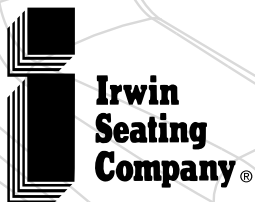
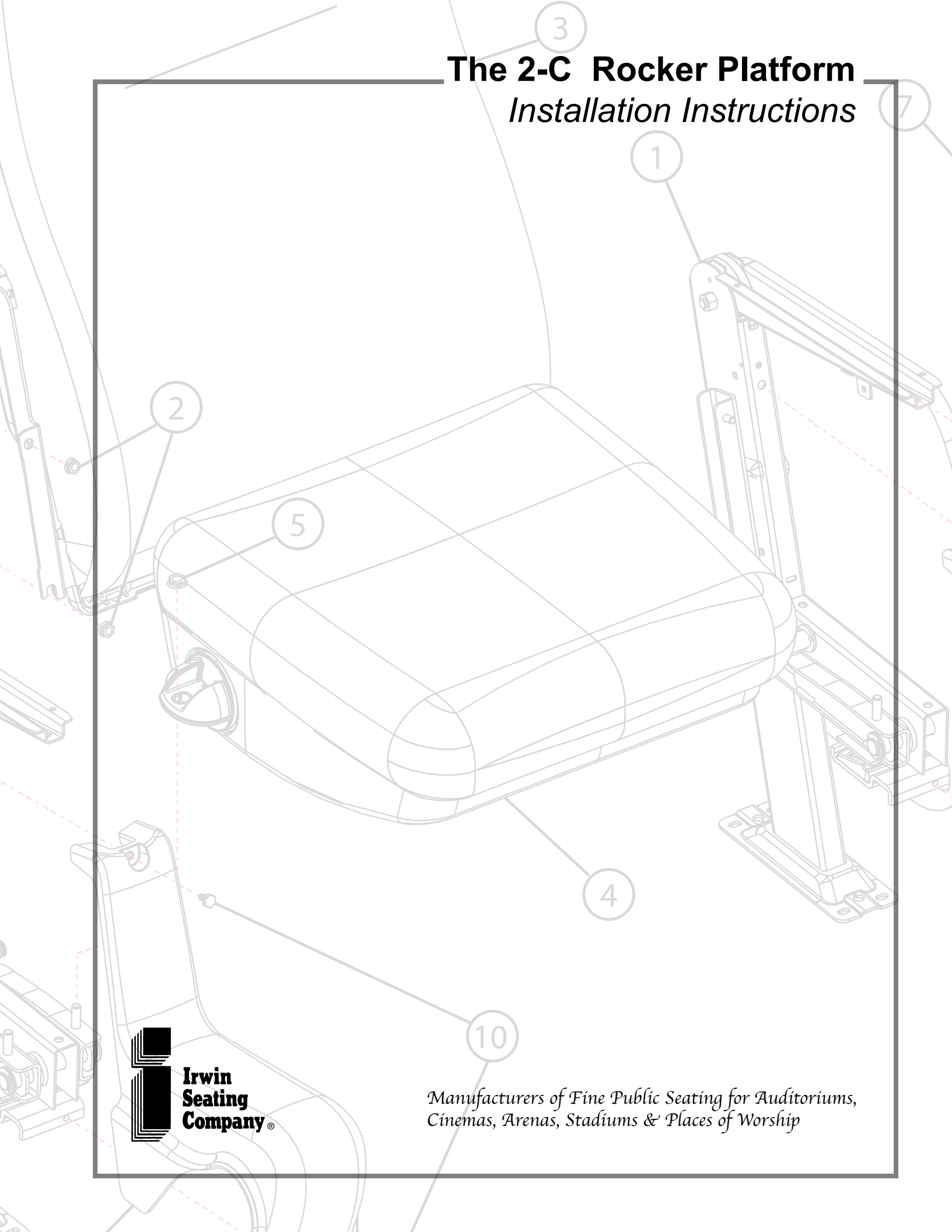


The 2-C Rocker Platform

Installation Instructions



*Manufacturers of Fine Public Seating for Auditoriums,
Cinemas, Arenas, Stadiums & Places of Worship*



Installation Instructions

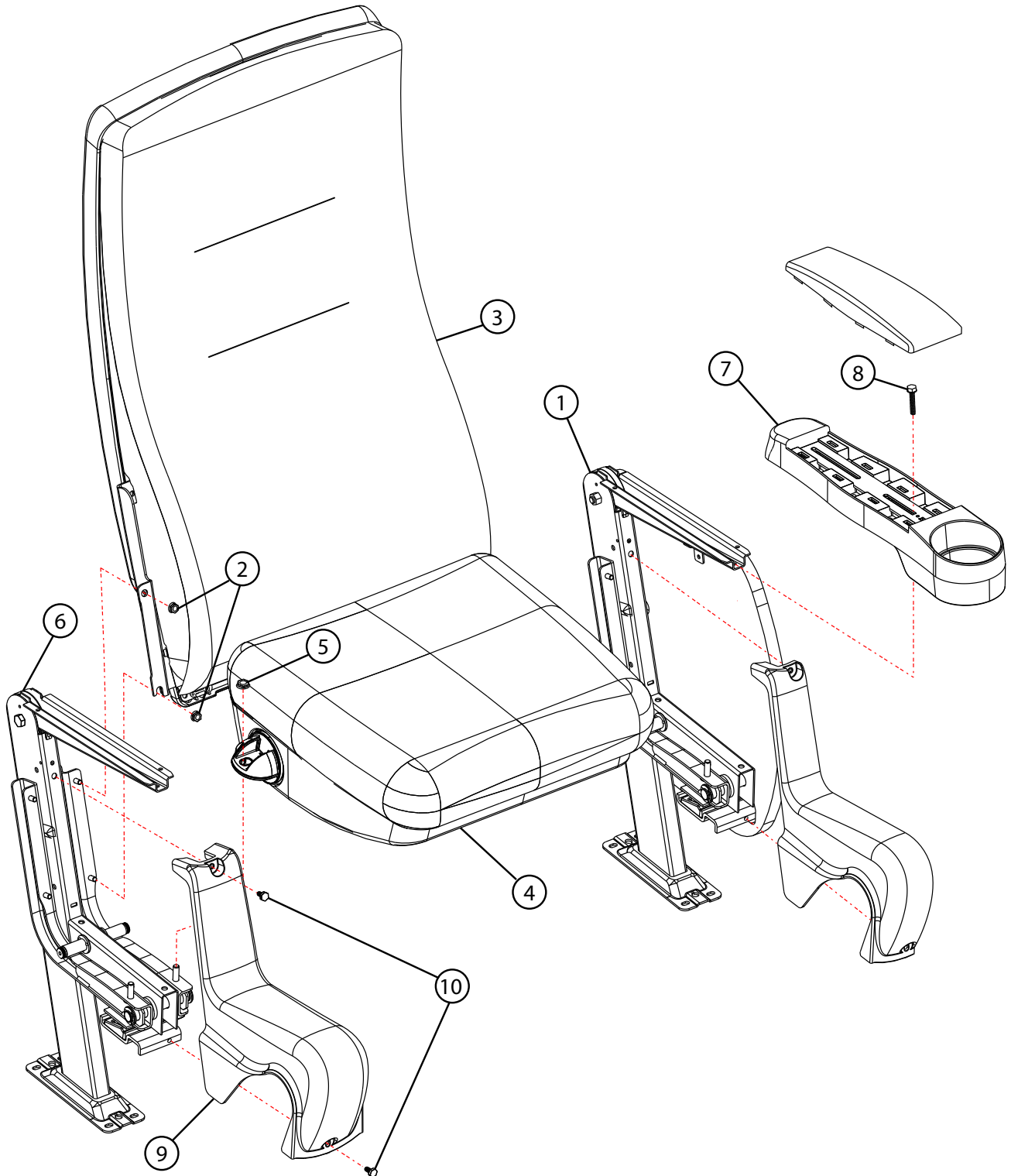
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Installation Instructions

