

# Ion Series Abdominal

## Assembly Instructions

CI-AB

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Part Number  
1017117-0001 AA

**CYBEX**<sup>®</sup>



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\*Also check [www.lifefitness.com](http://www.lifefitness.com) for local representation or distributor/dealer

# User and Service Documents Link

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<https://lifefitness9512.zendesk.com/hc/en-us>

<https://www.lftechsupport.com/web/document-library/documents>

Additional information is available online using the links above.

تتوفر معلومات إضافية على الإنترنت باستخدام الرابط أعلاه.

点击上面的链接可在线获取更多信息。

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Bijkomende informatie is online beschikbaar via bovenstaande link.

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Zusätzliche Informationen finden Sie online über den oben angegebenen Link.

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追加情報は上記リンクを使用してオンラインで利用可能です。

상기 링크를 통해 온라인에서 추가 정보를 볼 수 있습니다.

Informações adicionais estão disponíveis on-line, através do link acima.

Дополнительная информация доступна в интернете по ссылке, указанной выше.

Mediante el enlace anterior podrá acceder a información adicional en línea.

Ytterligare information finns online genom att använda länken ovan.

İnternet üzerinden daha fazla bilgi edinmek için yukarıdaki bağlantıyı kullanabilirsiniz.

هناك معلومات إضافية متاحة على الإنترنت باستخدام الرابط أعلاه.

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Допълнителна информация можете да намерите онлайн, като използвате връзката по-горе.

Mitjançant l'enllaç anterior podreu accedir a informació addicional en línia.

使用上面的連結線上提供額外資訊。

Dodatne informacije možete pronaći na internetu sljedeći vezu iznad.

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Lisätietoja on saatavissa verkosta käyttämällä yllä olevaa linkkiä.

Wubetumi anya nsem afoforo aka ho wa websait so denam asem a ewa atifi ho a wubemia so so.

Πρόσθετες πληροφορίες είναι διαθέσιμες online χρησιμοποιώντας το σύνδεσμο παραπάνω.

המידע הנדרש נמצא באתר האינטרנט באמצעות הקישור לעיל.

További információ elérhető online, a fenti hivatkozás segítségével.

Viðbótarupplýsingar eru fáanlegar á netinu með því að smella á tengilinn hér fyrir ofan.

Plus indicium per superum situm potes invenire.

**മുകളിലുള്ള ലിങ്ക് ഉപയോഗിച്ച് ഓൺലൈനിൽ കൂടുതൽ വിവരങ്ങൾ ലഭ്യമാണ്.**

Ytterligere informasjon er tilgjengelig på nettet via linken ovenfor.

Dodatkowe informacje są dostępne online pod powyższym odnośnikiem.

Informações adicionais estão disponíveis online a usar o link acima.

Informații suplimentare sunt disponibile online, utilizând link-ul de mai sus.

Dodatne informacije dostupne su na mreži putem gornjeg linka.

Ďalšie informácie sú dostupné online na vyššie uvedenom odkaze.

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# Safety

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## Safety Information

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It is the sole responsibility of the purchaser of Life Fitness Family of Brands products to read the owner's manual and warning labels and instruct all individuals, whether they are the end user or supervising personnel, on proper usage of the equipment.

UNDERSTANDING EACH AND EVERY WARNING TO THE FULLEST IS IMPORTANT. IF ANY OF THESE WARNINGS ARE UNCLEAR, CONTACT Life Fitness Family of Brands CUSTOMER SERVICE IMMEDIATELY AT 1-800-351-3737.

This equipment is categorized as class S per EN ISO 20957-1. As such this equipment is only intended for commercial, institutional and/or studio facilities. It is not intended for home use. Contact Life Fitness Family of Brands with any questions regarding this classification.

It is recommended that all users of Life Fitness Family of Brands exercise equipment be informed of the following information prior to use.

### Operating Warnings

 **WARNING:** This product can expose you to chemicals including Di-isobutyl Phthalate, which is known to the State of California to cause birth defects or other reproductive harm, and Antimony Trioxide, which is known to the State of California to cause cancer. For more information go to <http://www.P65Warnings.ca.gov>

- It is the purchaser's sole responsibility to properly instruct its end users and supervising personnel as to the proper operating procedures of all equipment.
- This equipment is not intended for use by children. Keep children under the age of 13 away from the machine.
- Do not allow users to wear loose fitting clothing or jewelry while using equipment. It is also recommended to have users secure long hair back and up to avoid contact with moving parts.
- All bystanders must stay clear of all users, moving parts and attached accessories and components while machine is in operation.

### Access Control

- Life Fitness Family of Brands recommends that all commercial fitness equipment be used in a supervised area. It is recommended that the equipment be located in an access controlled area. Control is the responsibility of the facility owner.

