire-welded to each side of the bottom pan, running front to rear on the cabinet housing. The Base members have tabs that fit into pre-punched slots in the bottom pan for self-locating during the welding process. Each end of the base member features a wire-welded 12 gauge HR channel-formed reinforcement that has a pre-punched hole in it for the field attachment of two (2) 16 gauge CR quadruple-formed closure strips (included).
***NOTE:*** *This option is factory installed only*

**Mobile Base and Handle**
A series of components to provide the means to convert a housing into a mobile unit. Kits are offered with 5" diameter casters (2,600 lbs. load capacity) or 6" diameter casters (2,800 lbs. load capacity). The 5" diameter casters increase the overall height of the cabinet by 6-1/2". The 6" diameter casters increase the overall height of the cabinet by 7-1/2". Each kit consists of two (2) stationary casters, two (2) swivel casters with footbrakes, a handle, and all necessary hardware for their assembly (all attachment holes are pre-punched into the cabinet housings). All casters feature 2" wide, roller bearing, polyolefin wheels and the swivel casters feature a "Tech-Lock" brake. The handle is constructed from 18 gauge CR, 1 1/4" diameter steel tubing, 24" long, and is wire-welded to a 12 gauge HR, multi formed mounting plate. The handle assembly (painted to match the cabinet housing color) includes black, rubber end caps that are applied to the tube ends.

Mobile base kits can also be applied to cabinet housings without forklift base. In addition to the items listed above, a pair of 12 gauge GA mounting plates are supplied and are attached between the casters and the bottom pan of the cabinet.
***NOTE:*** *This option is factory installed only*
*Not recommended for cabinet housing heights taller than 37-3/16" (40 segments), due to potential tipping.*
*Latch-In / Latch-Out feature is strongly recommended for all mobile cabinet applications.*

**Bottom Shelf**
A bottom shelf applied to the inside of any size cabinet. It is a fill-in shelf, installed inside the base of a housing used in shelf and swing door applications. The bottom shelf is a 16 gauge CR multi-formed panel that features a built-in 1" high retainer at both sides and at the rear. The bottom shelf also features a 16 gauge CR vee-formed reinforcement, resistance welded to the underside, running side to side for 22, 30, and 36" wide cabinets. The 45 and 60 wide bottom shelves do not feature reinforcements, but rather are adequately supported by the reinforcing channels which are wire-welded to the interior of the bottom pan of the cabinet housing.

**Adjustable Shelf**
A series of components for the application of a static shelf to the inside of any size cabinet. Shelves are designed to carry an evenly displaced load of 400 lbs. and are adjustable on 20mm (0.7874") centers. The adjustable shelves measure 1 1/2" in height and feature a built-in 1" high retainer at both sides and at the rear. Each kit consists of the shelf, a pair of shelf supports, and the necessary hardware with assembly instructions. The shelf is a 16 gauge CR multi-formed panel that features a 16 gauge CR vee-formed reinforcement, resistance-welded to the underside, running side-to-side for 22, 30, and 36" wide cabinets. Two (2), 14 gauge CR hat-shaped reinforcements are used for 45 and 60 wide shelves. Shelf supports are 12 gauge GA angle-formed members that feature two (2) mounting tabs which engage into the front and rear vertical members of the cabinet housing, and a pre-punched slot to allow for a #8, countersunk-head screw which secures the shelf support into position. The shelf is placed on top of the supports and held in place by its formed flanges.

**Roll-Out Shelf**
A series of components for the application of a roll-out shelf to the inside of any size cabinet. A roll-out shelf is a 5-segment drawer with a notched drawer front that features channel reinforcing inserts. Roll-out shelves are designed to carry an evenly displaced load of up to 400 lbs. and are adjustable on 20mm (0.7874") centers. Roll-out shelves measure 2" in height, and feature a built-in 1-5/8" high retainer at both sides and at the rear. Each kit consists of the roll-out shelf that features four (4), 18 gauge GA channel-formed inserts, one (1) pair of drawer slides, and the necessary hardware with assembly instructions. The roll-out shelf is assembled into a cabinet like a typical drawer.
***NOTE:*** *This option cannot be used in conjunction with Flush Swing Doors.*
*This option can be positioned at the bottom of a shelf cabinet in lieu of a bottom shelf.*

**Keyed-Alike Lock**
A lock cylinder and a pair of keys that are coded to be interchangeable within a specific group. There are a total of five (5) different key code groups available.

**External Lock Bar**
A device that provides a means to lock all drawers with one, centrally located external padlock (not supplied). This option is recommended for mobile and high-risk applications. The mechanism is specified by the height of the housing and consists of an 18 gauge CR continuous hinge, a 14 gauge CR hemmed plate, and a 12 gauge HR hasp clip. These components are resistance-welded together and the painted assembly (cabinet housing color) is fastened to the right-hand, outside face of the cabinet housing with #8 self-tapping screws that are concealed when in the locked position.
***NOTE:*** *This option can be fastened to the left-hand side of the cabinet housing, but only if the Latch-in / Latch-Out feature is not specified.*

**Deduct Cabinet Lock**
A cabinet housing without either the Single Drawer Access or Multiple Drawer Access locking systems. It consists of a black, plastic plug that is press-fitted into the lock cylinder hole of the top pan of the cabinet housing.

**Maintain Single Drawer Access**
A cabinet featuring the Single Drawer Access locking system, but without a lock cylinder. This option maintains all of the features of the Single Drawer Access locking system, but without a keyed lock. It consists of a black, plastic plug that is press-fitted into the lock hole of the top pan of the cabinet housing.