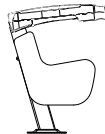
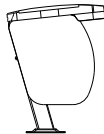
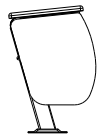
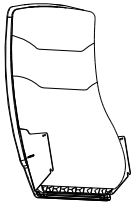

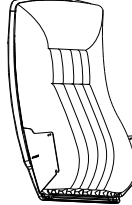
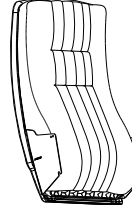
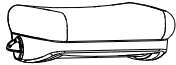




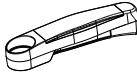
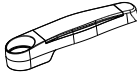


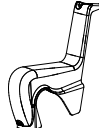

Bill of Materials





Installation Instructions

Bill of Materials

Item Number	Part Number	Description
1	Right or Left: No.2, No.22, No.22 (Wood Arm)	End Standard:  No.2  No.22  No.22 (Wood Arm)
2	1/4-20WL	1/4"-20 Whiz Lock Nut - used to attach backs to standards, 4 per back
3	71B, 72B, 73B, 74B	Back:  71B  72B  73B  74B
4	12S (Ergo, Loge, or Sus- pension, Ergo Sculp- ed, Sculpted)+Color 21S (fully upholstered)	Seat Assembly:  12S - Ergo  12S - Loge
5	516x18422	5/16-18 Whiz Lock Nut - used to attach seats to standards, 2 per seat
6	2C (L), 2C (A), 2C (B), 2C (C), 2C (D), 2C (E), 2C (HR), 2C (LR), 2C (SH)	Center Standard:  2C (L)  2C (LR)  2C (HR)
7	62005MB (If Full End Panel), 62005UT (PT), 62005UB, 62005PB	Arm Assemblies:  62005UB  62005MB  91A-2C
8	14x112TT	Hex head washer bolt - used to attach cupholder arm to standard, 1 per arm
9	22049+Color 22049R+Color 22049L+Color	Shroud:  22049  22049R  22049L
10	1420X34TOR	Torx Drive self taper bolt - used to attach shroud to standard, 2 per shroud
Floor Attachment	1/4x314	1/4-20x3 1/4" Hilti Wedge Anchor and nut
	3/8X3	Hilti Wedge Anchor, 3/8 x 3"
	2277	1/4-20 x 2" Hex Washer Head Screws

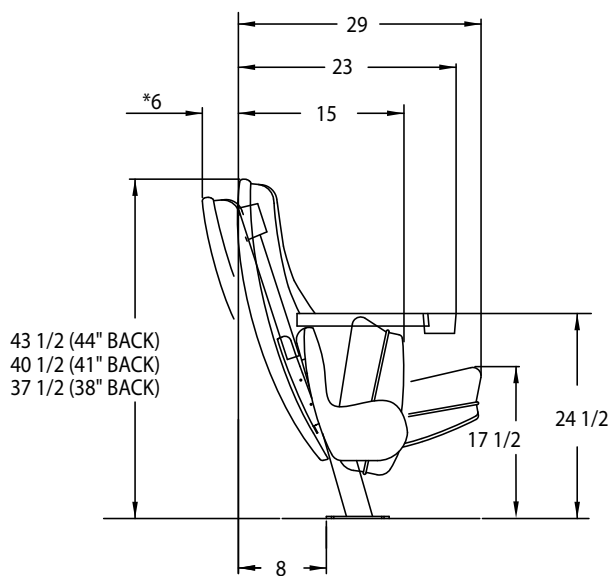


Installation Instructions

Step 1: Layout and Drilling

Once verification of the proper quantity and type of product has been made, the next step is to layout and drill the floor and/or risers following the seating layout drawing supplied by Irwin Seating Company's Seating Layout Department. The profile drawings (Figure 1) may be used as a general guideline for riser restrictions and clearances; however, the profile drawings in Figure 1 are always superseded by the layout drawing for project specific applications

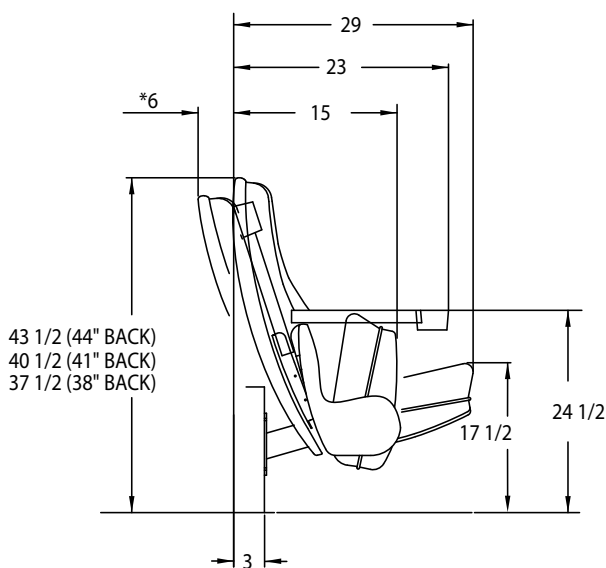
SIGNATURE - 72B12S2E FLIP-UP ROCKER
FLOOR MOUNTED



*ALLOW 6" FOR DISTANCE FOR BACK TRAVEL

Floor Mount

SIGNATURE - 72B12S2E FLIP-UP ROCKER
RISER MOUNTED



*ALLOW 6" FOR DISTANCE FOR BACK TRAVEL

High Rise

Figure 1: Profile drawings for Floor and High Rise Standards.



