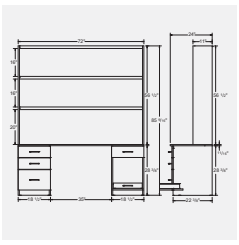
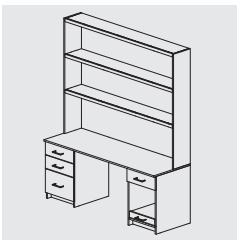
DESK
WITH BOOKCASE

CONSTRUCTION PLAN

Difficulty level: **MODERATE**

Completion time: **1 day**





DESK WITH BOOKCASE

This set includes a desk with drawers and a pull-out printer shelf. Installed above the desk: shelves ideal for storing books and files. The pine finish harmonizes perfectly with all types of decor.

The desk is 29 1/16" H, 72" W and 24" D. Measurements for the bookcase shelves are: 56 1/2" H, 72" W and 11" D.

This project is accessible for most people with the right tools, including a router and biscuit joiner.

TOOLS AND MATERIALS NEEDED

TOOLS

- Table saw
- Circular saw or sliding compound mitre saw
- Screwdriver drill
- Countersink bit
- Bit for handle screw holes
- Router table
- Biscuit joiner
- Nailer
- Tape Measure
- Pencil

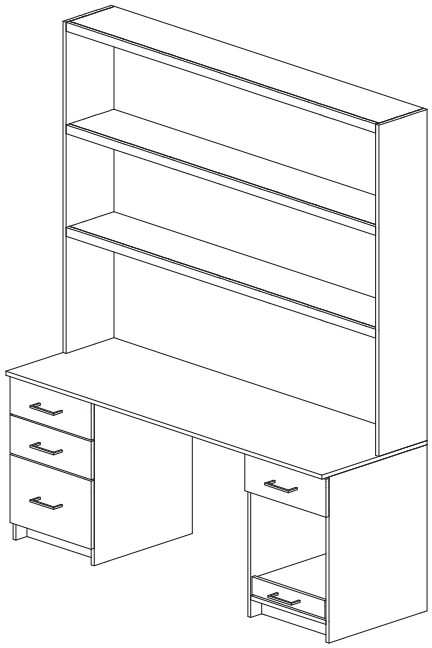
MATERIALS

- 2 pine particle board panels, 11/16" x 48" x 96"
- 1 board Russian birch, 1/2" x 60" x 60"
- 5 boards knotted pine, 1" x 12" x 72"
- 2 sheets Masonite, 1/4" x 48" x 96"
- 5 sets full extension sliders, 20"
- 1 roll pre-pasted pine edge-banding, 3/4"
- Carpenter glue
- Finishing nails for a nailer, 1 1/4"
- 1 1/4" No. 8 screws
- No. 00 Biscuits

USING WOOD BISCUITS

Assembly using biscuits produces very solid results. It consists of inserting wood biscuits (oval-shaped discs) in slots made using a biscuit joiner. Glue is applied to the biscuits inserted into the slots. The biscuits expand in the slots, reinforcing the join.

Although learning how to use a biscuit joiner (the specialized tool required for this type of assembly) requires some time, the technique is simple, fast and effective.



ROUTERS

The router is a motorized tool that can be equipped with a wide variety of cutters, or bits, making it extremely versatile. There is a router bit for every type of woodworking project, from making mouldings to carving grooves (e.g. for inserting drawer bottoms or cabinet door panels), giving a more professional-looking finish to the edges of pieces of stock (boards, shelves, tables), planing surfaces and even making dovetail joints. Router bits are often sold in sets and usually come with illustrations of the patterns that they can cut.

Depending on the model of router and type of work involved, the user either moves the router along the fixed material (e.g. to follow curves) or moves the material itself along a fixed router table (e.g. to carve grooves). A number of routers are designed to be used either way and can be fastened upside down under a router table.

DESK WITH BOOKCASE

BEFORE ASSEMBLY

CUTTING LIST

Board Russian birch, 1/2" x 60" x 60"

PIECES		QUANTITY	WIDTH (")	LENGTH (")
T1	DRAWER SIDE	6	4 3/4	20
T2	DRAWER SIDE	2	9 1/2	20
T3	DRAWER FRONT/BACK	6	4 3/4	16
T4	DRAWER FRONT/BACK	2	9 1/2	16

Pine particle board panels, 11/16" x 48" x 96"

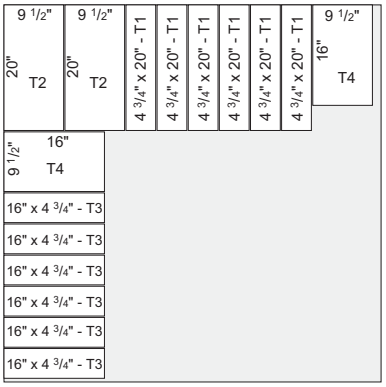
PIECES		QUANTITY	WIDTH (")	LENGTH (")
T5	DRAWER FACADE	3	6 1/2	18 1/2
T6	DRAWER FACADE	1	11 5/8	18 1/2
C1	CABINET SIDE	4	22 3/8	28 3/8
C4	RIGHT-SIDE CABINET BOTTOM	1	17 1/8	22 3/8
C5	SUPPORT	4	4 1/2	17 1/8
C6	BASE MOULDING	4	3	17 1/8
P1	PULL-OUT SHELF	7	16 5/8	19 13/16
P4	PULL-OUT SHELF SIDE	2	2 1/16	19 13/16
P5	PULL-OUT SHELF FACADE	1	3	16 5/8
E4	WORK SURFACE	1	24	72