### Installation

- Life Fitness Family of Brands recommends that all equipment be secured to a solid, level surface to stabilize it and eliminate rocking or tipping over. This must be performed by a licensed contractor. See [Bolt to Floor Guide](#) for installation procedure.

### Proper Usage

- Do not use any equipment in any way other than as designed or intended by the manufacturer. It is imperative that Life Fitness Family of Brands equipment is used properly to avoid injury.
- Injuries may result if exercising improperly or excessively. It is recommended that all individuals consult a physician prior to commencing an exercise program. If at any time during exercise you feel faint, dizzy or experience pain, STOP EXERCISING and consult your physician.
- Keep body parts (hands, feet, hair, etc.), clothing and jewelry away from moving parts to avoid injury.
- When adjusting any seat, knee hold down pad, range of motion limiter, foothold pad, pulley or any other type of adjuster, make certain that the adjusting pin is fully engaged in the hole to avoid injury.

### Inspection

- DO NOT attempt to use or repair any accessory approved for use with the equipment which appears to be damaged or worn.
- DO NOT use or permit use of any equipment that is damaged and/or has worn or broken parts. For all Life Fitness Family of Brands equipment, use only replacement parts supplied by Life Fitness Family of Brands.
- Cables and belts pose an extreme liability if used when damaged. Always replace any cable at first sign of wear (consult Life Fitness Family of Brands if uncertain).
- Maintain labels and name plates - Do not remove labels for any reason. They contain important information. If unreadable or missing, contact Life Fitness Family of Brands customer service for a replacement.
- Equipment Maintenance - Preventative maintenance is the key to smooth operating equipment as well as to keep your liability to a minimum. Equipment needs to be inspected at regular intervals.
- Ensure that any person(s) making adjustments or performing maintenance or repair of any kind is qualified to do so. Life Fitness Family of Brands will provide service and maintenance training at our corporate facility upon request or in the field if proper arrangements are made.

- Before use, examine all accessories approved for use with the Life Fitness Family of Brands equipment for damage or wear.

### SelectORIZED

- Use only weight selector pins supplied by seller on weight stacks. Substitutes are forbidden.
- Fully insert weight selector pins. Partial insertion can cause weights to fall unexpectedly.
- Never pin the weight stack in an elevated position.
- Never remove selector pin if any weights are suspended.
- Never attempt to release jammed weights or parts.
- Never use dumbbells or other means to incrementally increase the weight resistance. Use only those means provided by seller.

### Warnings and Cautions

- Warning labels indicate a potentially hazardous situation that could result in serious injury or death if the precautions are not observed.
- Caution labels indicate a potentially hazardous situation that could result in serious injury or damage to machine if the precautions are not observed.
- Contact [Customer Support Services](#) to replace any worn or damaged labels.

### Product Labels

**Serial Number**





9525 WEST BRYN MAWR AVE  
ROSEMONT, IL 60018  
USA 1-800-351-3737  
CAGE Code: 0CMY5      EN ISO 20957 Class S  
www.cybexintl.com