Installation Instructions

Step 1: Layout and Drilling

- A. Check building dimensions thoroughly to make sure that they match factory seating layout dimensions exactly.
- B. Locate all aisles, identify and mark all aisle and/or wall end locations on print. Note: also identify aisle light locations if applicable.
- C. Locate chair placement between aisle ends using one of the following methods, and mark center standard locations.

Straight Layout:

1. Establish and mark centerline if applicable.
2. Locate the chair size line of first and last row; establish a mark at this point on the centerline.
3. Locate and mark all sequential rows; use back-to-back measurement indicated on seating layout.
4. Position all aisle and wall end locations
5. Position individual chair components between aisle and walls, following the chair sizes indicated on the seating layout.
6. Use template made by tracing the hole pattern of standard onto plastic, cardboard, or sheet metal to locate mounting holes for standards, or use a carpenter's square.

Radius Layout:

Follow guidelines in "Installation Procedures for Radius Layout." For a copy of these procedures contact Irwin Customer Technical Service Department at (616) 574-7400.

Riser Layout:

1. Verify that risers are the proper height for the standards shipped. Irwin manufactures low, high risers standards and super high standards. Riser dimensions can be verified by the seating layout drawing. Standard riser heights: Low: 4" – 12"; High: 12 1/2" – 16"; Super High: 16"-18". Any deviation from standard product will be noted on seating layout drawing and production order form. **Warning: if risers and standards shipped are not compatible, contact the Irwin Project Administrator or Customer Technical Services at (616) 574-7400.**
2. Risers must be plumb.

Note: the American Concrete Institute 117-5.3 (ACI) tolerance for plumbness (planar dimension) is 1/8" in 10". If risers are out of plumb, notify the contractor and the Irwin Project Administrator or Customer Technical Services at (616) 574-7400 for instructions on how to proceed.

3. Using a drill template (Figure 2), drill and set an anchor at the beginning and the end of the chair run. Use the anchors to mark a chalk line along the riser face to insure that standards are level (Figure 3).
4. Layout and mark riser face according to seating layout drawing to position standards according to chair size. The use of a drill pattern and drill rig facilitates the installation process (Figures 2 and 3).

Installation Instructions

Step 1: Layout and Drilling



Figure 2: A drill pattern for riser mount standards constructed of acrylic or plexi-glass facilitates installation.

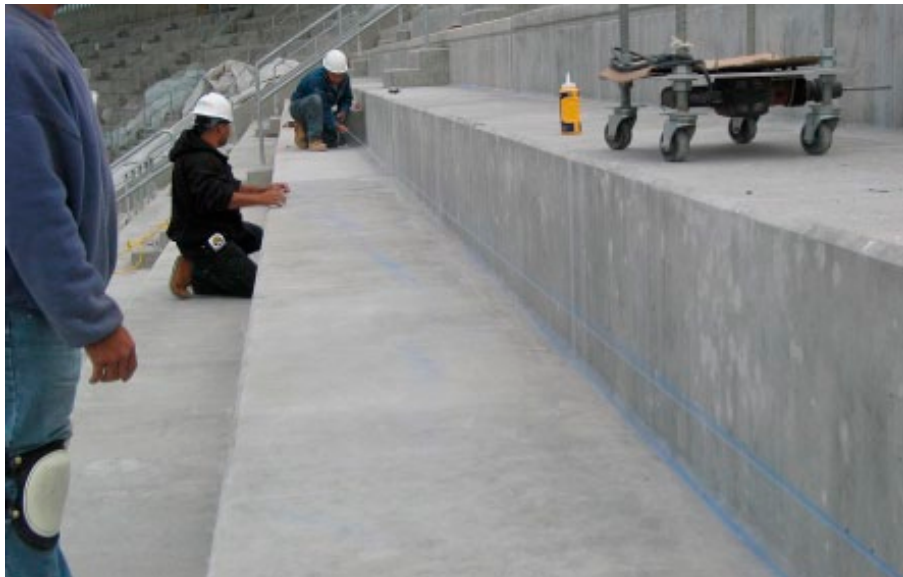


Figure 3: To ensure a visually consistent run of chairs, set an anchor at the beginning and at the end of the row. Use the anchors to snap a chalk line to follow for drilling anchor locations in accordance with the seating layout drawing. The drill pattern is used to mark drill holes along the chalk line at the appropriate chair spacing. The drill rig, upper right hand corner, is used to further facilitate the installation process.



Installation Instructions

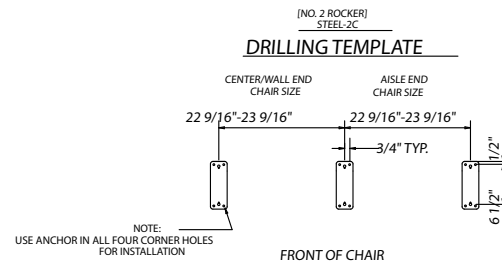
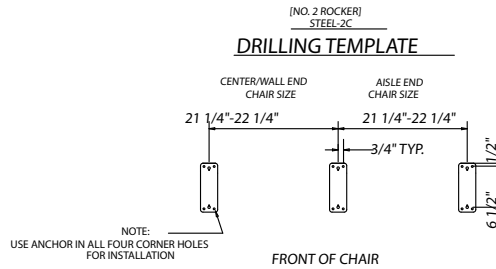
Step 1: Layout and Drilling

The drilling patterns (Figure 4) may be used as a general guideline for installing level, low, and high-rise standards, however may be superseded by the seating layout drawing for project specific applications.

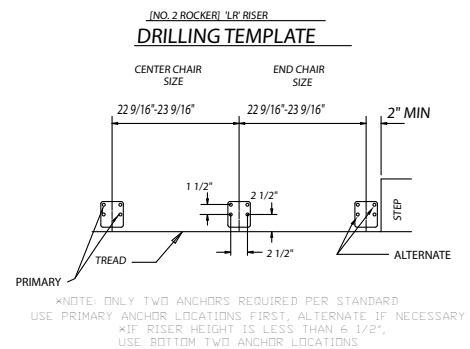
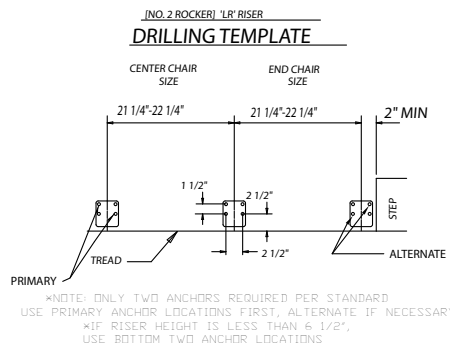
Floor Mount Foot:

1/4" ADD ON ONLY

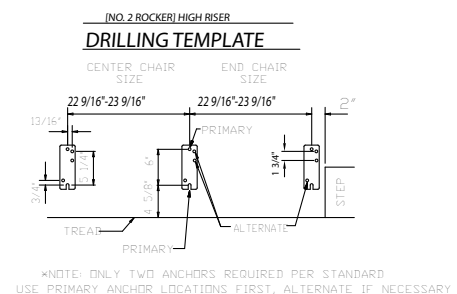
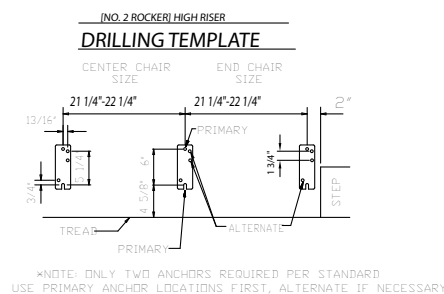
9/16" ADD ON ONLY



Low Riser:



High Riser:



Super High Riser:

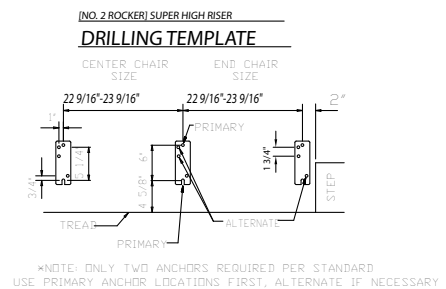
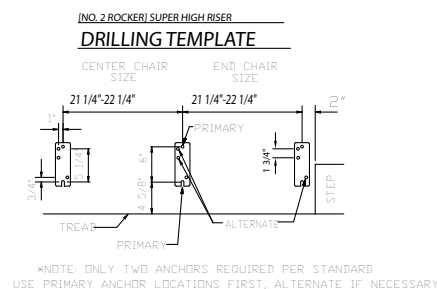


Figure 4: Drilling patterns for Level, Low, High Rise standards, and Super High Rise.



Installation Instructions

Step 1: Layout and Drilling

Floor Mount

After layout is complete, drill floor and set anchors for standards.

Note: Irwin Seating Company recommends a Hilti Kwik-bolt* anchor.

- **Concrete Floor:** When installing on a concrete floor, drill for floor and/or riser mounted chairs following the drill instructions as specified by the anchor manufacturer, then set anchors.
- **Wood Floor:** When installing in a wood floor use four #2277 screws to secure the standard to the wood floor.
- **Carpet and Tile:** To install when there is carpet over concrete, pre-punch the carpet to avoid pulling and unraveling during the drilling. To install when there is tile over concrete or wood, experiment with the tile to ensure correct techniques and drilling procedures.

Riser Mount:

1. Riser mounted end standards are drilled vertically. Check the drilling templates on the seating layout drawing for drilling pattern. Any special instructions will be noted on the seating layout.
2. Riser mounted center standards are drilled and set horizontally.
3. Pre-drill 3/8" diameter holes, 2" deep.
4. Two 3/8" X 3" anchors are required per standard.

Step 2: Installation of Standards

Anchor Installation:

1. Hammer drill a hole the same nominal diameter as the anchor bolt
2. Clean hole of all debris.
3. Push anchors in holes (do not hammer down), then place the standards on top of the anchors.
4. Drive the anchor far enough into the hole so that at least six threads are showing above the standard.

Floor Mount:

1. *Concrete:* Use 1/4" anchors with hex nuts; minimum two per standard.
 - a. Install standards over anchors in proper location (centers, aisles) and at the proper incline.
 - b. Use 7/16" wrench or socket to tighten to the **required torque of 4 ft-lb.**
2. *Wood Floor*
 - a. Mount standards on locations laid out or pre-drilled.
 - b. Secure standards with proper screws (see Bill of Materials).

Riser Mount:

1. Use 3/8" anchor, hex nut and washers
 - a. Install standards over anchors in proper place (centers, aisles).
 - b. Use 9/16" wrench or socket to tighten to the **required torque of 20 ft-lb.**



Installation Instructions

Step 2: Installation of Standards

Installation Methods:

1. Boxes should always be carried/stored in an upright position.
2. Boxes containing standards should not get wet.
3. Boxes should be carried to the standards installation location.
4. Remove 1 standard from box and immediately hang the standard on its anchor bolts.
5. **Attach backs following instructions in Step 3**
6. Tighten the anchor hardware.
7. **Check with General Contractor for allowable exposed threads at anchors**

Note: This should be done 1 standard at a time.

Note: Irwin Seating Company is not responsible for mistreatment or mishandling of its products in the field that result in damage. All standards chipped or broken as a result of mishandling (and the touch-painting or replacement thereof) shall be the responsibility of the installer.

Step 3: Installation of Backs

1. Identify and locate back sizes. Place each back between standards in the proper location, according to size, as called out on the seating layout drawing. After all backs have been laid out, hang each back on the threaded studs of the rocker standards, attaching each back with four (4) 1/4-20wl whiz lock nuts.

Note: Leave (1/4-20wl) each whiz lock nut loose until told to tighten

2. Once all backs are in place and standards have been corrected for out-of-plumb conditions, tighten all back attachment hardware.

Note: *Torque each (1/4-20wl) whiz lock nut to the required 5 ft-lbs*

3. After backs have been secured, tighten all concrete anchors to the anchor manufacturer's specifications (pg. 9).

Note: Care must be taken that the backs are not dropped or dragged during the installation process. Damages resulting from the mishandling of product shall be the responsibility of the installer.



Installation Instructions

Step 4: Installation of Seats

1. Identify and locate seat size between standard in accordance with the seating layout.
2. Place seats in proper location on top of threaded studs in the rocker standard.
3. While holding seat in position, loosely attach seat pivot to landings with two (5/16x18422) whiz lock nuts. Center seat between standards and tighten bolts.

Note: *Torque required for the seat hardware is 11ft-lb ± 1-foot pound.*

Note: Care must be taken that the seats are not dropped or dragged during the installation process. Damages resulting from the mishandling of product shall be the responsibility of the installer.

4. Once seat is attached, place plastic caps in the groves of the seat pivots.
5. Upon installation of a single row of chairs, a final review of seat alignment must be conducted. Seats in the unoccupied position are designed to be within the envelope of the standard.

Step 5: Installation of Shrouds

1. Carefully place shroud onto standard, making sure that the alignment tabs line up between the rocker mechanism and the standard.
2. Attach the shroud to the standard by using two 1420x34Tor screws.

Note: *Torque required for the shroud hardware is 4ft-lb.*

3. Check to make sure that the shroud is securely attached to the standard, and that the seat brackets and rocker mechanism are covered by the shroud.