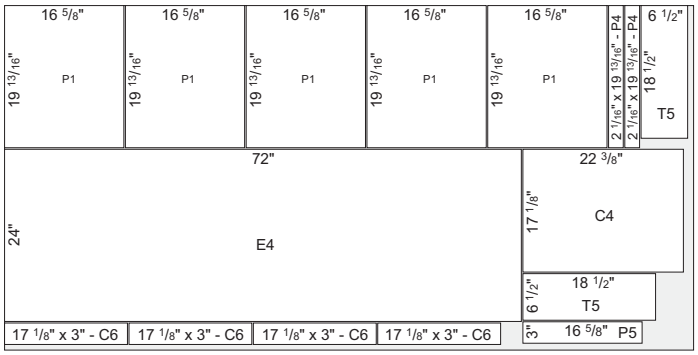
Sheets Masonite, 1/4" x 48" x 96"

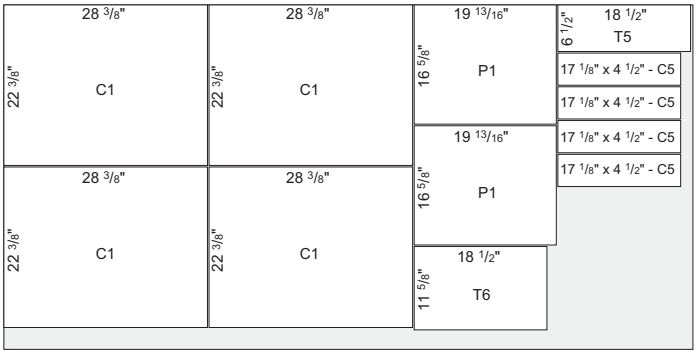
PIECES		QUANTITY	WIDTH (")	LENGTH (")
T7	DRAWER BASE	4	15 1/2	20
E3 (A)	BOOKCASE BACK	1	35 1/8	71 1/4
E3 (B)	BOOKCASE BACK	1	21	71 1/4

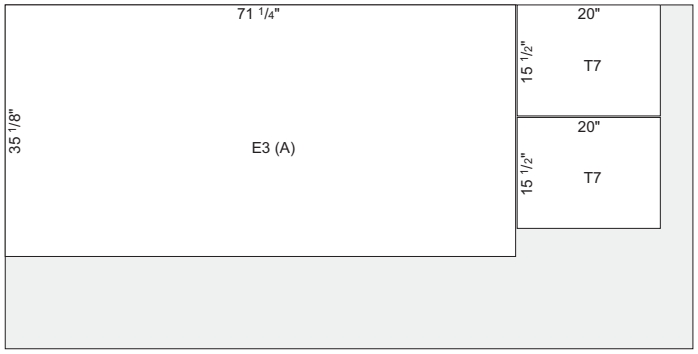
Boards knotted pine, 1" x 12" x 72"

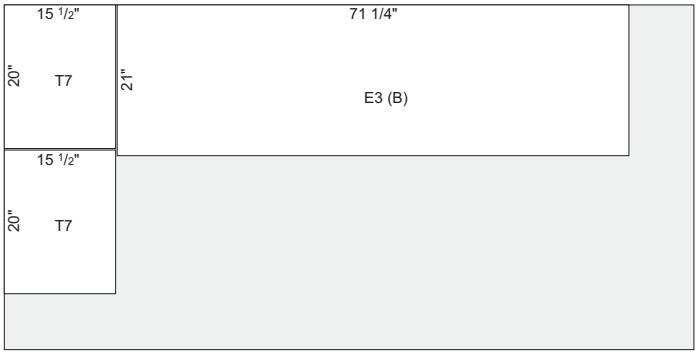
PIECES		QUANTITY	WIDTH (")	LENGTH (")
C2	STRIP	4	3/4	22 3/8
C3	BLOCK	8	3/4	3
P2	STRIP	2	3/4	19 3/16
P3	STRIP	1	3/4	12
E1	BOOKCASE SIDE	1	11	56 1/2
E2	BOOKCASE SIDE	1	11	56 1/2
E5	SHELF	1	10 1/4	70 1/2
E6	SHELF	2	10	70 1/2
E7	SHELF FACADE	3	1 1/2	56 1/2