Model: **XXX**  
Made in Hungary

Max User Wt:    XXXlbs XXXkgs  
Max Training Wt: XXXlbs XXXkgs

SN: XXXXXXXXXXXXX



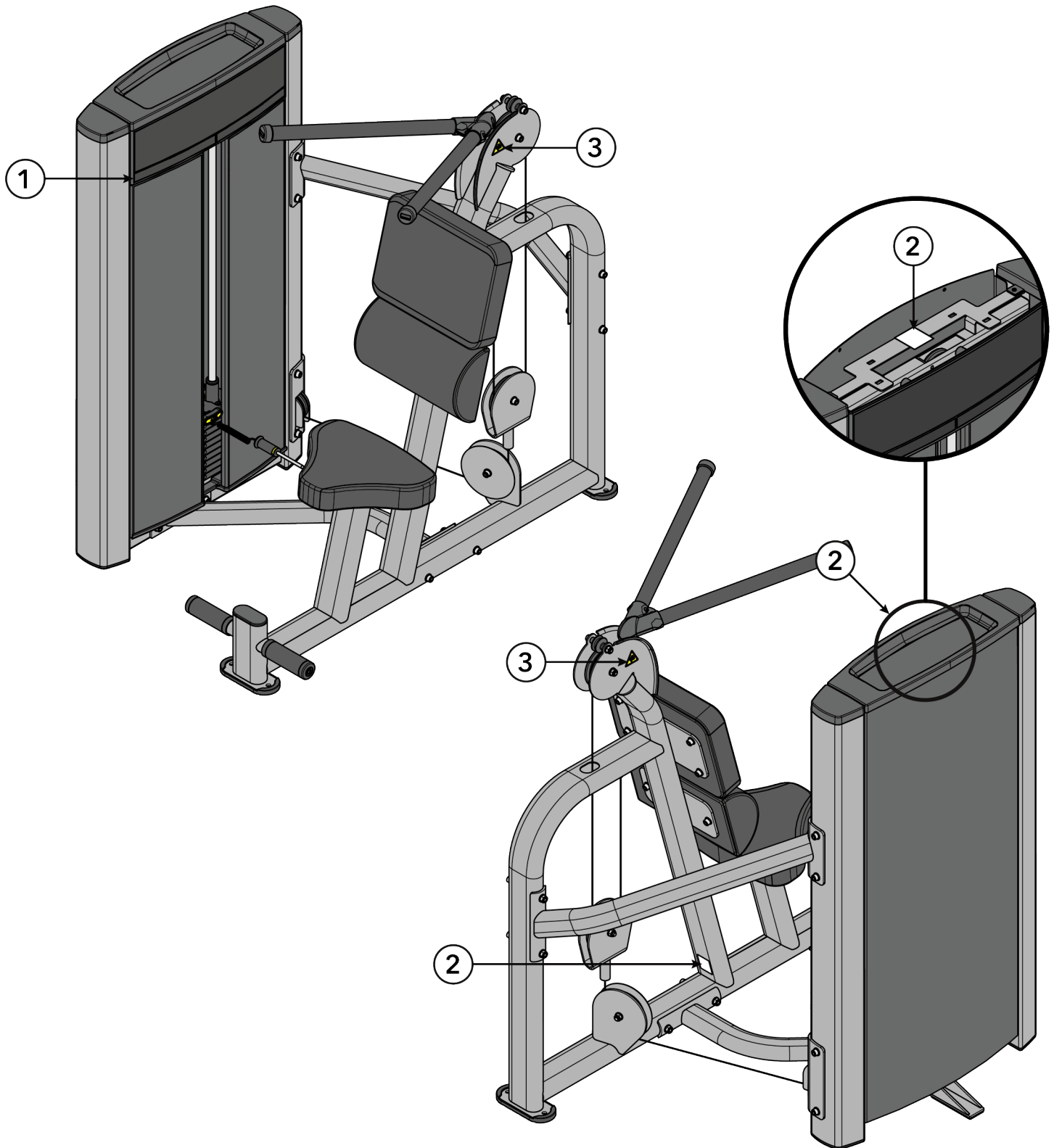


### Multilingual Label with General Warning

**⚠ WARNING**      **SERIOUS INJURY CAN OCCUR IF CAUTION IS NOT USED** Before using the equipment: **1.** Read all the warnings, obtain, read and follow the instruction for use. Inspect the equipment for damage and operability, including cables and their connections. Be certain that weight pin is completely inserted. Use only the pin provided by the manufacturer; if unsure, seek assistance.

**2. DO NOT** use equipment if it appears damaged or inoperable, or the weights are pinned in elevated position. **DO NOT** attempt to fix. Notify Staff. **3. DO NOT** modify the equipment. **4. DO NOT** allow children on the equipment. **5.** Cease exercising if you feel faint or dizzy. **6.** Keep body, hair, clothing, and fitness accessories clear of all moving objects. **7.** Manufacturer recommends securing the equipment to the floor for stability and tip over prevention.

# Label Locations



Item	Description	Qty.
1	Multilingual Label with General Warning	1
2	Serial Number	2
3	Pinch Hazard	2