Step 6: Installation of Arms

1. Slide the armrest onto the Arm Channel portion of the standard.
2. Align the hole in the armrest (located towards the front on the top of the armrest), with the whole located in the front of the arm channel.
3. Secure the Armrest with one (1) 14x112TT Hex head washer bolt.

Note: *Torque required for the arm hardware is 4ft-lb.*

4. To snap on the appropriate top cover, make sure to align the tabs in the cover with the slots in the armrest as well as making sure that the wide end is towards the cupholder. Once the top cover is aligned simply push down to engage the tabs snap feature.



Installation Instructions

Step 7: Installation Number & Letter Plates

Number and letter plates must be installed in numerical order and alphabetical sequence according to factory seating layout drawing.

Note: some installations use adhesive number and letter plates and some utilize rivets for attachment.

1. Row ID Tags:

- a. Letter plates must be installed on aisle standard and positioned to be read from the aisle.
- b. If applicable remove backing from letter plate to expose adhesive. Position plate in recess on side of aisle standard and press into place.
- c. Position plate on side of aisle standard (pre-drilled), attach with two (2) 2X38B or (2) 2X38Z nails.

2. Seat Number Plates:

- a. Number plates are to be placed into the recess located on the seat.
- b. Position plate in place on seat (pre-drilled), attach with two (2) AD34ABS or (2) SD32BSBP rivets.
- c. Use awl to pop nail through rivet (AD34ABS or SD32BSBP) to avoid burrs.

Note: For adhesive tags and logo plates the surface must be clean, dry and warm. Use a damp cloth to clean.

Step 8: Final Check and Installation Review

A final check and review of the installation is required to ensure proper assembly.

1. Anchors - Ensure all concrete anchors are properly installed and torqued to anchor manufacturer's specifications.
2. Back hardware - Check to ensure back bolts and nuts are secured.
3. Cup holders - if applicable, cup holder attachments should be inspected to ensure nuts and bolts are secured.
4. Seat Alignment - Unoccupied seats should visually align in a row.
5. Seat hardware - Ensure all seat hardware is installed and torqued to specifications.
6. Number and letter plates - Ensure all number and letter plates are properly installed in the specified sequence.

Step 9: Field Damage Repair Instructions

Refer to the document: "*Touch up and cleaning standards*"

Note: If you do not have a copy or would like to obtain a copy of this document, please contact the Irwin Project Administrator or Customer Technical Services at (616) 574-7400.



Care & Maintenance

Performance Check

Fixed seating should be inspected periodically to insure the chairs are in safe, working condition. Inspection should be performed every six months, heavy use facilities may require weekly inspection. Any chair that is found to be damaged should be taken out of service.

It is recommended that a regular schedule be developed based on the frequency of use and the degree to which patrons use the seating in ways other than which it is intended for.

Performance Checks should include all aspects of the chair including those not listed specifically here.

Back Inspection:

- Check to make sure the back is secured to the chair standards.
- Inspect the back for damage from vandalism.
- Inspect the upholstery for wear.

Seat Inspection:

- Oscillate each seat to make sure it returns to the upright position under its own power.
- Check to make sure the seat is secured to the chair standards.
- Inspect the seat for damage from vandalism.
- Inspect the upholstery for wear.

Support Standards and Armrests:

- Check to make sure standards are secure to the anchors / screws.
- Inspect the column, seat bracket, armrest support for damage from vandalism.
- Inspect armrests to insure they are secured to the chair standards and that they have not been damaged from vandalism that will harm a patron.

Note: for repair information refer to the document: “*Touch up and cleaning standards*”

Accessories:

- Inspect all accessories (letter & seat plates, aisle lights, tablet arms, cupholders, etc.) to insure they are secure and in proper working order.

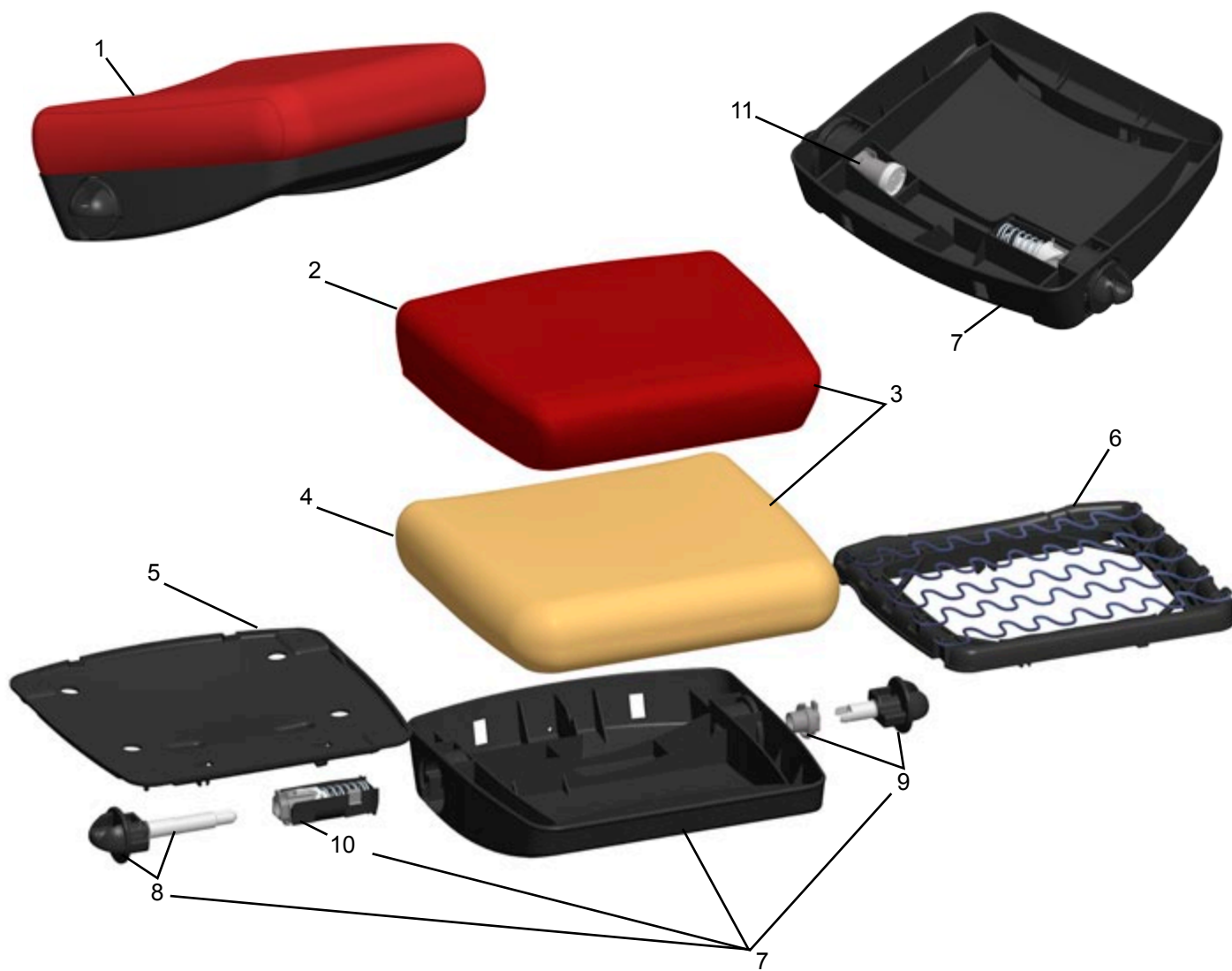
Should any component be found to be not working as originally installed remove the chair from service if the problem creates a safety issue. Refer to the components maintenance instructions for instructions on how to repair the chair. If you are unsure how to repair a problem please contact the Irwin Seating Company Customer Technical Services Department by calling 1.866.464.7946, Mon. - Fri., 8:00 am - 4:30 pm EST.

