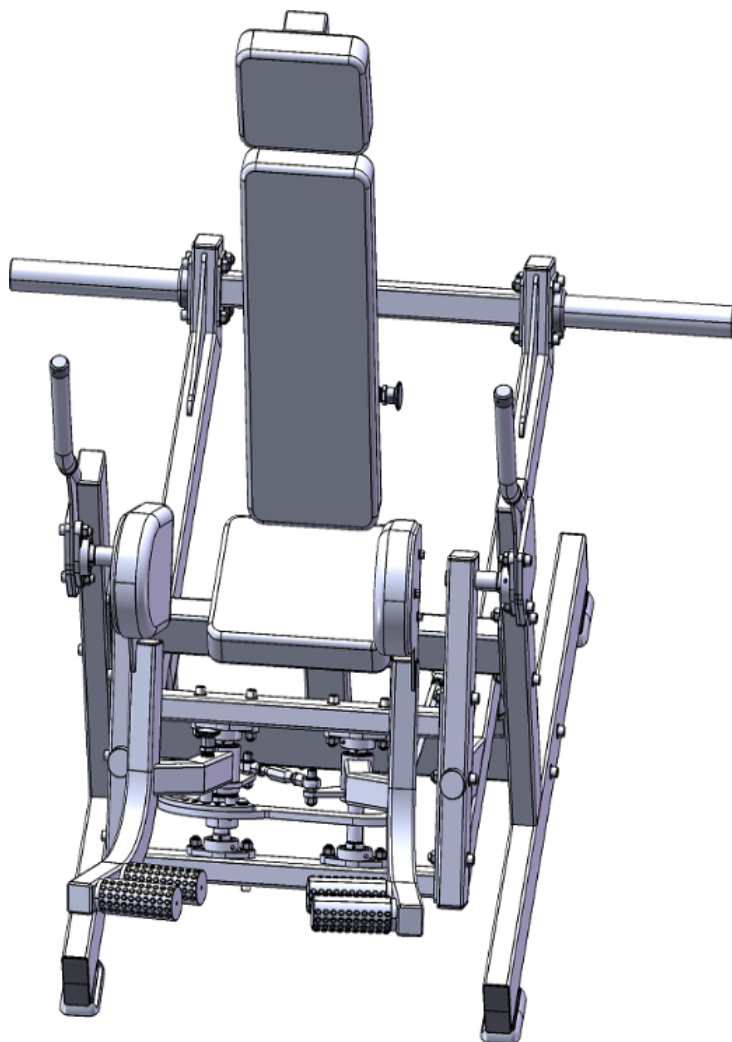


INFINITE SERIES

Linked Hip Abduction

Assembly & Owner Guide



BUILT TO PERFORM.

Read before assembly. Keep this guide for future reference.

01 / PREPARE

Before you begin

Set up your space

Assemble indoors on a level, stable surface with clear access around the equipment. Protect the floor and allow enough room to lay out the frame and hardware.

Check every part

Unpack and compare the components with the illustrated lists. Keep hardware grouped by stage. Reference numbers identify parts in the drawings; they may restart at each stage. Quantities are for the corresponding source list and should not be added across stages.

Prepare tools and help

Have metric hex keys and suitable metric wrenches or sockets ready for the listed fasteners. Use sufficient help to support heavy frames and moving assemblies. Keep hands clear of pinch points and never work beneath an unsupported load.

Follow the assembly drawings

Work through the stages in order. Match each numbered callout with its parts list. Confirm orientation before fitting fasteners. A part described as an assembly is supplied as a component; the wording does not instruct you to weld it.

Check connections before use

Use the specified hardware at each joint. Confirm that fasteners are secure and moving parts operate freely. If a part, dimension or connection is unclear, stop and contact Build A Gym before continuing.

ASSEMBLY SUPPORT

Build A Gym • (512) 591-8553 • buildagym.com

02 / SAFETY

Use and care safely

- Use the equipment indoors in a dry, supervised area. Keep the surrounding floor level and unobstructed.
- Children under 12 must not use this equipment. Provide appropriate supervision and assistance for other users who need it.
- Before each use, inspect moving components, fasteners, pins and attachments. Have loose or damaged parts corrected before use.
- Wear suitable exercise clothing and athletic shoes. Warm up before exercise and use slow, controlled movements.
- Increase resistance gradually. Stop exercising if you feel pain, discomfort or anything unusual, and consult a doctor.
- Consult your doctor before starting an exercise program.
- Keep hands, clothing and other objects clear of moving parts. Make sure adjustment pins and any safety stops are fully engaged.
- Clearly mark the equipment “Out of Use” during servicing or repair. Keep this guide available for future reference.

Your assembly sequence

Stage 1 → Stage 2 → Stage 3 → Stage 4 → Final inspection

Use the PDF bookmarks to jump directly to a stage.

STAGE 1 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 1

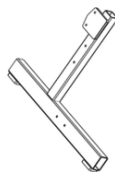
QTY 1



Right support assembly

REF 2

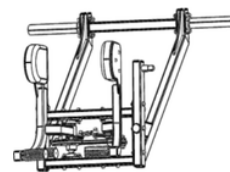
QTY 1



Left support assembly

REF 3

QTY 1



Boom

REF 4

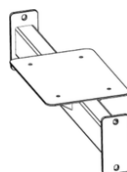
QTY 1



Lower connection brace assembly

REF 5

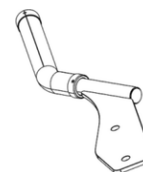
QTY 1



Cushion connection assembly

REF 6

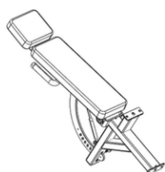
QTY 2



Handle assembly

REF 7

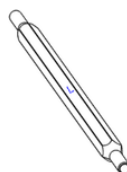
QTY 1



Seat

REF 8

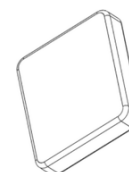
QTY 1



Hexagonal long connecting rod

REF 9

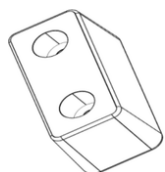
QTY 1



Cushion

REF 10

QTY 2



Thick cushioning

REF 11

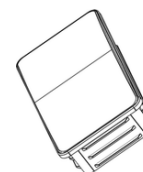
QTY 4



Anchor

REF 12

QTY 4



50 x 100 Rectangular tube plug

STAGE 1 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 13

QTY 2



50 × 80 Rectangular tube plug

REF 14

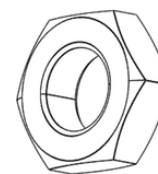
QTY 1



Joint bearing (reverse buckle)
M12 × 67

REF 15

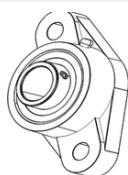
QTY 2



Hex thin nut M12

REF 16

QTY 2



Ø25 bearing housing

REF 17

QTY 33



Washer Ø12.2xØ24 × 1.2

REF 18

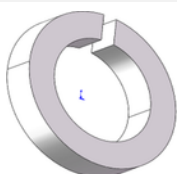
QTY 4



Washer Ø10.3xØ20 × 1.2

REF 19

QTY 4



Spring washer Ø10

REF 20

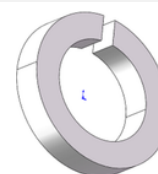
QTY 4



Washer Ø8.3xØ16 × 1

REF 21

QTY 4



Springwasher Ø8

REF 22

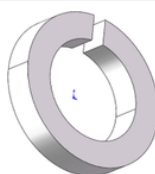
QTY 4



Socket-head screw M8 × 25

REF 23

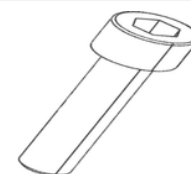
QTY 1



Spring washer Ø12

REF 24

QTY 4

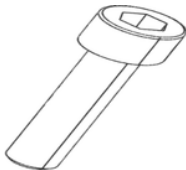
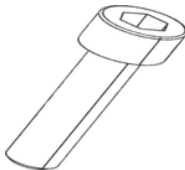
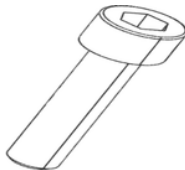
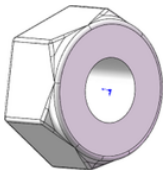
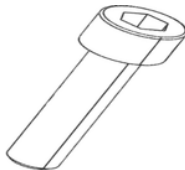
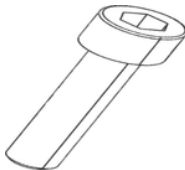