**Flush Swing Door**
A series of components for the application of a flush swing door to any size cabinet. Doors are designed to be flush with the case opening of the cabinet housing. The 22, 30, and 36 wide units feature a single door that hinges on the right-hand side. The 45 and 60 wide units feature a pair of doors that part in the middle. All doors feature a two-point (top and bottom) locking system. Each kit consists of a bottom shelf, pre-assembled door panel(s), door stops with magnets, and the necessary hardware with assembly instructions. The door panel assembly is an 18 gauge CR multi-formed panel with a 24 gauge CR hat-shaped stiffener resistance-welded vertically at its midpoint. All doors feature two (2), 18 gauge CR multi-formed lock bar guides that are resistance-welded at its top and bottom jamb corners. A 16 gauge CR continuous hinge is resistance-welded to the door panel and the assembly is fastened to the cabinet housing using 1/4” self-tapping screws.

All right-hand door panels feature a black, molded plastic handle attached with self-tapping screws. The locking mechanism consists of a lock cylinder, two (2) 0.086” thick brass keys, a 12 gauge GA pivoting cam, two (2) 20 gauge GA formed channel lock bars, and the necessary hardware for their attachment. The lock is operated by 90 degree key rotation and the key is removable in either the locked or unlocked positions. Key coding matches cabinet housing coding, which is chosen randomly from 250 different combinations.
***NOTE:*** *This option cannot be used in conjunction with drawers or a roll-out shelf.*

**Deduct Door Lock**
A flush swing door without the locking system. A black, plastic plug is press-fitted into the lock hole of the flush swing door panel. The magnets on the door stops retain the door in the closed position.

## Drawer Options

**Partition**
18 gauge GA multi-formed panel that is used for structural support of a loaded drawer, ant to sub-divide the drawer interior into smaller compartments. Partitions are available in five (5) lengths, equivalent to the interior drawer width and each length is available in four (4) heights, equivalent to the drawer body height (20 standard sizes total). The 30 wide partition is also utilized front to rear, inside any width drawer. Partitions feature slots that line up with the slots around the drawer interior for the installation of dividers. Partitions are installed by inserting their end flanges into the slots along the drawer perimeter and fastening their bottom flange into the pre-punched holes of the drawer bottom with #6 self-tapping screws (supplied).

**Divider**
20 gauge GA flanged plate that is used to sub-divide the drawer interior into smaller compartments. They are available in twenty-two (22) lengths of 3 segments through 24 segments, and each length is available in four (4) heights equivalent to the drawer body height (88 standard sizes total). Dividers are installed by inserting their end flanges into the slots between the drawer perimeter and a partition, or between partitions. Dividers over 14 segments feature an additional

pre-punched bottom flange to be fastened into the pre-punched holes of the drawer bottom with #6 self-tapping screws (supplied). Dividers feature pre-printed part numbers for ease of customer identification.

**Hanging File Frame**
Galvanized framework that is sized to fit the interior dimensions of any width drawer. The frame is designed for the support of standard letter-sized file folders inside a minimum useable drawer height of 10-1/8" (#14 drawer) or larger.

**Plastic Bins and Dividers**
Three (3) bin sizes (W x D) are offered as standard, each in two different heights (six sizes total). Two (2) divider sizes are offered as standard, each in two different heights (four sizes total). Both bins and dividers are offered in either a non-conductive yellow, high-impact polystyrene plastic, or a conductive black, graphite filled polypropylene plastic used for anti-static applications. Material thicknesses are 0.090" for bins and 0.100" for dividers. Bins feature molded-in label holders and interior grooves for locating dividers. 3" width or depth bins have a usable measurement of 2-3/4". 6" width or depth bins have a usable measurement of 5-3/4". 2" high bins have a usable dimension of 1-13/16", and 3" high bins have a usable dimension of 2-13/16".

**Plastic Quarter Trays**
Two (2) styles of quarter trays are offered as standard. Quarter trays are 0.030" thick and are vacuum-formed from white, high-impact polystyrene plastic. Trays measure 12-9/16" square and have a usable height of 1-1/4". Each compartment of the 20 compartment tray has a usable dimension of 2-1/8" by 2-11/16", and each compartment of the 35 compartment tray has a usable dimension of 2-1/8" by 1-3/8".

**Latch-In / Latch-Out**
A device that provides a means to automatically latch individual drawers in both the closed and fully opened positions. Designed for release by rotating a knob, this option is recommended for non-static applications such as a cabinet on casters and for units in ships, vans, and other vehicular equipment. This device can be applied to any width drawer size and consists of a 1/4" diameter control rod with a 1" diameter, knurled aluminum knob, and a latching mechanism. The latching mechanism consists of a mounting bracket, cam and extension spring. It is fastened to the left, rear drawer rail with (2) #10-24 self-tapping screws. The control rod fits through a punched hole in the lower-left face of the drawer front. A momentary twist of the knob while opening a drawer, rotates the 14 gauge cam away from a notch in the top rear of the drawer slide. As the drawer travels forward, the cam rides along the length of the drawer slide until it engages in front of the drawer slide and automatically stops the drawer from being closed.
***NOTE:*** *This option is only available on the left side of the drawer.*
*This option is factory installed only.*

**Bottom Inserts**
Three (3) styles of bottom inserts are offered for all drawer sizes. The green felt insert is 3/64" thick, the black non-slip polyester mesh insert is 1/8" thick, and the white, high-impact polystyrene plastic insert is 30 mil. thick.