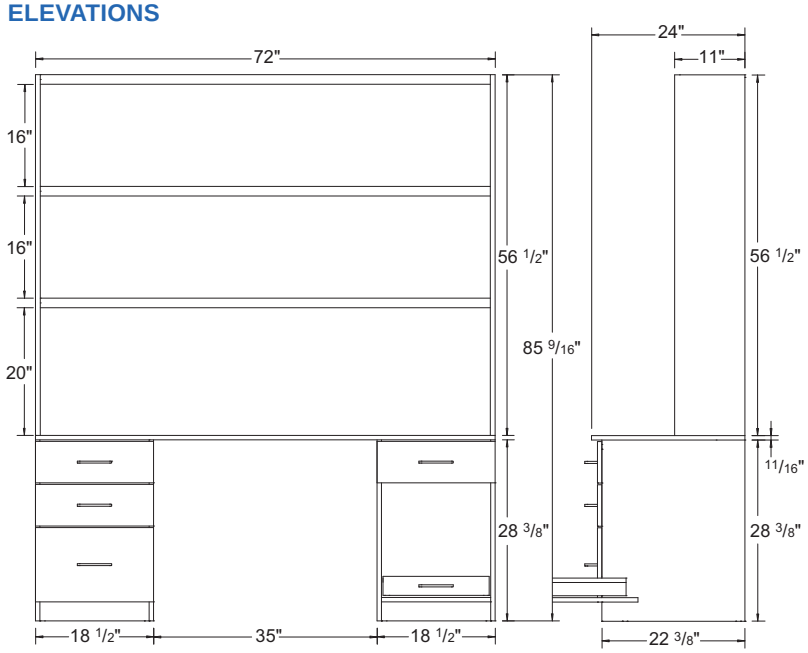




DESK WITH BOOKCASE

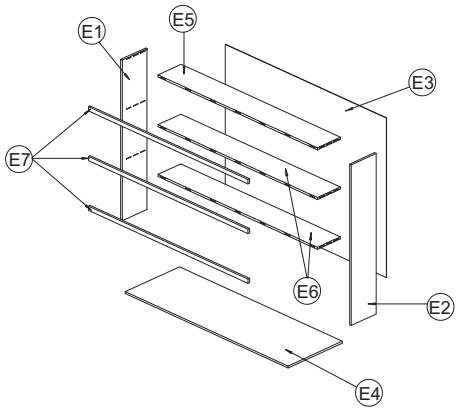
BEFORE ASSEMBLY (CONT'D)

ELEVATIONS

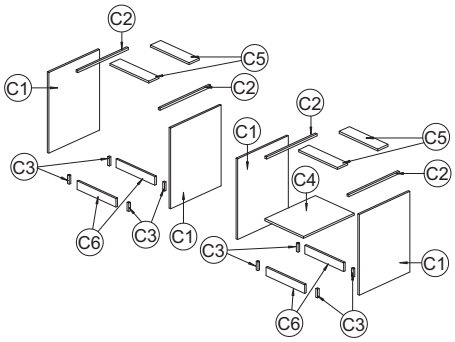


Front view **Side view**

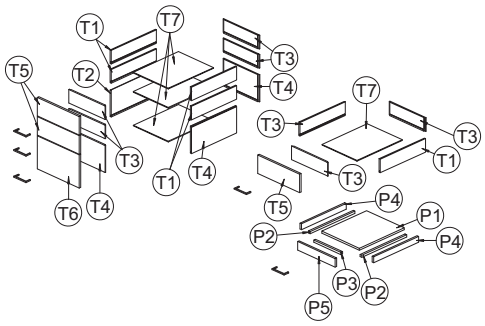
EXPLODED VIEW OF THE BOOKCASE



EXPLODED VIEW OF THE CABINETS



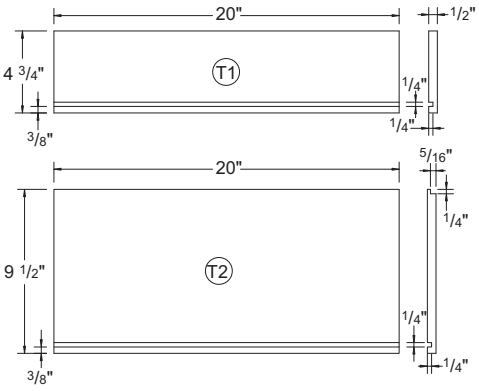
EXPLODED VIEW OF THE DRAWERS



PREPARATION

1 CUT THE GROOVES FOR DRAWER PIECES T1, T2, T3 AND T4

1.1 Use a router to make a groove 1/4" wide and 1/4" deep, 3/8" from the bottom of pieces T1, T2, T3 and T4.

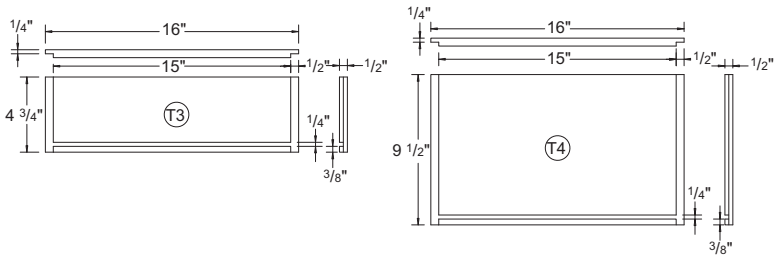


DESK WITH BOOKCASE

PREPARATION (CONT'D)