Socket-head screws M10 × 45

STAGE 1 / PARTS

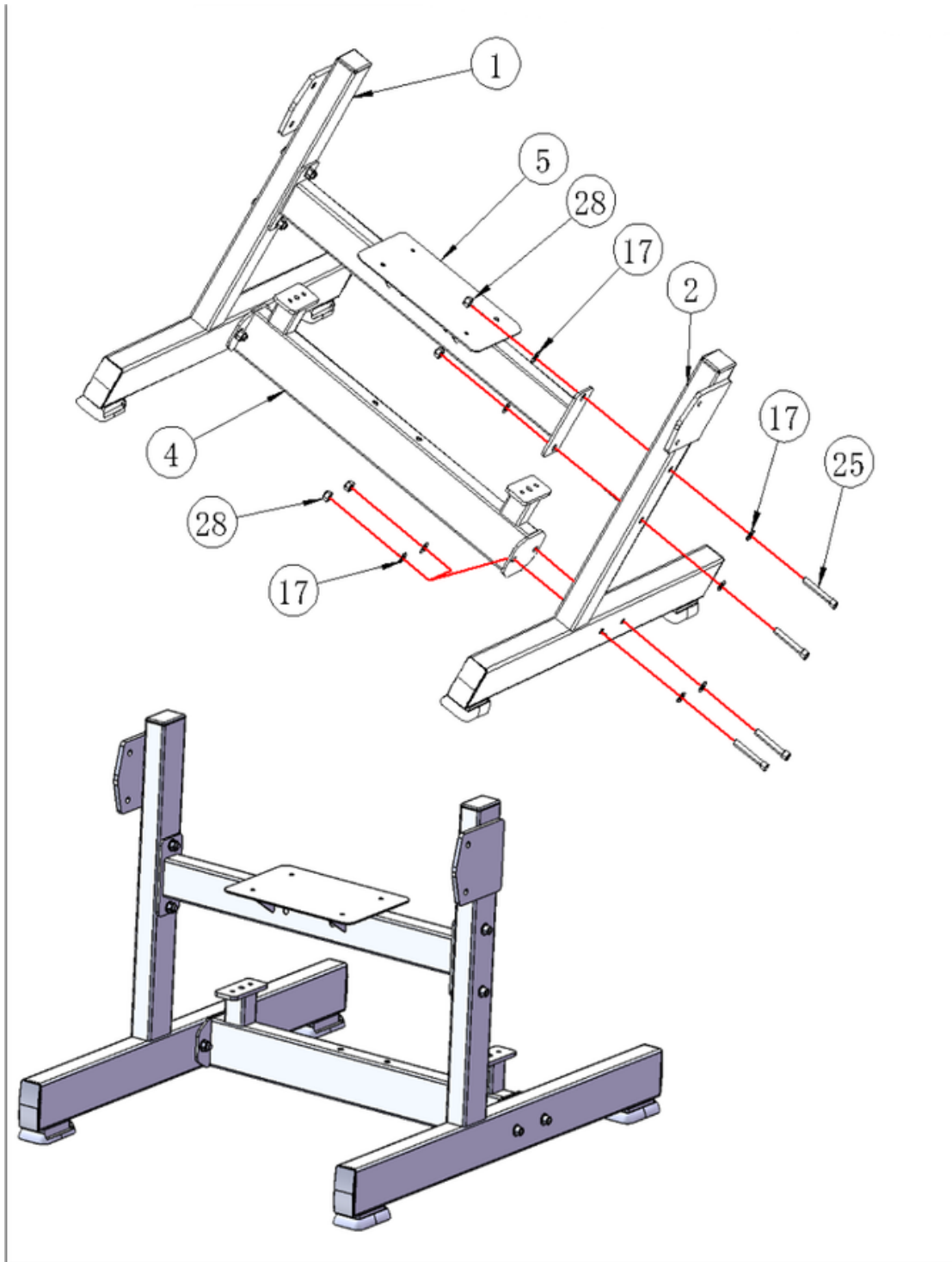
Identify your components

Match each reference and quantity to the drawing for this stage.

REF 25 QTY 10  Socket-head screw M12 × 75	REF 26 QTY 4  Socket-head screw M12 × 50	REF 27 QTY 2  Socket-head screw M12 × 125
REF 28 QTY 16  Locknut M12	REF 29 QTY 4  Socket-head screw M12 × 15	REF 30 QTY 1  Socket-head screw M12 × 35

STAGE 1 / DRAWING 1 OF 3

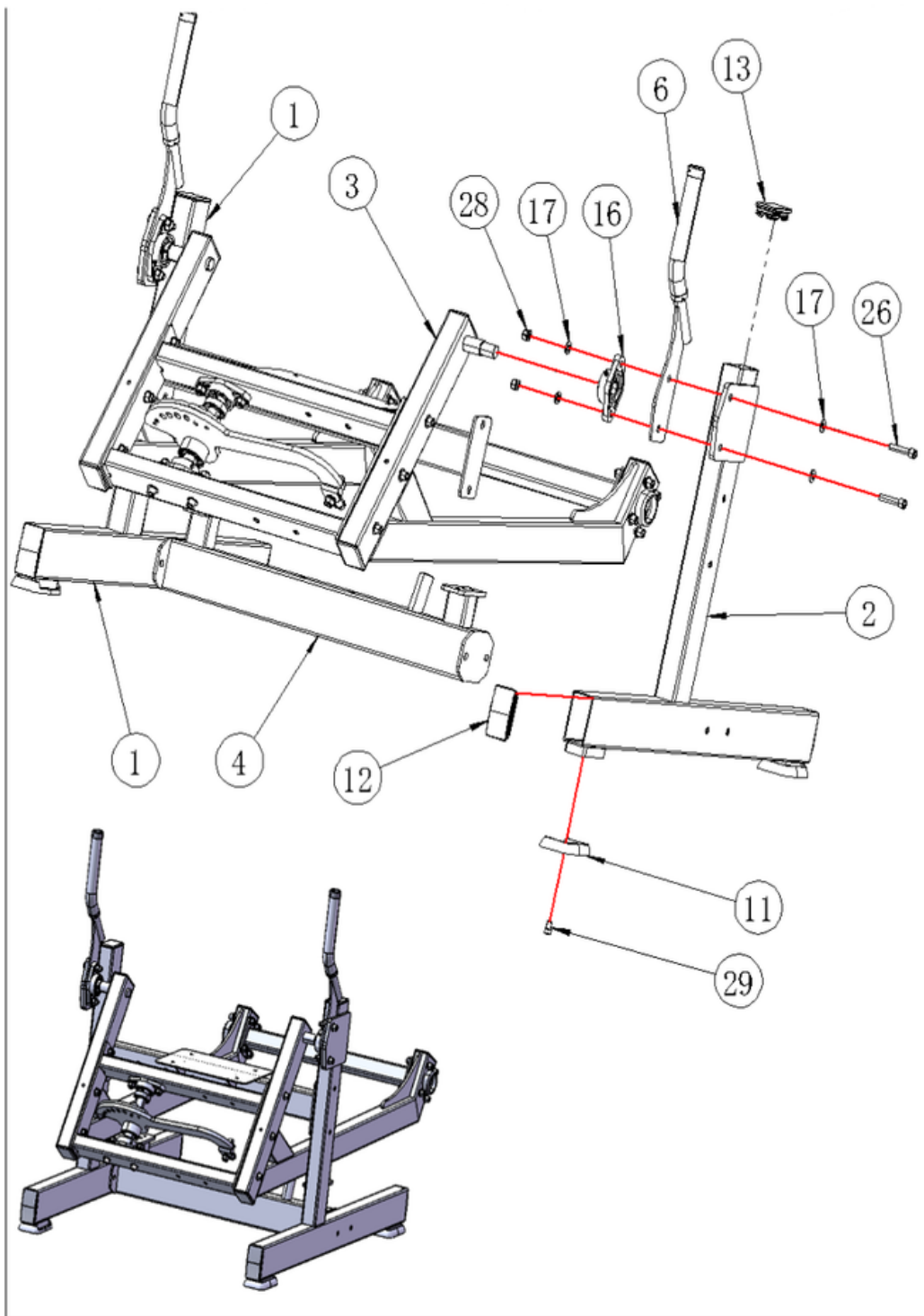
Assembly stage 1



Match the numbered callouts to the Stage 1 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 1 / DRAWING 2 OF 3