Parts may be ordered by contacting your local Irwin Seating Company representative, by calling 1.866.464.7946 or visiting www.irwinseating.com.



Care & Maintenance

No. 12 Seat Assembly



Short Bracket
1205R/L



Long Bracket
1228R/L



Care & Maintenance

No. 12 Seat Indoor Assembly

No. 12 Seat Assembly		
Ref. #	Part#	Description
1	12S+Size	Complete Upholstered Seat
2	12SF+Size	Seat Cover
3	12U+Size	Upholstered Cushion Only (no bucket assembly)
4	1215+Size	Ergo Seat Foam
	1240+Size	Suspension Seat Foam (3")
	1245+Size	Loge Seat Foam (4")
	1248+Size	Ergo Sculpted Seat Foam
	1249+Size	Sculpted Seat Foam
5	1216+Size	Ergo substrate
6	1239+Size	Suspension substrate frame with springs
7	1211+Size+Color	Fully assembled full fold bucket with hinges
	1217+Size+Color	Fully assembled 3/4 fold bucket with hinges
	1231+Size+Color	Fully assembled 1/2 fold bucket with hinges
8	1201+Color	RH short bracket hinge assembly
	1201SW+Color	RH long bracket hinge assembly
9	1226+Color	LH short bracket hinge assembly
	1226SW+Color	LH long bracket hinge assembly
10	1227	3/4 fold spring assembly (white)
	1232	1/2 fold spring assembly (gray)
	1252	Full fold spring assembly (black)
11	1222QR	Quiet rise damper assembly
	1221+Color	Short bracket seat bolt caps
	1229+Color	Long bracket seat bolt caps
	516x15SEMS	5/16-18 x 1 1/2" hex w/SEMS washer and nylon patch - 2 per seat
	5/15x18422	Hex whiz lock nut for thread cutting bolt (1per - U7 & 7U and 2 per U6)

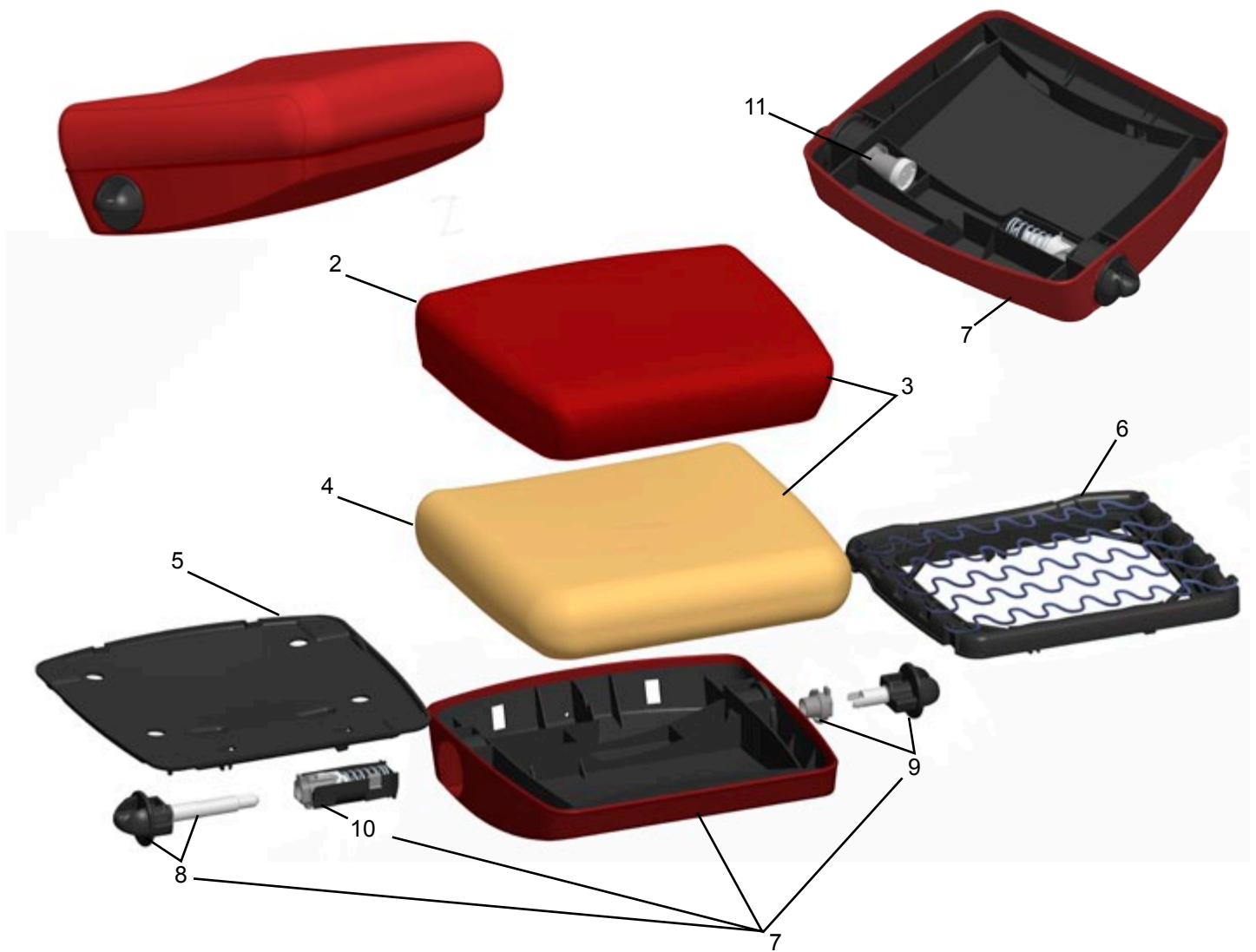
When ordering please remember to specify the following:

1. Size of seat (19", 20", 21")(Located on the side of the plastic bucket)
2. Embossed/Recessed for number plate
3. Color of plastic
4. Long or short seat brackets (Long brackets used with tablet arms, tight radius, cupholder arms, and rockers)(See number stamped on bracket)
5. Regular or slow rise seat minimum order is \$25.00



Care & Maintenance

No. 21 Seat Assembly



Short Bracket
1205R/L



Long Bracket
1228R/L



12



13



Care & Maintenance

No. 21 Seat Assembly

No. 12 Seat Assembly		
Ref. #	Part#	Description
1	21S+Size	Complete Upholstered Seat
2	12SF+Size+Fabric	Seat Cover
3	12U+Size	Upholstered Cushion Only (no bucket assembly)
4	1215+Size	Ergo Seat Foam
	1240+Size	Suspension Seat Foam (3")
	1245+Size	Loge Seat Foam (4")
	1248+Size	Ergo Sculpted Seat Foam
	1249+Size	Sculpted Seat Foam
5	1216+Size	Ergo substrate
6	1239+Size	Suspension substrate frame with springs
7	21SBUC+Size+Fold+Fabric	Upholstered bucket with fold assembly
	21SF+Size+Fabric	Bucket Cover
8	1201	RH short bracket hinge assembly
	1201SW	RH long bracket hinge assembly
9	1226	LH short bracket hinge assembly
	1226SW	LH long bracket hinge assembly
10	1227	3/4 fold spring assembly (white)
	1232	1/2 fold spring assembly (gray)
	1252	Full fold spring assembly (black)
11	1222QR	Quiet rise damper assembly
12	144	Bookbox assembly
13	1246V	Wood veneer decorator panel
	1246L	Laminate decorator panel
	1246U	Upholstered decorator panel
	1221	Short bracket seat bolt caps
	1229	Long bracket seat bolt caps
	516x125	5/16 x 1 1/4" hex w/SEMS washer - 2 per seat
	5/15x18422	Hex whiz lock nut for thread cutting bolt (1per - U7 & 7U and 2 per U6)

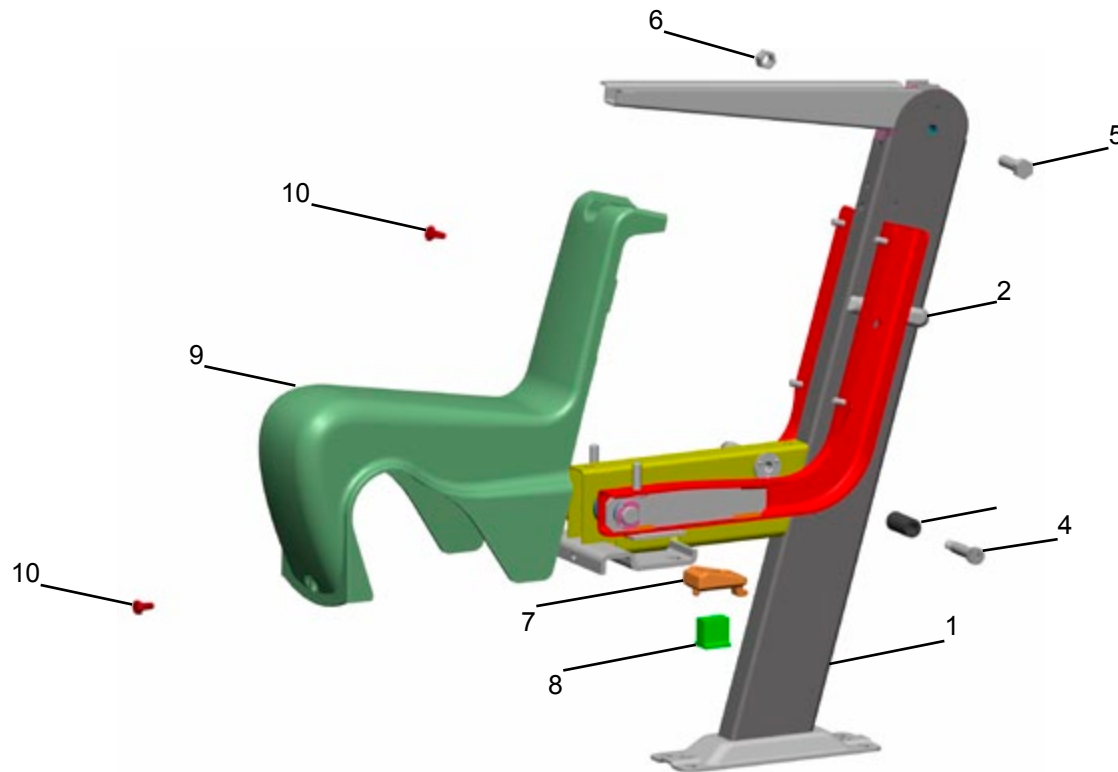
When ordering please remember to specify the following:

1. Size of seat (19", 20", 21", 22", 23")(Located on the side of the plastic bucket)
2. Embossed/Recessed for number plate
3. Color of plastic
4. Long or short seat brackets (Long brackets used with tablet arms, tight radius, cupholder arms, and rockers)(See number stamped on bracket)
5. Regular or slow rise seat minimum order is \$25.00



Care & Maintenance

2C Center Standard Assembly



2C Center Standard Assembly		
Ref. #	Part#	Description
1	22000 (L, A, B, C, D, E, LR, HR, SH)	Column assembly, FUA
2	22013	Spacer
3	22059	Upstop sleeve, 2 per standard
4	22058	Shoulder screw, 3/8" x 1 1/4", 2 per standard
5	88308	3/8-16 x 1 1/2" Hex head bolt, Grade 8, Zinc plated
6	3/8-16N	3/8-16 Nylock nut, hex
7	22009	Bumper, retainer, 2 per standard
8	22010T	Bumper, Rocker FUA, 2 per standard
9	22049 + Color	Center shroud
10	1420X34TOR	Torx drive self taper bolt, 2 per standard