2 ROUT THE ENDS OF DRAWER PIECES T3 AND T4

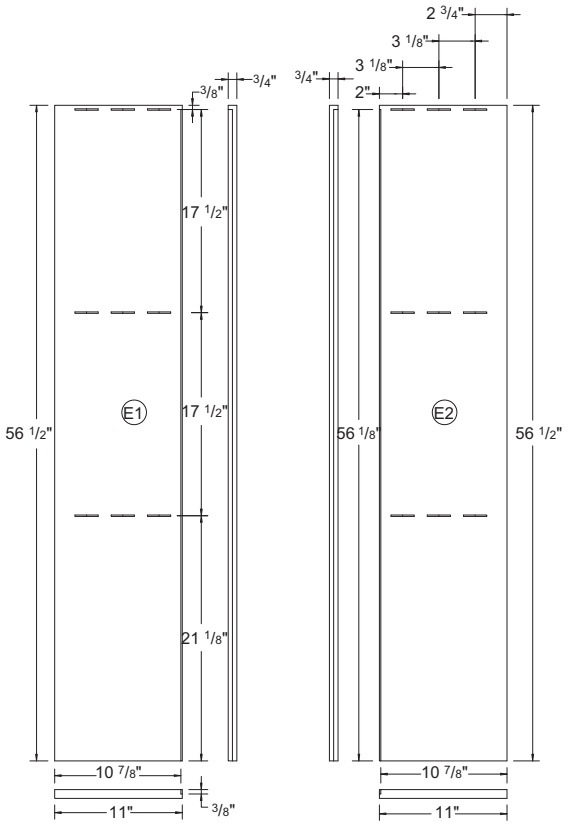
2.1 Create an edge 1/2" wide and 1/4" deep on the ends of drawer back/fronts T3 and T4.



3 MILL AND ROUT BOOKCASE SIDES E1 AND E2

3.1 Use a router to remove a 1/8" layer from the thickness and 3/8" from the width along one edge length of bookcase sides E1 and E2. Leave 3/8" at the end of each board.

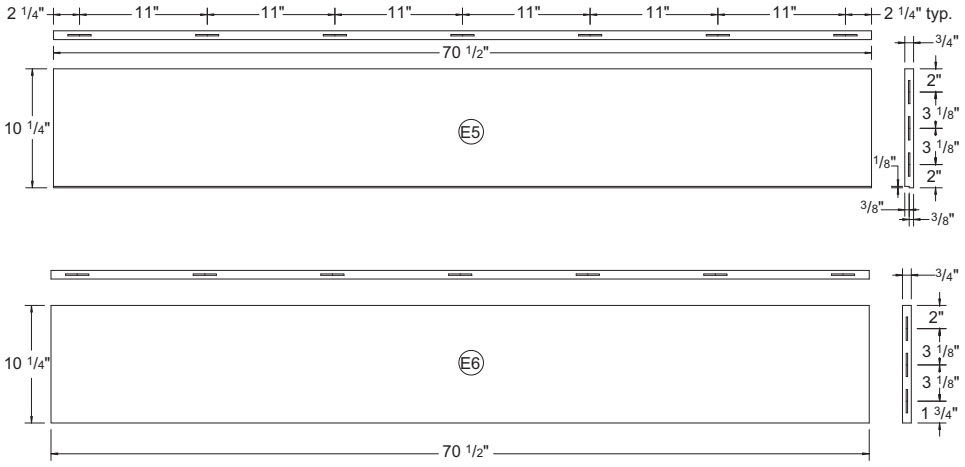
3.2 Use the biscuit joiner to mill as indicated in the illustration. Slots are situated on the same side of the board as the groove made by the router.



4 MILL AND ROUT SHELVES E5 AND E6

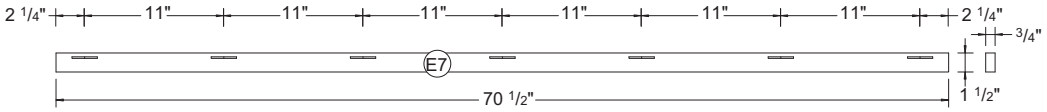
4.1 Use a router to remove a 1/8" layer from the thickness and 3/8" from the width along one edge of shelf E5 only.

4.2 Mill shelves E5 and E6 as shown in the illustration.



5 MILL FACADES OF SHELVES E7

5.1 Mill facades of shelves E7 where indicated in the illustration.



CABINETS

ASSEMBLY

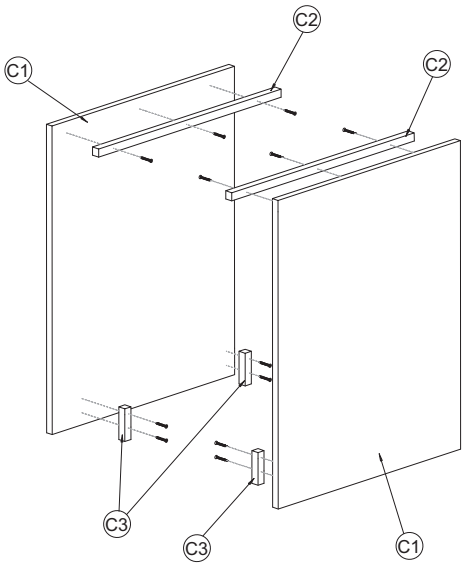
Cabinet pieces are assembled using carpenter glue and 1 1/4" No. 8 screws.

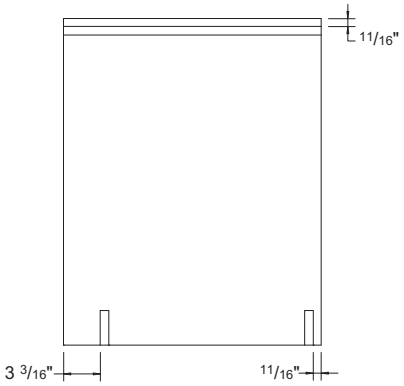
6 SCREW STRIPS C2 AND BLOCKS C3 TO SIDES C1

C2 and C3 should be pre-drilled using a countersink bit.