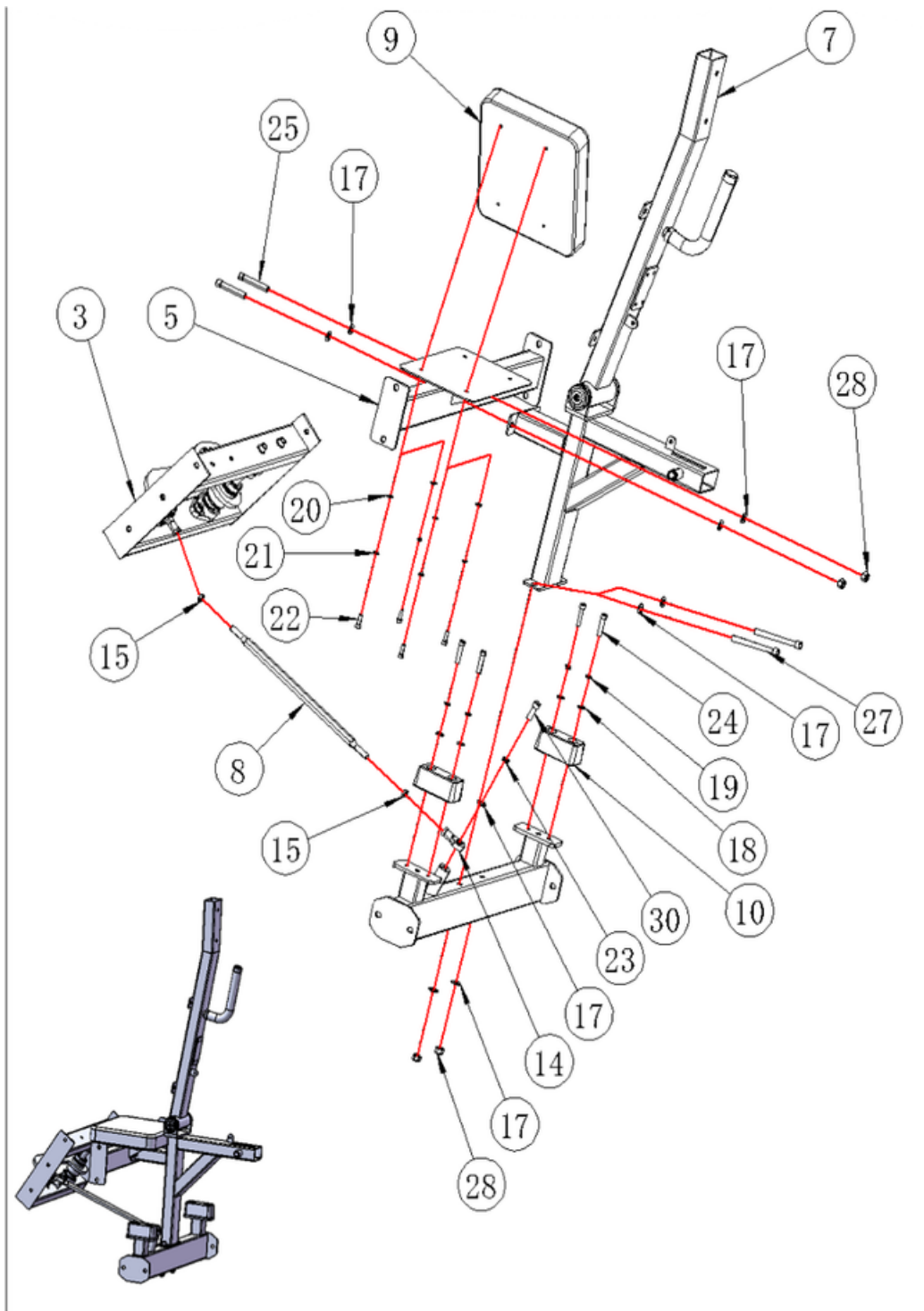
Assembly stage 1



Match the numbered callouts to the Stage 1 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 1 / DRAWING 3 OF 3

Assembly stage 1



Match the numbered callouts to the Stage 1 parts list. Position the components as shown and use the listed hardware at each connection.

Stage 1: Join the Main Assemblies

Stage 1 shows the final joining plan. Assemble loose seat and leg mechanisms in Stages 2–4 first; keep moving sections supported.

1. Join the base supports

Brace right support 1 and left support 2 on a level surface. Fit lower brace 4 and seat connection 5 between them in Drawing 1 orientation. Use M12 × 75 screws 25, washers 17 and nuts 28 at the shown joints. Align the frame before final fastening.

2. Prepare and install the moving assembly

Complete the loose subassemblies in Stages 3–4 before closing the base. Support boom assembly 3 between the sides in Drawing 2. Fit the two bearing housings 16 and handles 6 using M12 × 50 screws 26, washers 17 and nuts 28 as shown. Confirm omitted shaft-retention and bearing settings before releasing the support.

3. Fit the seat and pads

Prepare the backrest in Stage 2. In Drawing 3, join seat assembly 7 to connection 5 with M12 × 75 screws 25 and to the lower mount with M12 × 125 screws 27, washers 17 and nuts 28. Attach cushion 9 with M8 × 25 screws 22 and washers 20–21. Fit buffers 10 using M10 × 45 screws 24 and washers 18–19.

4. Connect the long linkage and finish the base

Fit long rod 8, joint bearing 14 and thin nuts 15 in Drawing 3 orientation; retain the lower joint with M12 × 35 screw 30 and washers 17 and 23. Confirm rod length, thread engagement and the upper end retention before adjustment. Fit feet 11 using screws 29 and plugs 12–13 as shown. The listed feet do not specify a floor-anchoring method.

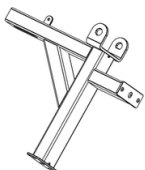
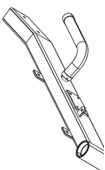
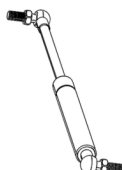
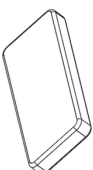
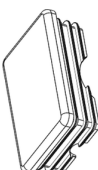
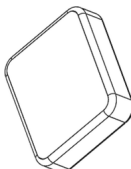
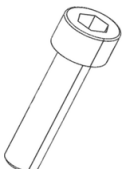
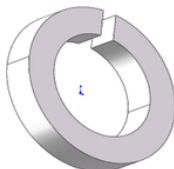
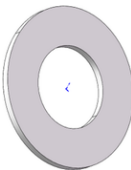
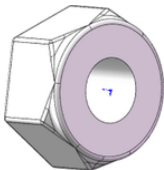
Check before continuing

Frame joints, pivot retention, long linkage and seat mounting are confirmed.

STAGE 2 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 1 QTY 1  Seat fixing assembly	REF 2 QTY 1  Backrest assembly	REF 3 QTY 1  Adjustment assembly
REF 4 QTY 1  Gas springs	REF 5 QTY 1  Backrest	REF 6 QTY 2  50 × 80 Rectangular tube plug
REF 7 QTY 1  Head pad	REF 8 QTY 2  Socket-head screw M8 × 75	REF 9 QTY 14  Spring washer Ø8
REF 10 QTY 10  Washer Ø8.3xØ16 × 1	REF 11 QTY 2  Socket-head screw M8 × 25	REF 12 QTY 2  Locknut M8

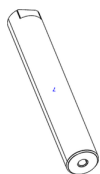
STAGE 2 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 13