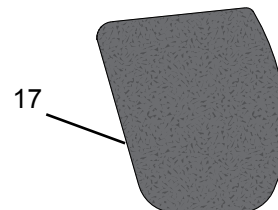
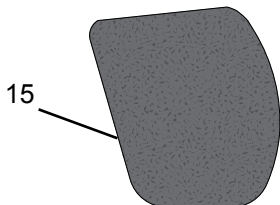
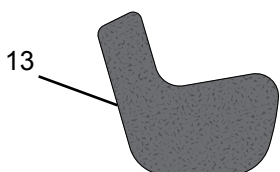
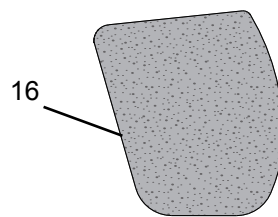
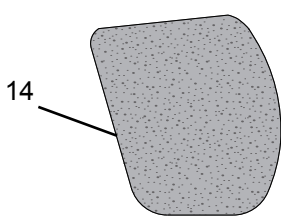
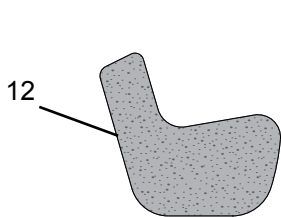
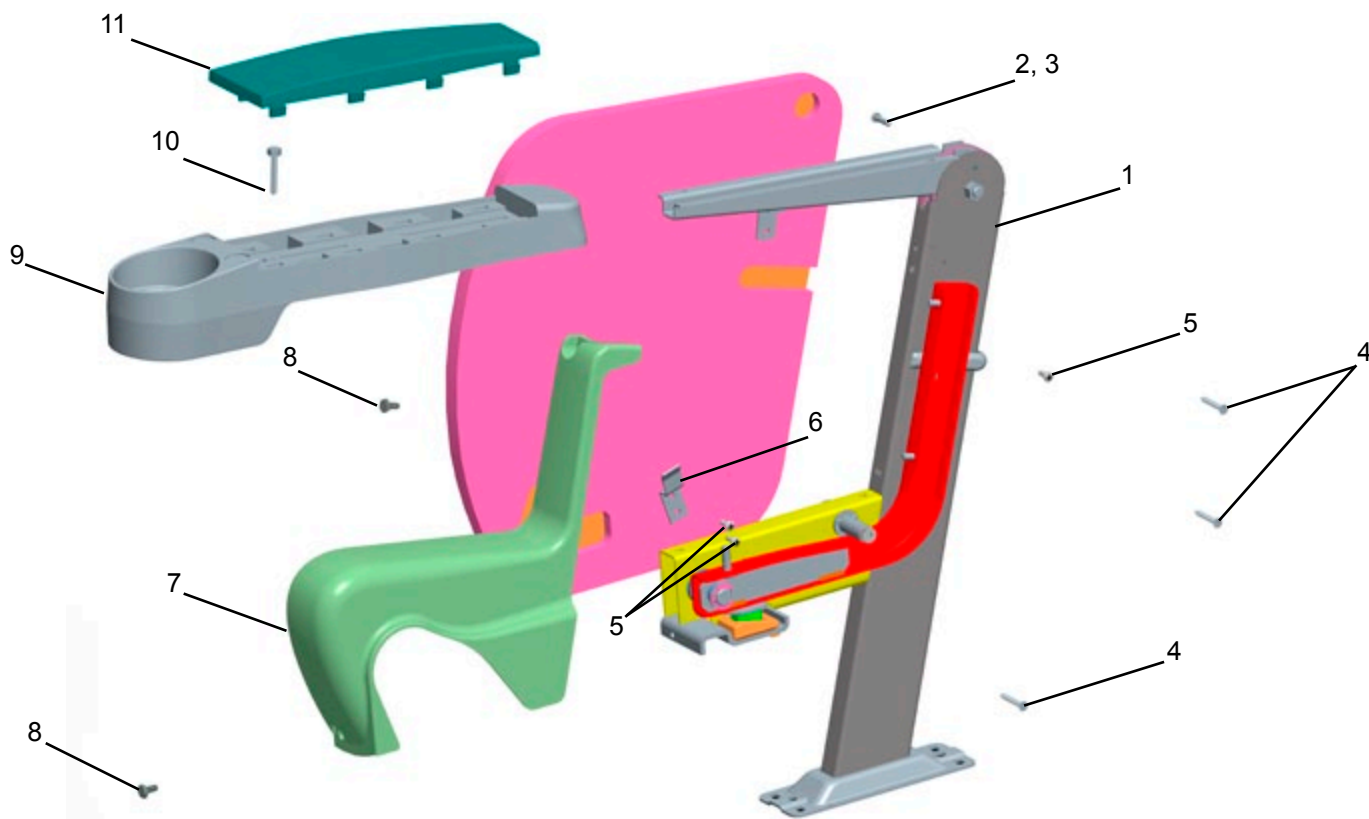
When ordering please remember to specify the following:

1. Specify powder coat enamel for steel components
2. Specify plastic color for plastic components
3. Minimum order is \$25.00



Care & Maintenance

2E End Standard Assembly





Care & Maintenance

2E End Standard Assembly

2E End Assembly		
Ref. #	Part#	Description
1	22000 (L, A, B, C, D, E, LR, HR, SH)	Column assembly, FUA
2	10C114TT	10-24 x 1" Pan head, Phillips, Taptite, Zinc, Black
3	CR77009	10-24 Nut, Acorn cap, Zinc, Black
4	10X112FHB	10 x 1 1/2" Phillips, Flat head, Black, Wood screw, Three per end panel
5	10X5/8	10 x 5/8" Phillips, Pan head, Low root, Black, Three Per End (except "Boot Style" which gets 2 per end)
6	836	Clip , Body, Panel, 2E
7	22049 (R/L+Color)	Shroud, 2E, RH or LH
8	1420X34TOR	Torx drive self taper bolt, 2 per standard
9	62005MB	Plastic Arm, Main body only
	91A-2C	Wood, Laminate, Or upholstered arm
	10X78	#10 x 7/8" Screw used to assemble wood arm to standard
10	14X112TT	1/4 - 20 x 1 1/2" Hex washer head, black phos. plated, tap tight thread forming screw
11	62005UT	Plastic top cover, 2005 Series cupholder
	62005PT	Upholstered top cover, 2005 Series cupholder
12	2R or 2L	Panel, End, #2E, Boot Style, Laminate
13	2RV-B or 2LV-B	Panel, End, #2E, Boot Style, Vinyl Wrap
14	2F2R or 2F2L	Panel, End, #2E, Full, Laminate
15	2F2RV-B or 2F2RV-B	Panel, End, #2E, Full, Vinyl Wrap
16	2FW2R or 2FW2L	Panel, End, #2E, Full, Laminate (For installs with a 91A-2C)
17	2FW2RV-B or 2FW2LV-B	Panel, End, #2E, Full, Vinyl Wrap (For installs with a 91A-2C)

When ordering please remember to specify the following:

1. Specify powder coat enamel for steel components
2. Specify color for plastic components
3. Determine if product is right hand or left hand as if you are sitting in the chair
4. Minimum order is \$25.00