6.1 Screw a C2 strip 11/16" from the upper end of each side of the C1 cabinet.

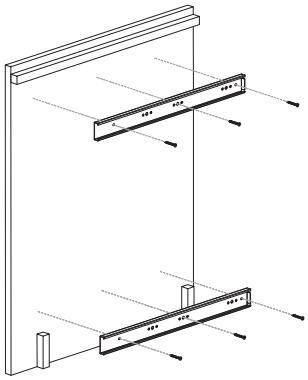
6.2 On the same side, screw blocks C3 so that they are flush with the lower end of C1. One of the blocks should be positioned 3 3/16" from the edge, which will be the front edge, and the other 11/16" from the back edge.

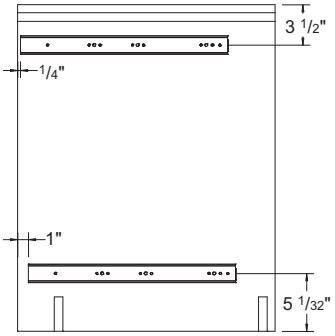




7 ATTACH 2 SLIDERS TO 2 SIDES C1

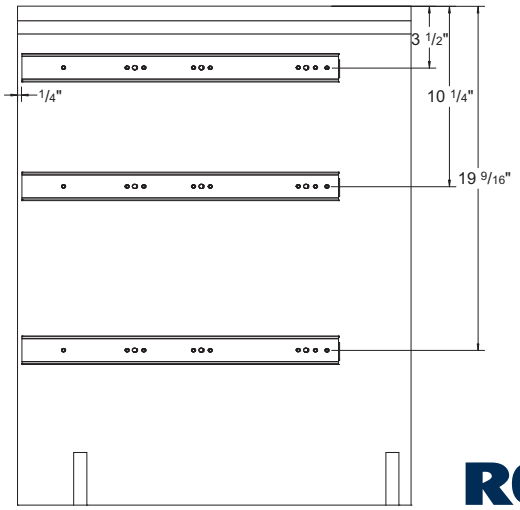
7.1 Screw 2 sliders to 2 sides C1 with the supplied screws, on the side where the strips and blocks have been installed. They should be positioned as shown in the illustration. Follow the manufacturer's instructions. **Note:** this is the right-side cabinet.





8 ATTACH 3 SLIDERS TO 2 MORE SIDES C1

8.1 Use the screws provided to screw 3 sliders to the 2 remaining sides C1 on the surface where the strips and blocks were installed, according to the illustration. Follow the manufacturer's instructions. Note that this is the left-side cabinet.



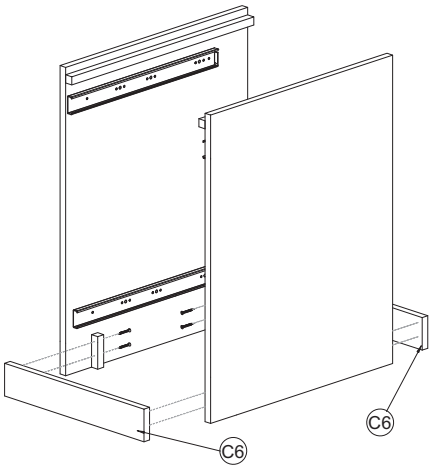
CABINETS

ASSEMBLY (CONT'D)

9 SCREW BASE MOULDINGS C6 BETWEEN SIDES C1

Blocks C3 should be pre-drilled using a countersink bit.

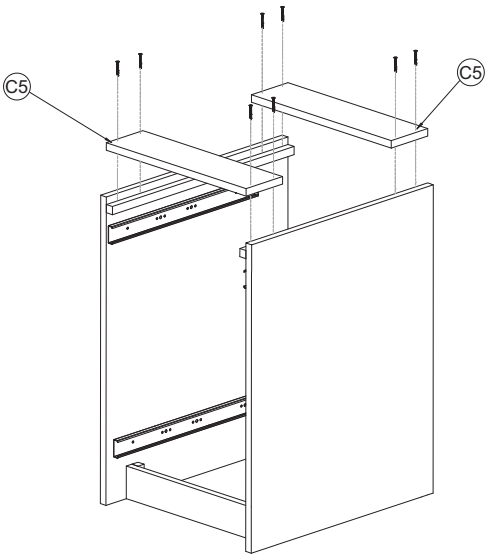
9.1 Screw 2 base mouldings C6 to the blocks of the 2 sides of C1 of the right-side cabinet, from the inside. The base mouldings should be flush with the lower ends of C1. Repeat with sides C1 of the left-side cabinet.



10 SCREW SUPPORTS C5 BETWEEN SIDES C1

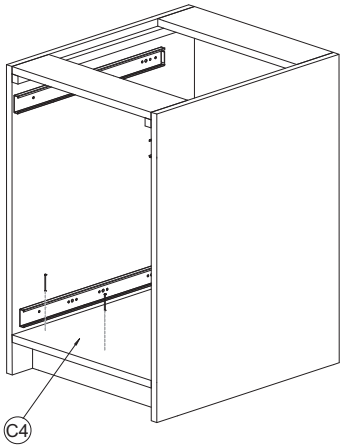
Strips C2 and supports C5 should be pre-drilled using a countersink bit.

10.1 Screw 2 supports C5 on the strips of the sides C1 of the right-side cabinet. Screw from above. Repeat with sides C1 of the left-side cabinet.