QTY 1



Boom connects shaft

REF 14

QTY 2



Aluminum cover

REF 15

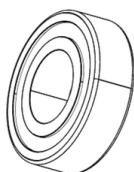
QTY 2



Powder compartment

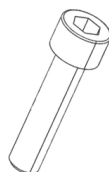
REF 16

QTY 2

Deep groove ball bearings
Ø52xØ25 x 15

REF 17

QTY 8



Socket-head screw M8 x 30

REF 18

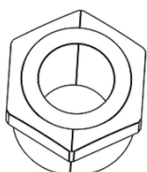
QTY 1



Pull pin shaft

REF 19

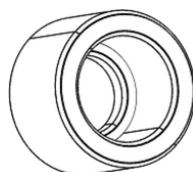
QTY 1



Hex nut

REF 20

QTY 2



Limit spacer

REF 21

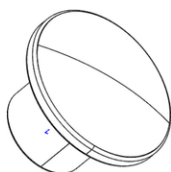
QTY 1



Spring

REF 22

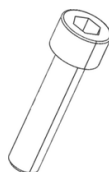
QTY 1



Pull-pin cap

REF 23

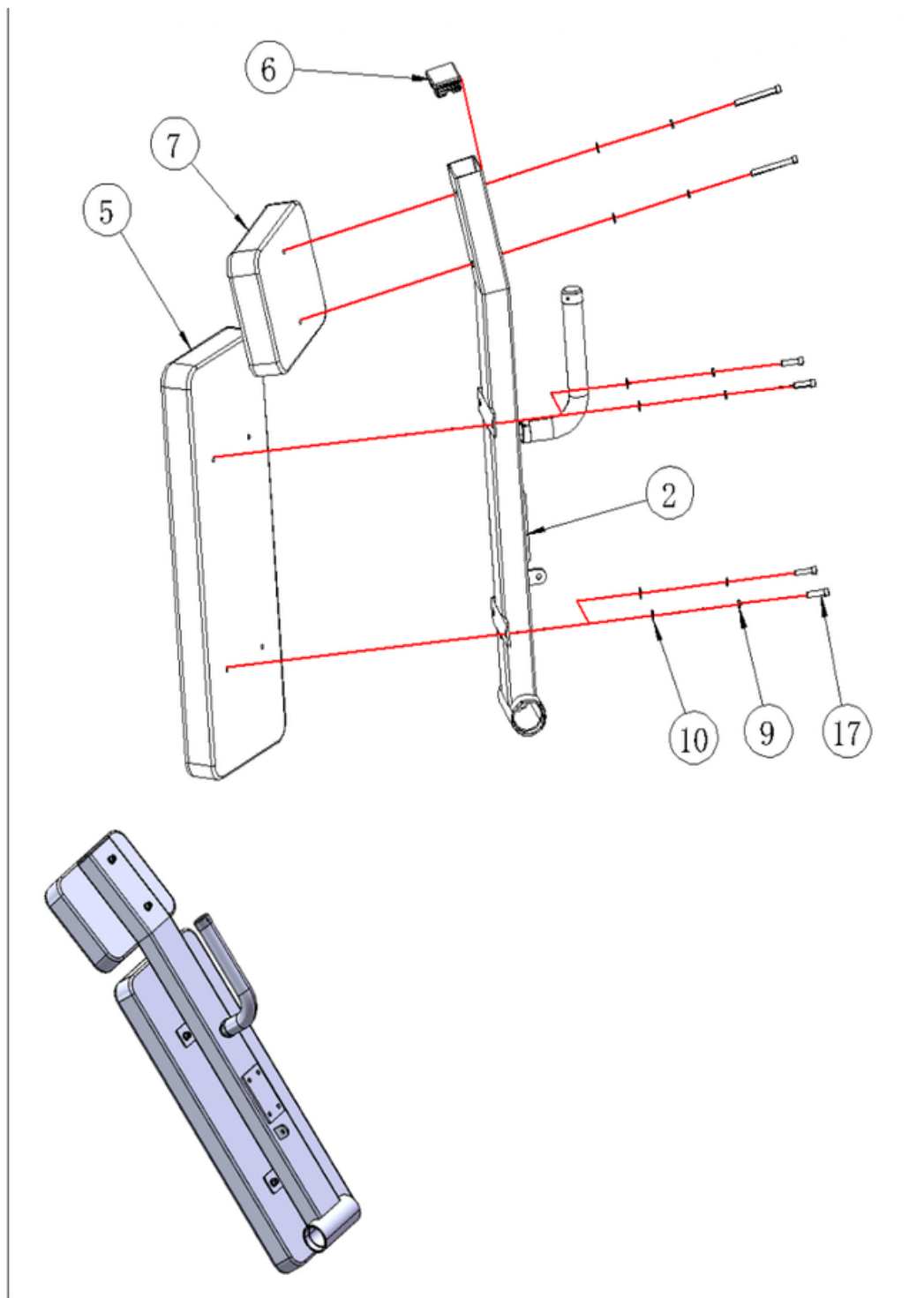
QTY 2



Socket-head screw M8 x 15

STAGE 2 / DRAWING 1 OF 2

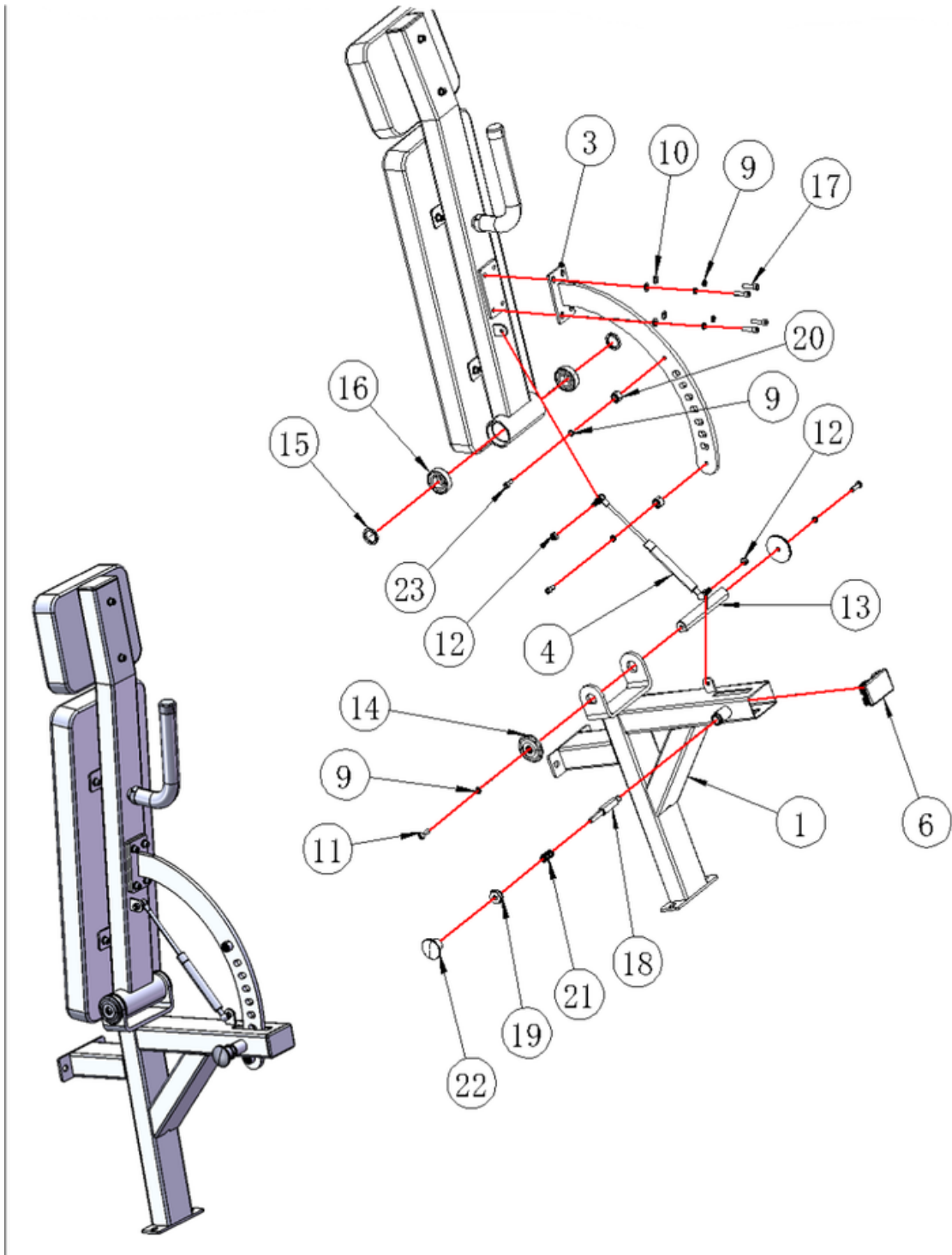
Assembly stage 2



Match the numbered callouts to the Stage 2 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 2 / DRAWING 2 OF 2

Assembly stage 2



Match the numbered callouts to the Stage 2 parts list. Position the components as shown and use the listed hardware at each connection.