11 INSTALL BOTTOM C4 IN THE RIGHT-SIDE CABINET

11.1 Screw the bottom of the cabinet C4 on (top of) the base mouldings of the right-side cabinet.



DRAWERS AND PULL-OUT SHELF

ASSEMBLY (CONT'D)

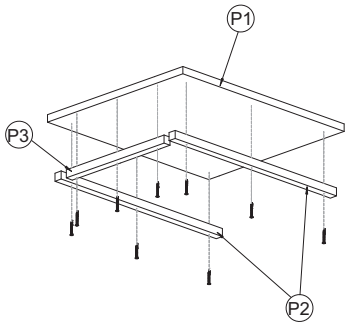
The pull-out shelf is assembled using screws and glue, whereas the drawers are assembled with 1 1/4" finishing nails and glue.

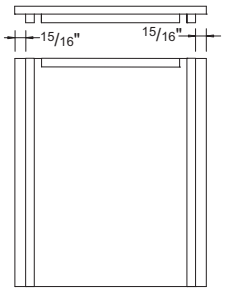
12 SCREW STRIPS P2 AND P3 UNDER PULL-OUT SHELF P1

Strips should be pre-drilled using a countersink bit.

12.1 Strips P2 should be screwed 15/16" from the long edges of P1.

12.2 Install strip P3 so that it is flush with the front edge of P1.





13 SCREW SIDES P4 AND FACADE P5 TO THE PULL-OUT SHELF

Strips should be pre-drilled using a countersink bit.

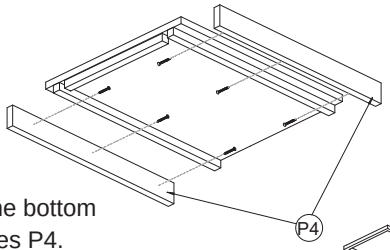
13.1 Drill the holes on the facade of P5 for the handle screws.

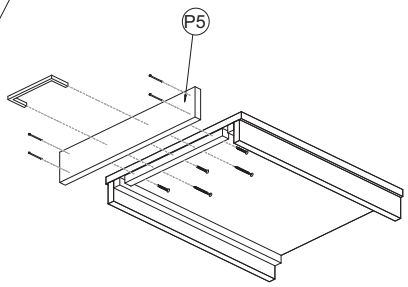
13.2 Screw sides P4 to strips P2, from the inside.

13.3 Screw facade P5 to the strip P3, from the inside. The bottom of the facade should be flush with the bottom of sides P4.

13.4 Secure the facade with 1 1/4" nails.

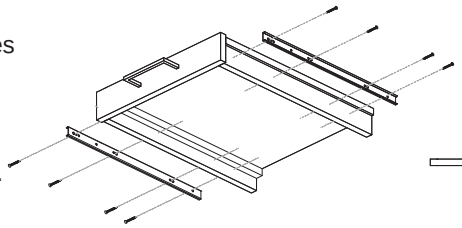
13.5 Install the handle.

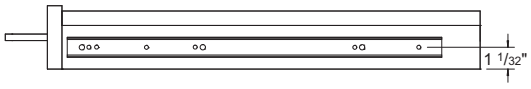




14 FASTEN SLIDERS TO THE PULL-OUT SHELF

14.1 Screw the sliders on to the sides of the pull-out shelf using the screws provided, as shown in the illustration. Follow the manufacturer's instructions.





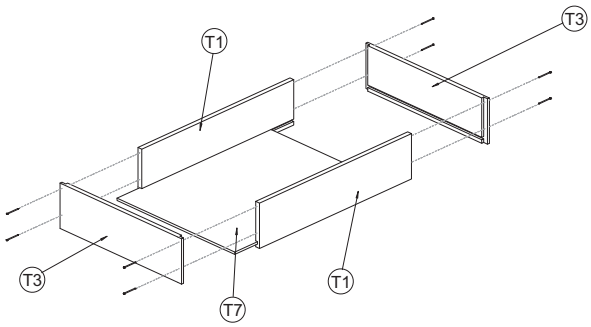
15 ASSEMBLE DRAWER BOXES

15.1 Nail a drawer back T3 to the outer ends of 2 drawer sides T1. The grooves in T1 should line up with those on T3. Repeat for the other T3 and T1 pieces.

15.2 Nail a drawer back T4 to the outer ends of drawer sides T2.

15.3 Slide a drawer bottom T7 into the grooves of each of the 3 previous assemblies.

15.4 Complete assembly by nailing a drawer front T3 to sides T1, and a drawer front T4 to sides T2.



DRAWERS AND PULL-OUT SHELF

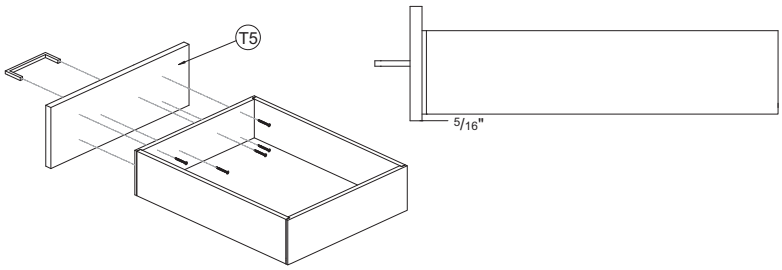
ASSEMBLY (CONT'D)