Stage 2: Assemble the Adjustable Backrest

The gas spring assists the backrest; the adjustment pin must engage positively. Part numbers restart for this stage.

5. Attach the back and head pads

Position back pad 5 and head pad 7 on frame 2 as shown in Drawing 1. Attach them with the depicted M8 × 30 screws 17, washers 10 and spring washers 9. Fit top plug 6. Start pad fasteners by hand and confirm every mounting point aligns.

6. Build the backrest pivot

Support backrest 2 above seat frame 1. In Drawing 2, fit bearings 16, spacers 15 and shaft 13 in their shown relationship. Retain the pivot with covers 14, M8 × 25 screws 11 and spring washers 9. Preserve factory-fitted bearings and confirm any omitted shaft or bearing setting.

7. Fit the adjustment bracket and gas spring

Attach curved bracket 3 with screws 17 and washers 9–10. Fit stops 20 using M8 × 15 screws 23. Support the backrest while connecting gas spring 4 in the shown orientation with M8 × 75 screws 8 and nuts 12. Do not open the gas spring or force its travel; confirm the supplied end fittings and retention before releasing the backrest.

8. Install and test the backrest lock

Assemble pull pin 18, spring 21, nut 19 and cap 22 in the drawing order. Nut 19 has no listed size: identify the supplied matching part. Fit remaining plug 6. While supporting the backrest, check each adjustment position and full pin return. Resolve unlisted spring setup details before use.

Check before continuing

Backrest pivot, gas-spring ends and adjustment lock are secure.

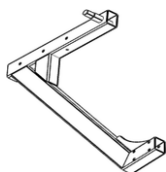
STAGE 3 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 1

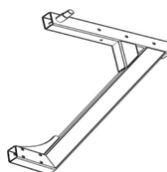
QTY 1



Left boom assembly

REF 2

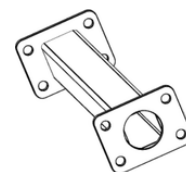
QTY 1



Right boom assembly

REF 3

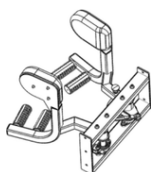
QTY 1



Connection assembly

REF 4

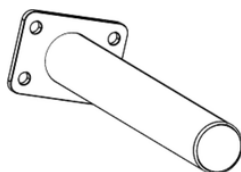
QTY 1



Main connection

REF 5

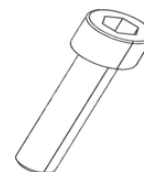
QTY 2



Barrel assembly

REF 6

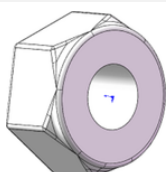
QTY 6



Socket-head screw M12 × 75

REF 7

QTY 14



Locknut M12

REF 8

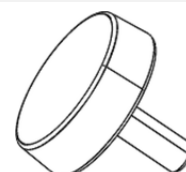
QTY 4



Hexagonal thin nut M10

REF 9

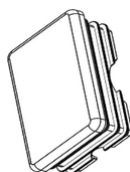
QTY 4



Round cushioning

REF 10

QTY 6



50 × 80 Rectangular tube plug

REF 11

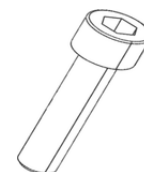
QTY 28



Washer Ø12.2xØ24 × 1.2

REF 12

QTY 8



Socket-head screw M12 × 80

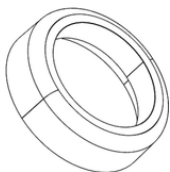
STAGE 3 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 13

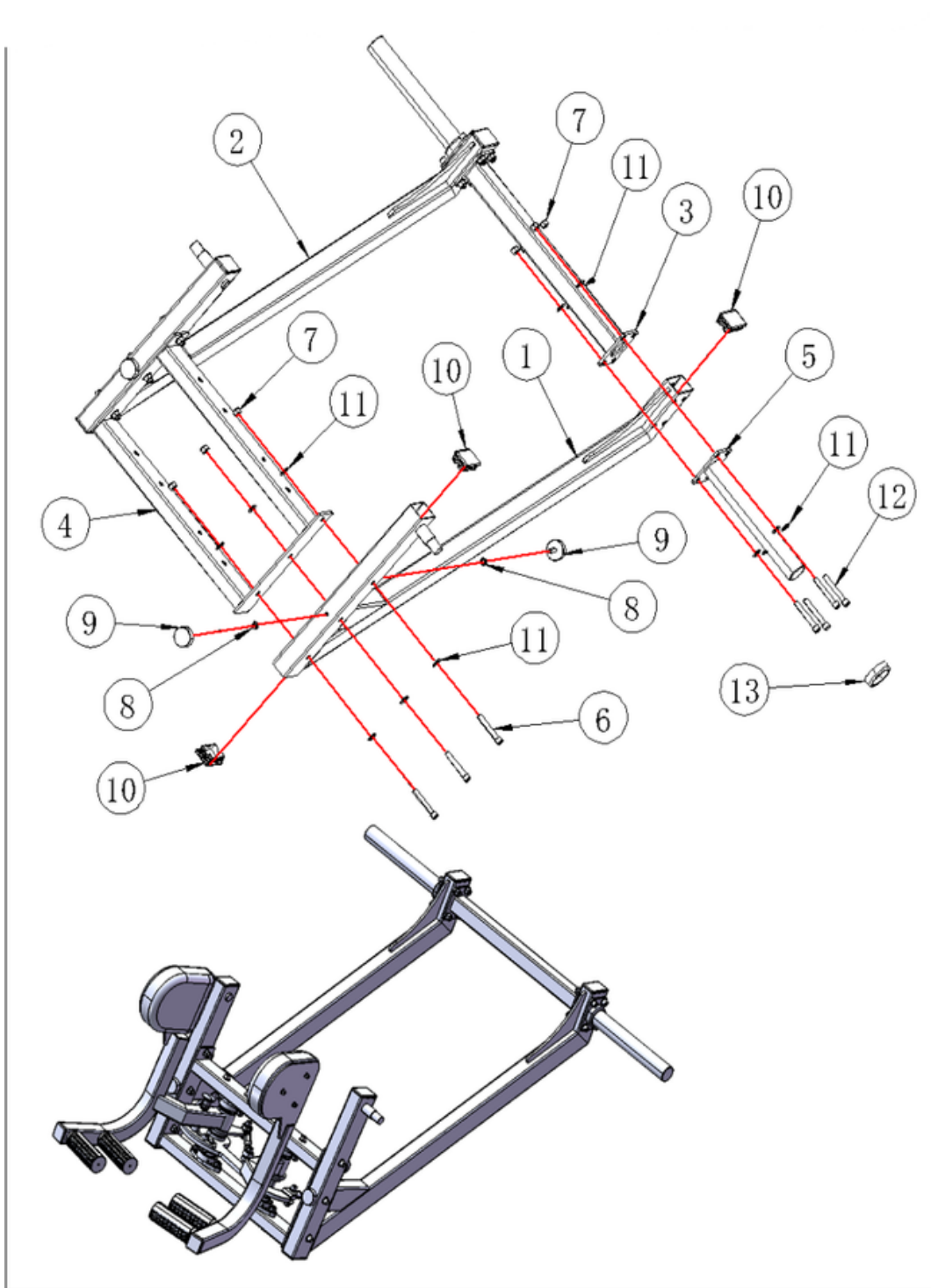
QTY 2



Cushioning rubber sleeves

STAGE 3 / DRAWING 1 OF 1

Assembly stage 3



Match the numbered callouts to the Stage 3 parts list. Position the components as shown and use the listed hardware at each connection.

Stage 3: Build the Loading Frame

Build the leg-arm carrier in Stage 4 before joining main connection 4. Keep the loading frame supported.

9. Join the left and right booms

Support left boom 1 and right boom 2. Join them to connection 3 and completed main connection 4 from Stage 4. Use the shown M12 × 75 screws 6 and M12 × 80 screws 12 with washers 11 and nuts 7 at their respective joints; do not substitute one length for the other.

10. Attach the two loading horns

Fit loading barrels 5 at the marked outer joints with screws 12, washers 11 and nuts 7. Fit the two rubber sleeves 13 against the horn bases. Keep all weight plates off the machine during assembly and adjustment.

11. Fit buffers and verify the frame

Fit round buffers 9 with thin M10 nuts 8 at the four shown contact points. Install plugs 10 after inspecting concealed joints. Confirm the buffer positions and any omitted stop settings; check clearance around both moving booms before completing their Stage 1 installation.

Check before continuing

Both horns, frame joints, buffers and clearances are confirmed.

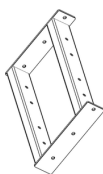
STAGE 4 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 1

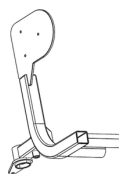
QTY 1



Main connection assembly

REF 2

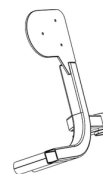
QTY 1



Right leg assembly

REF 3

QTY 1



Left leg assembly

REF 4

QTY 1



Disc assembly

REF 5

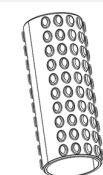
QTY 2



Leg pads

REF 6

QTY 4



Footrest cover

REF 7

QTY 22

Washer $\varnothing 12.2 \times \varnothing 24 \times 1.2$

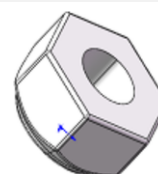
REF 8

QTY 8

Socket-head screw M12 $\times$ 70

REF 9

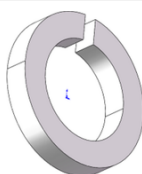
QTY 11



Locknut M12

REF 10

QTY 8

Spring washer $\varnothing 8$

REF 11

QTY 8

Socket-head screw M8 $\times$ 30

REF 12

QTY 2

Hexagon pan head screws M10 $\times$ 20

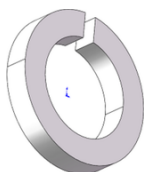
STAGE 4 / PARTS

Identify your components

Match each reference and quantity to the drawing for this stage.

REF 13

QTY 1



Spring washer Ø10

REF 14

QTY 2



Washer Ø10.3xØ20 x 1.2

REF 15

QTY 4



Hex thin nut M12

REF 16

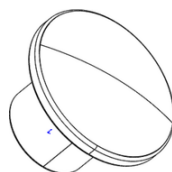
QTY 2



Socket-head screw M12 x 45

REF 17

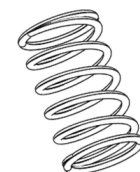
QTY 1



Pull-pin cap

REF 18

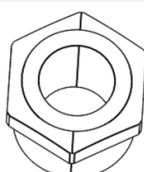
QTY 1



Spring

REF 19

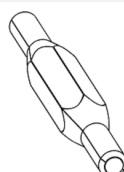
QTY 1



Hex nut

REF 20

QTY 1



Hex connecting rod

REF 21

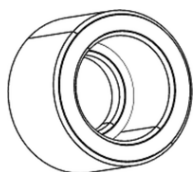
QTY 1



Powder compartment

REF 22

QTY 2



Limit spacer

REF 23

QTY 4



Ø25 bearing housing

REF 24

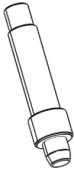
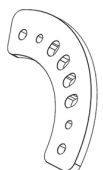
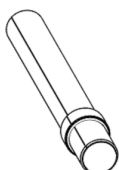
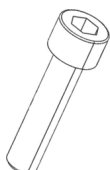
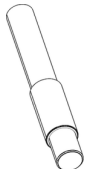
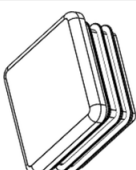
QTY 6

Deep groove ball bearings
Ø52xØ25 x 15

STAGE 4 / PARTS

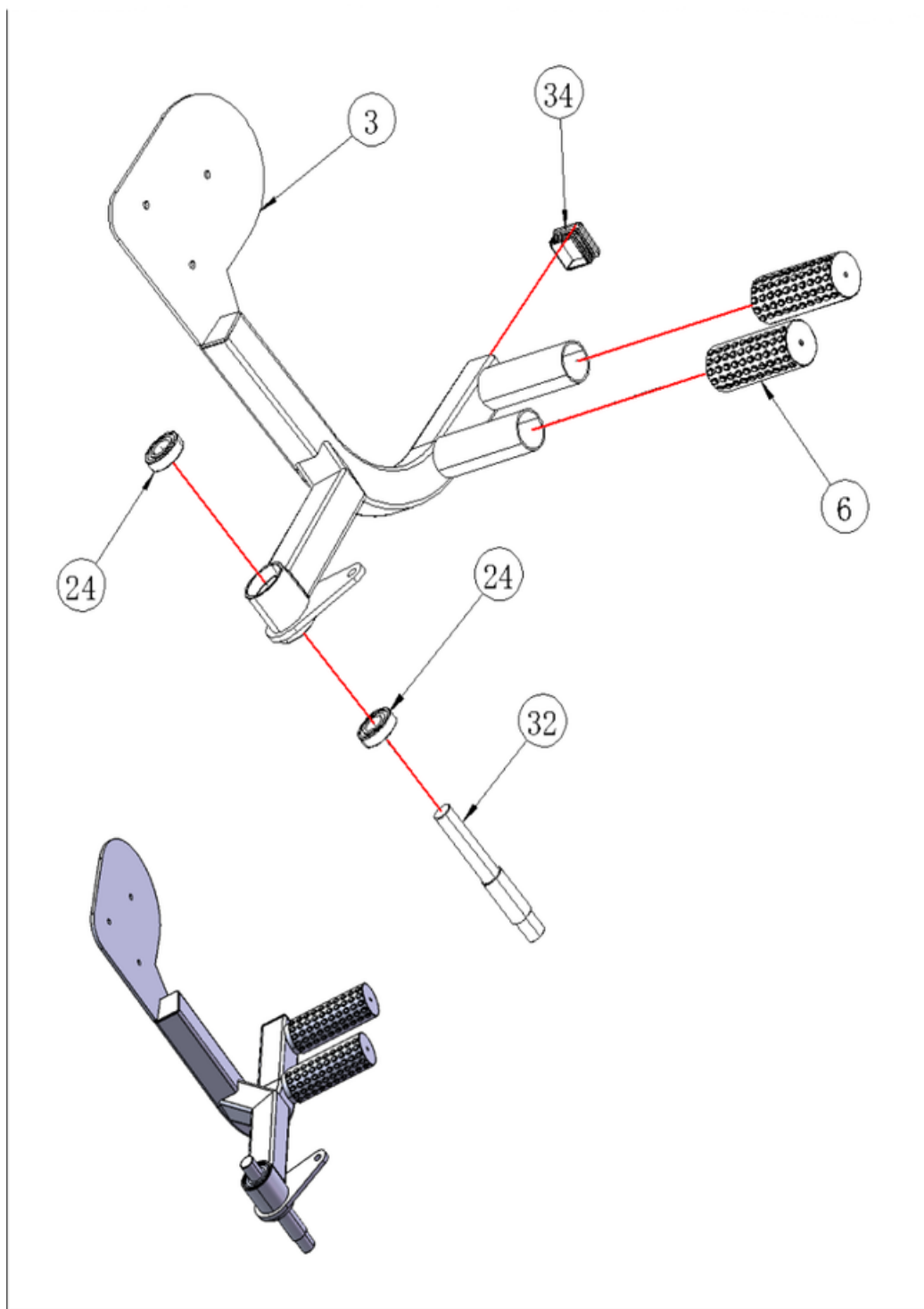
Identify your components

Match each reference and quantity to the drawing for this stage.