16 INSTALL DRAWER FACADES AND HANDLES

16.1 Drill the holes on facades T5 and T6 for the handle screws.

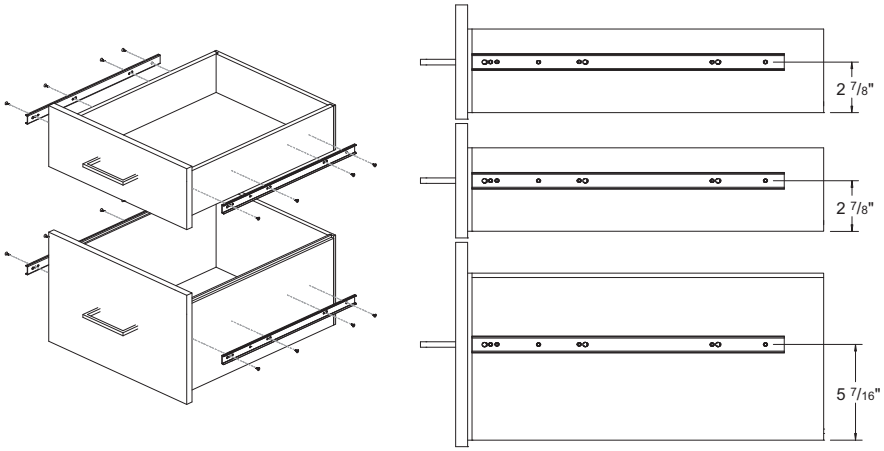
16.2 Screw a facade T5 on the drawers composed of pieces T1 and T3, then screw a facade T6 on the drawer composed of pieces T2 et T4. The lower edge of each facade should be 5/16" below the drawer.

16.3 Install handles.



17 ATTACH SLIDERS TO THE DRAWERS

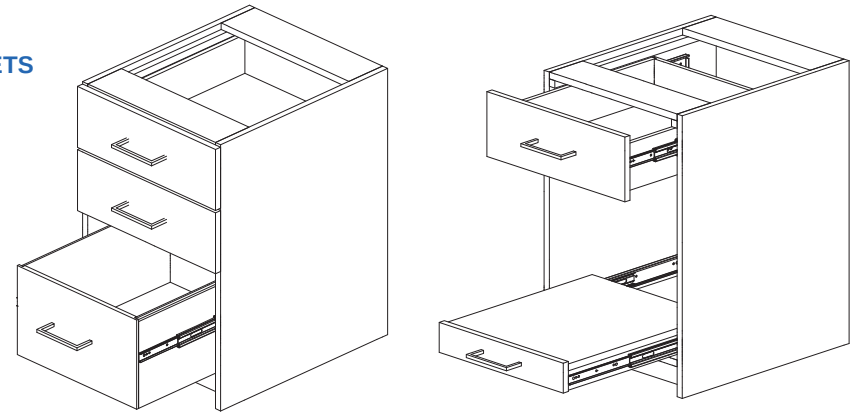
17.1 Screw the sliders to the sides of the drawers using the screws provided. Position as shown in the illustration. Follow the manufacturer's instructions.



18 INSERT THE DRAWERS INTO THE CABINETS

18.1 Insert the drawer sliders in their respective tracks inside the cabinets.

18.2 Insert the shelf sliders in the lower sliders of the right-side cabinet.

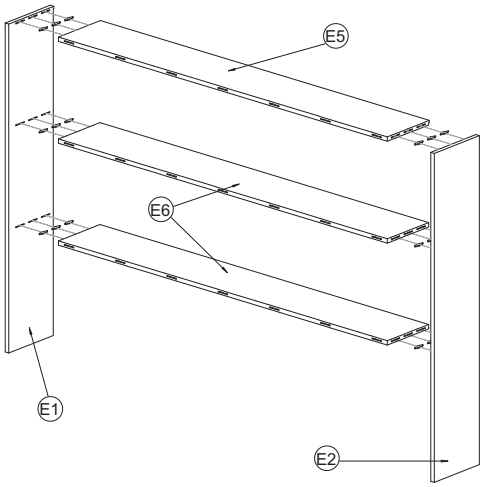


BOOKCASE

ASSEMBLY (CONT'D)

The bookcase is assembled using No.00 wood biscuits, carpenter glue and 1 1/4" finishing nails. If necessary, use a rubber mallet to lightly tap fitting parts to make sure biscuits are properly inserted into the slots.

19 SECURE SHELVES E5 AND E6 BETWEEN SIDES E1 AND E2



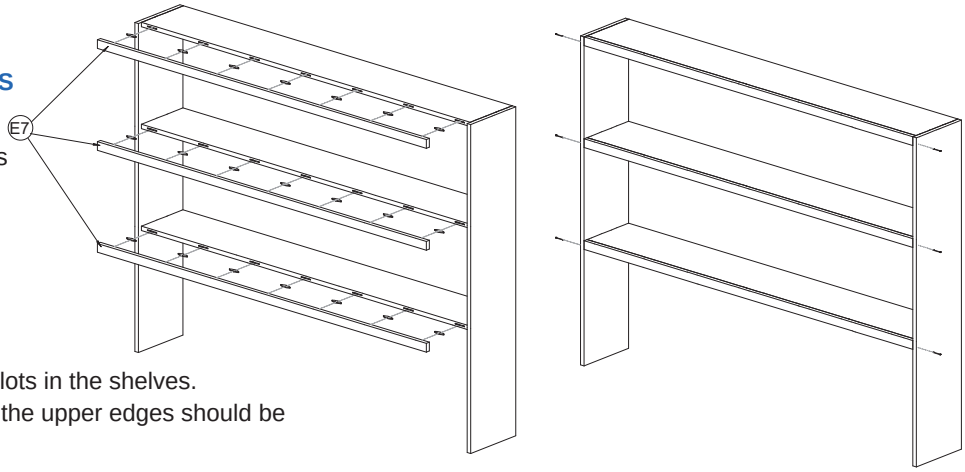
19.1 Apply carpenter glue to all the slots on the ends of shelves E5 and E6, then insert the wood biscuits.