REF 25 QTY 1  Joint bearing (reverse buckle) M12 x 67	REF 26 QTY 2  Joint bearings M12 x 67	REF 27 QTY 1  Pin shaft
REF 28 QTY 1  Adjustment plate	REF 29 QTY 1  Rotating shaft	REF 30 QTY 1  Socket-head screw M12 x 55
REF 31 QTY 2  Limit spacer	REF 32 QTY 1  Shaft 2	REF 33 QTY 6  Washer Ø8.3xØ16 x 1
REF 34 QTY 2  50 x 50 square pipe is plugged		

STAGE 4 / DRAWING 1 OF 4

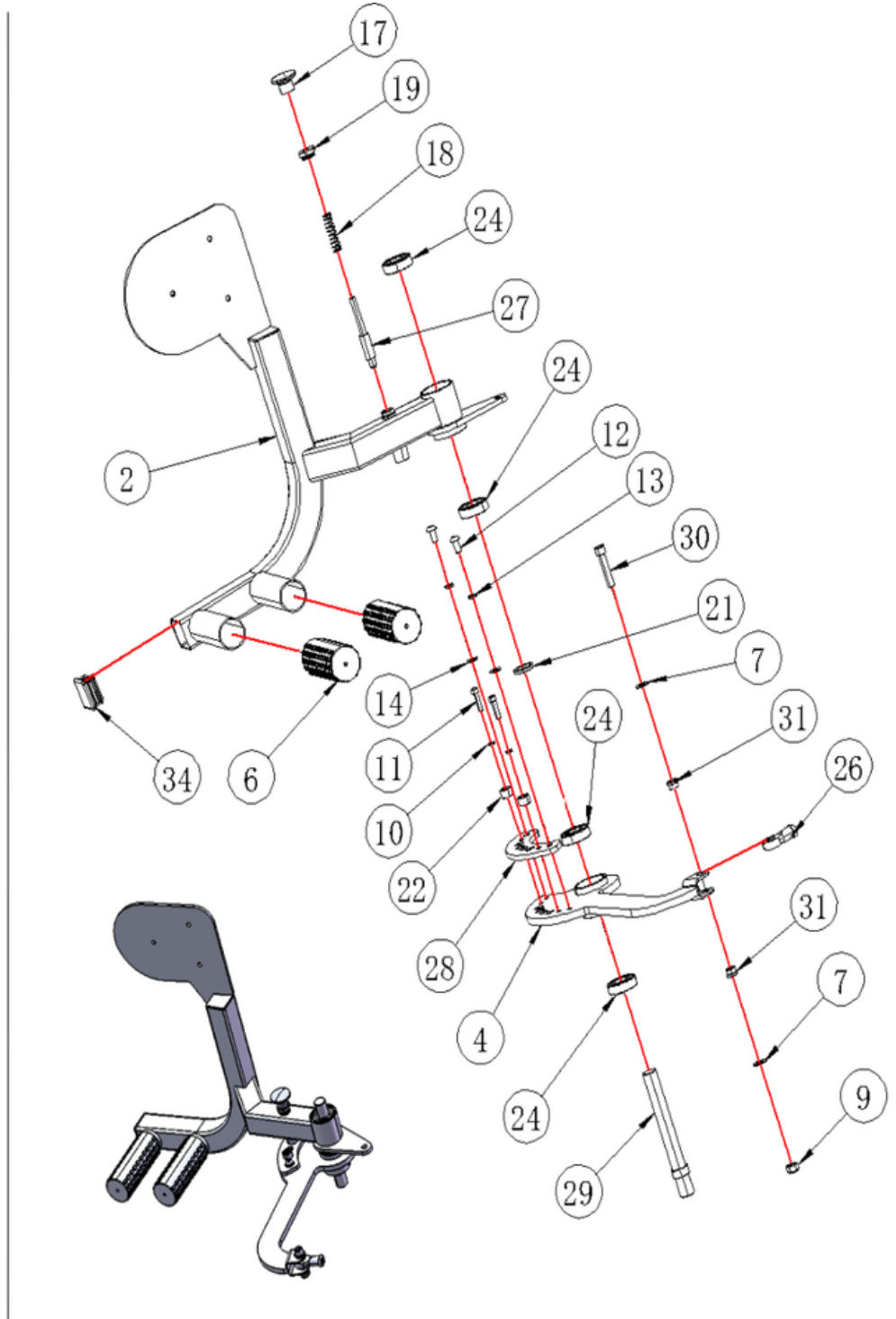
Assembly stage 4



Match the numbered callouts to the Stage 4 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 4 / DRAWING 2 OF 4

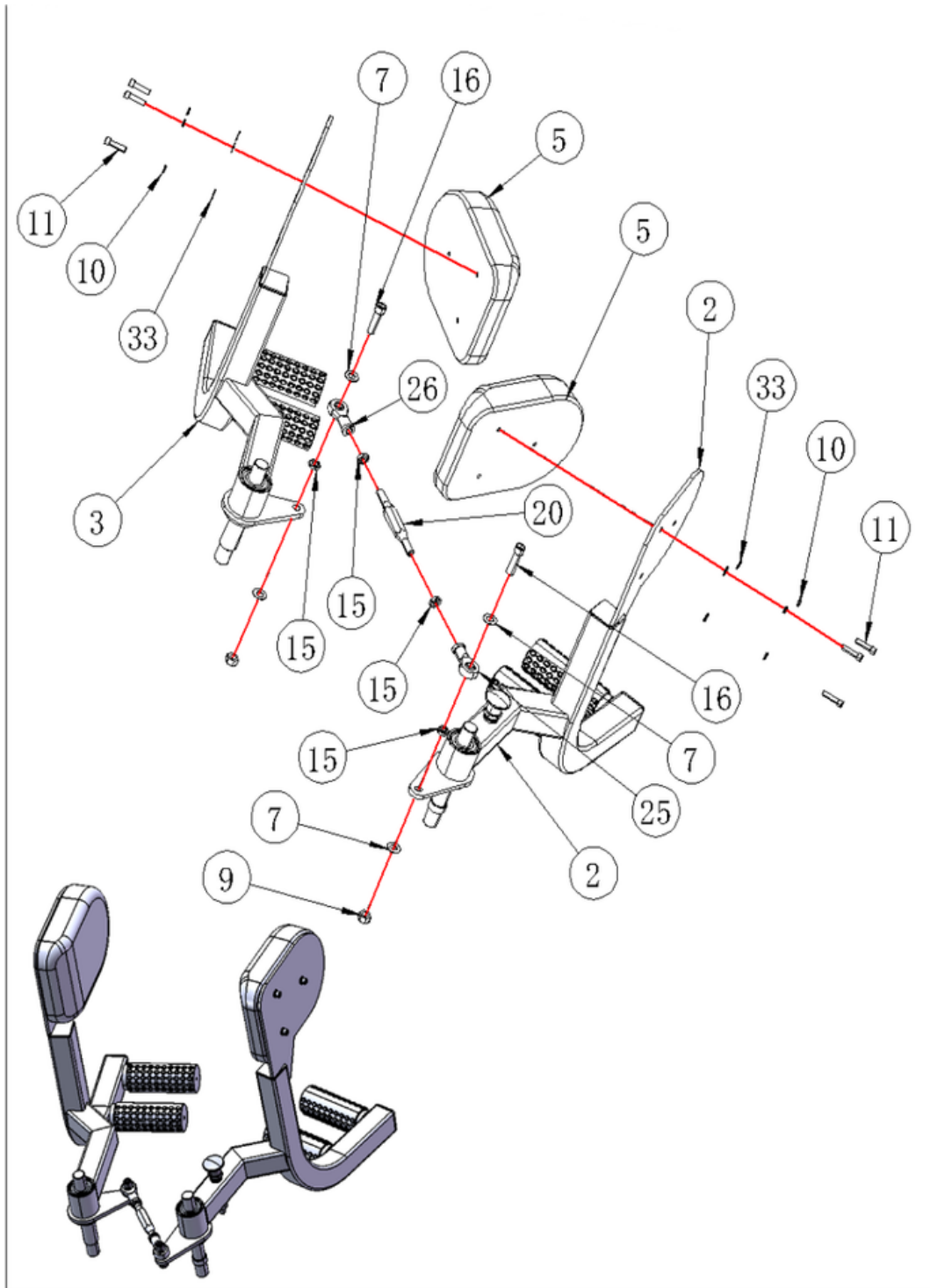
Assembly stage 4



Match the numbered callouts to the Stage 4 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 4 / DRAWING 3 OF 4

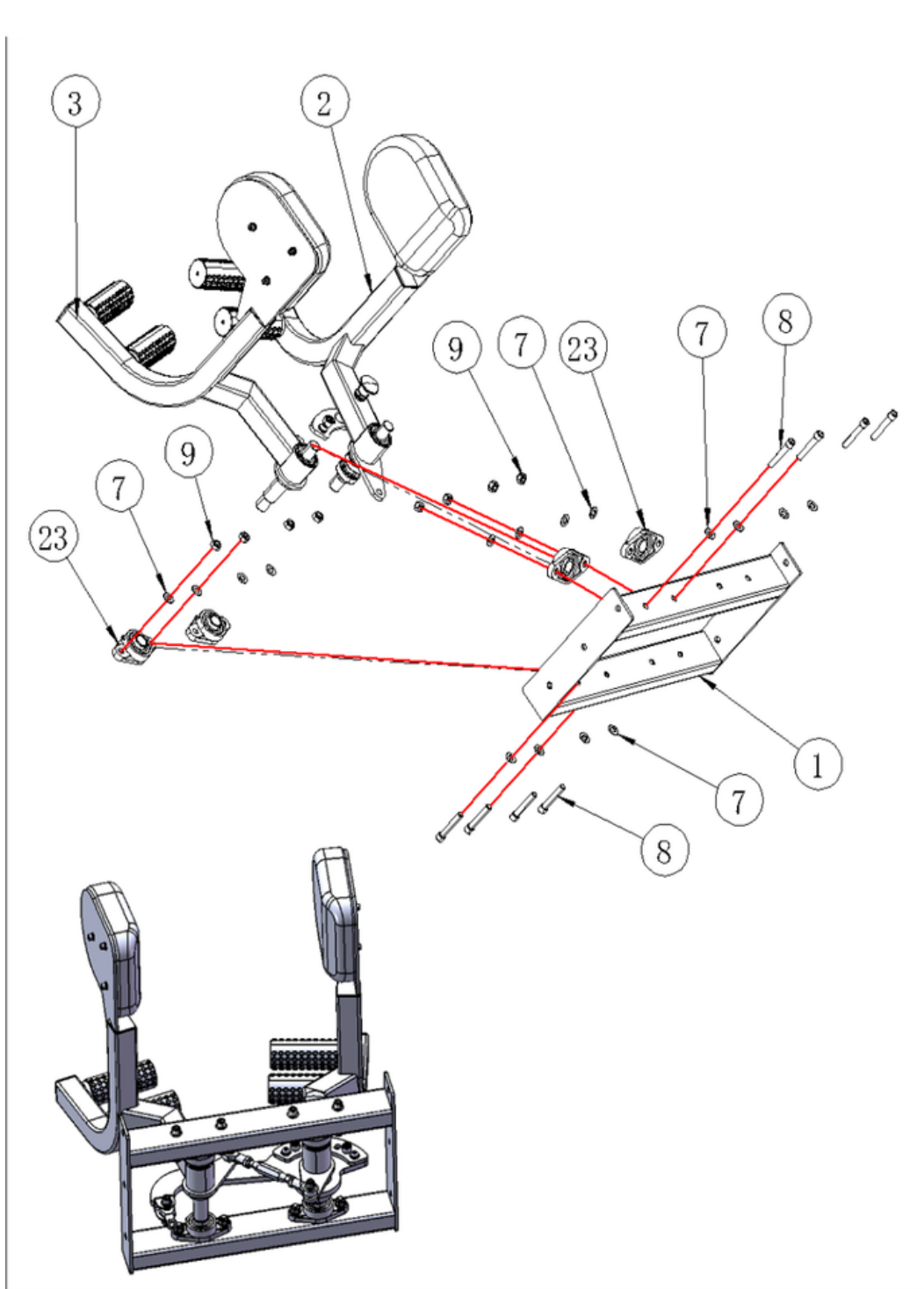
Assembly stage 4



Match the numbered callouts to the Stage 4 parts list. Position the components as shown and use the listed hardware at each connection.

STAGE 4 / DRAWING 4 OF 4

Assembly stage 4



Match the numbered callouts to the Stage 4 parts list. Position the components as shown and use the listed hardware at each connection.

Stage 4A: Build the Leg Pivots

Use Drawings 1–2 and keep both arms supported. Do not dismantle correctly assembled factory bearing units.

12. Prepare the left leg arm

In Drawing 1, support left arm 3. Fit its two bearings 24 and shaft 32 in the illustrated order, preserving any factory assembly. Fit the two footrest covers 6 and plug 34. Confirm the shaft seating and retention before handling the arm as a complete unit.

13. Prepare the right leg arm and disc

In Drawing 2, support right arm 2 and disc assembly 4. Position bearings 24, rotating shaft 29 and spacer 21 in the shown relationship. Fit adjustment plate 28, stops 22 and the depicted M8 screws 11 with spring washers 10. Retain the shaft using the shown M10 screws 12 and washers 13–14. Confirm bearing and shaft settings omitted from the drawing.

14. Install the right-arm adjustment pin

Fit pin shaft 27, spring 18, nut 19 and cap 17 in the illustrated order. The nut size and spring setup are not specified: confirm them against the supplied assembly. Fit footrest covers 6 and plug 34. Check that the pin fully engages the adjustment plate and returns when released.

15. Fit the disc connecting joint

Install joint bearing 26 between spacers 31 using M12 × 55 screw 30, washers 7 and nut 9 in Drawing 2. Keep the joint aligned with its intended linkage, and confirm it pivots freely after fastening. Do not infer adjustment dimensions from the exploded spacing.

Check before continuing

Leg pivots, disc joint and adjustment pin are positively retained.

Stage 4B: Link and Mount the Leg Arms

Drawings 3–4 connect the arms and mount them in the main carrier. Linkage lengths are not given in the source.

16. Fit both leg pads

Using Drawing 3, attach pads 5 to left arm 3 and right arm 2 with M8 × 30 screws 11, spring washers 10 and washers 33. The list shows eight screws but six flat washers; confirm the supplied hardware and intended washer positions before completing the pads.

17. Connect the short linkage

Fit rod 20 between standard joint bearing 26 and reverse-thread joint bearing 25 with thin nuts 15. Attach the joints with M12 × 45 screws 16, washers 7 and nuts 9 as shown. Match the thread direction and confirm rod length, adequate thread engagement and arm alignment before locking the thin nuts.

18. Mount the arms in the carrier

In Drawing 4, support both linked arms within main connection frame 1. Fit all four bearing housings 23 with M12 × 70 screws 8, washers 7 and nuts 9 at the shown points. Align the housings without forcing the shafts; verify positive retention and free pivoting before removing the supports.

19. Complete the frame and long-rod connections

Return to Stage 3 to join this carrier to the loading booms, then to Stage 1 to mount the complete moving assembly and long linkage. Keep the short leg-synchronizing rod and long loading-frame rod distinct. Confirm both end connections, thread engagement and specified setup dimensions before testing movement.

Check before continuing

Pads, both linkages and all four carrier bearings are secure.

Final Assembly: Adjust and Inspect

Complete these checks after the Stage 1 joining plan and all four subassembly stages.

20. Test adjustment and linked movement

With no plates fitted, support moving parts while checking backrest positions and the leg-arm starting-position lock. Verify every pin seats fully. Move both leg arms slowly through the intended range; the linkage must move smoothly without binding, frame contact or joints reaching their limits.

21. Verify all installation settings

Confirm structural fasteners, bearing retention, rod-end locknuts, gas-spring ends, footrests, pads and buffers. Obtain required torque, linkage setup, floor-anchoring requirements and permitted loading from Build A Gym; the source does not provide these values. Do not load an unconfirmed pivot, joint or adjustment lock.

22. Complete the installation checks

Check that the base remains stable, all plugs and covers are fitted, and every moving component clears the frame. Repeat pin-engagement and unloaded movement checks after final fastening. Resolve missing or inconsistent hardware information before releasing the machine for use.

Check before continuing

Both adjustment locks and all linked movement pass inspection.

FINAL CHECK

Ready for the first use?

☐ **Frame and hardware**

Confirm that the frame is stable, all required hardware is installed and all connections are secure.

☐ **Adjustments and safeties**

Check that adjustment pins, locking mechanisms and any safety stops engage fully. Verify that pads and handles are secure.

☐ **Moving parts**

Carefully check the full range of movement. Confirm that moving assemblies clear the frame and guards without binding.

☐ **Linked arms and backrest inspection**

Verify both rod linkages, pivot retention, gas-spring ends and full adjustment-pin engagement. Check unloaded arm movement, buffers, pads and footrests before adding resistance.

☐ **Keep the equipment ready**

Inspect before every use. Wipe contact surfaces dry after use. Have a qualified technician address damaged parts, unusual movement or noise before further exercise.

Need help with assembly?

Contact Build A Gym with your product name, assembly stage, part reference and a clear photo of the issue.

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