19.2 Apply glue to all the slots on sides E1 and E2.

19.3 Attach shelf E5 by inserting the biscuits into the slots on the top ends of sides E1 and E2. The milled edge of the shelf should be towards the front and the routed side of the shelf should be facing down.

19.4 Attach shelves E6 by inserting the biscuits in the corresponding slots of sides E1 and E2. The milled edges of the shelves should be towards the front.

20 INSTALL FACADES E7 ON THE FRONT OF THE SHELVES



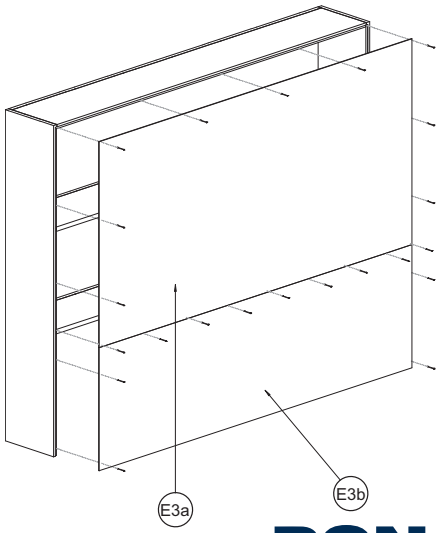
20.1 Apply carpenter glue to all slots in facades E7, then insert the wood biscuits.

20.2 Apply glue to all slots situated on the edges of the 3 shelves.

20.3 Attach facades E7 by inserting the associated biscuits in the slots in the shelves. Position the facades correctly: the upper edges should be flush with the top of the shelf.

20.4 Secure the facades by nailing 1 1/4" nails on the sides.

21 NAIL BACKS E3(A) AND E3(B) TO THE BACK OF THE BOOKCASE



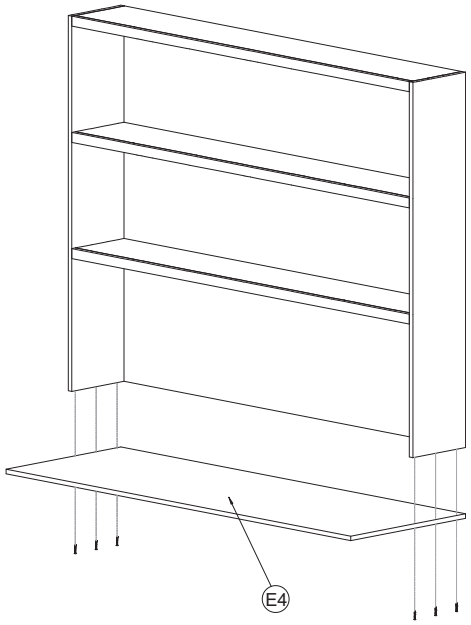
21.1 Lay the bookcase face down.

21.2 Set the back of the bookcase E3(a) on the upper part of the bookcase and the back E3(b) on the lower part. The back pieces should fit into the routed pieces on the bookcase sides and the shelf E5. Nail.

FINAL ASSEMBLY

ASSEMBLY (CONT'D)

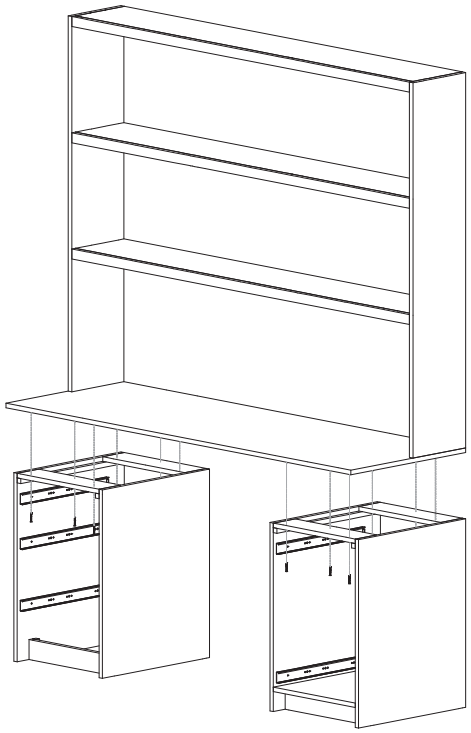
Assembly of the modules is done using 1 1/4" No. 8 screws and carpenter glue.



22 SCREW THE WORK SURFACE E4 TO THE BOOKCASE

22.1 Lay the bookcase face up.

22.2 Screw the work surface E4 to the bottom/base of the bookcase.



23 SCREW THE CABINETS UNDER THE WORK SURFACE

23.1 Leave the bookcase on its back, then position the left and right-side cabinets under the work surface so that the exterior sides sit flush with the edges of the work surface. Screw from underneath.