# Assembly

## Component and Hardware List

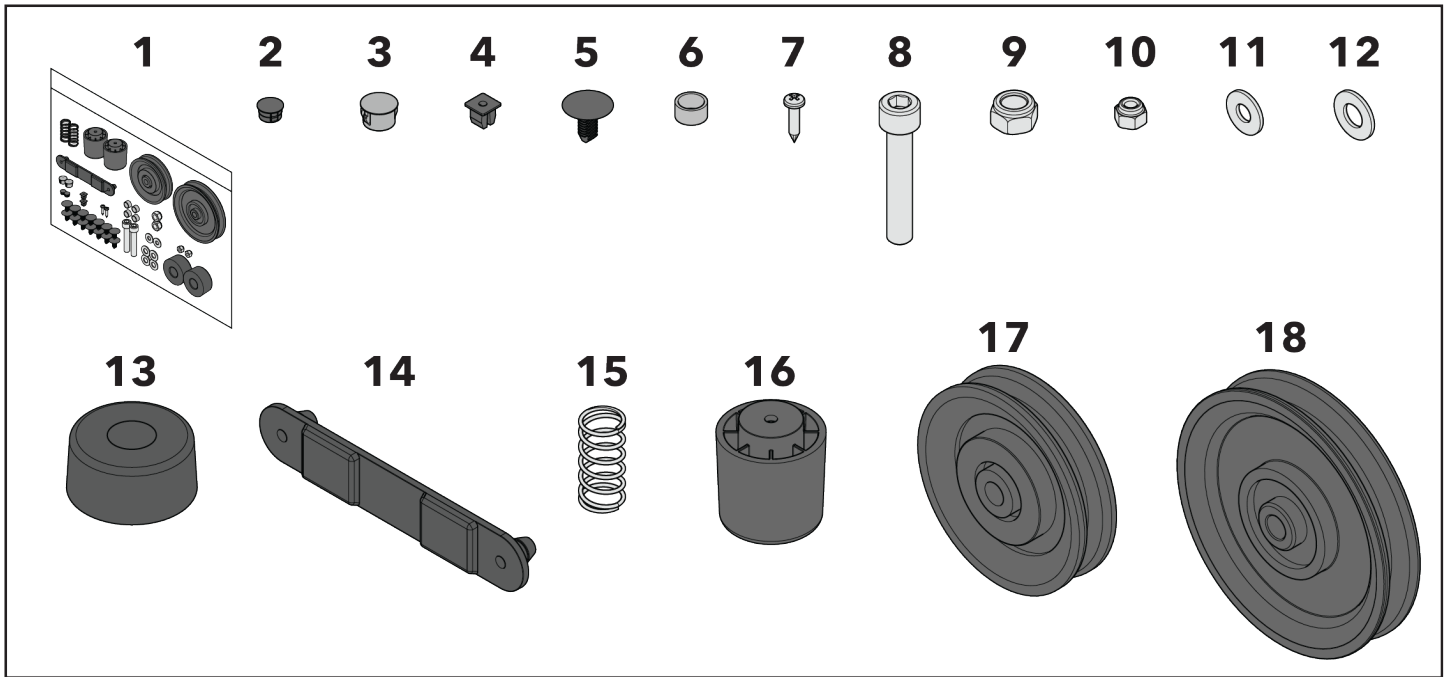
### Tower Components

Item	Description	Qty.
1	Tower Frame	1
2	Guide Rod	2
3	Increment Weight Guide Rod	2
4	Rear Shroud	1
5	Label, Weight Stack	1
6	Tube Cap	2
7	Top Cap	1

### Tower Hardware Kit

Item	Description	Qty.
1	Tower Hardware Kit	1
2	Hole Plug, 8.7 mm	2
3	Hole Plug, ½"	2
4	Grommet	2
5	Shroud Retainer	14
6	Bushing	4
7	Screw, 8 x ¾" Phillips	2
8	Screw, M10 x 1.5, 55mm	2
9	Nut, M10 x 1.5, Hex Nylock	2
10	Nut, ¼" Nylock	2
11	Washer, Flat ¼" ID	2
12	Washer, Flat 3/8" ID	4
13	Weight Stack Cushion	2
14	Increment Weight Bumper	1
15	Spring	2
16	Guide Rod Housing	2
17	Pulley, 3.5" OD	1
18	Pulley, 4.5" OD	1

## Tower Hardware Kit



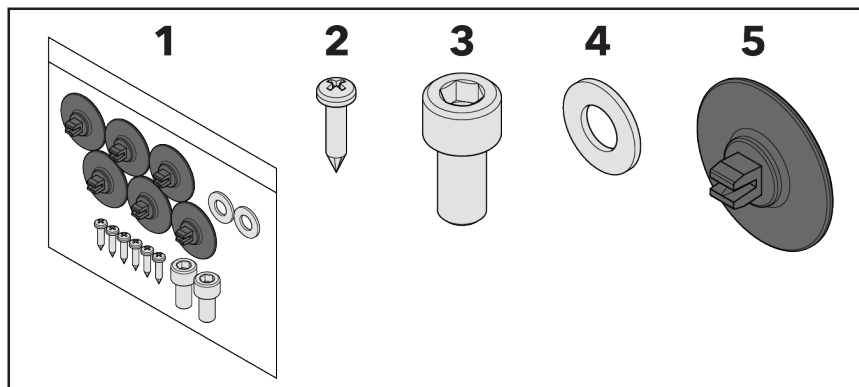
## Front Shroud Kit Components

Item	Description	Qty.
1	Front Shroud, Left	1
2	Front Shroud, Right	1
3	Bottom Cap	1

## Front Shroud Kit Hardware Kit

Item	Description	Qty.
1	Front Shroud Hardware Kit	1
2	Screw, M4.2 x 0.7, Phillips	6
3	Screw, M10 x 1.5, 20mm	2
4	Washer, Flat 3/8"	2
5	Grommet, Shroud Retainer	6

## Front Shroud Kit Hardware Kit



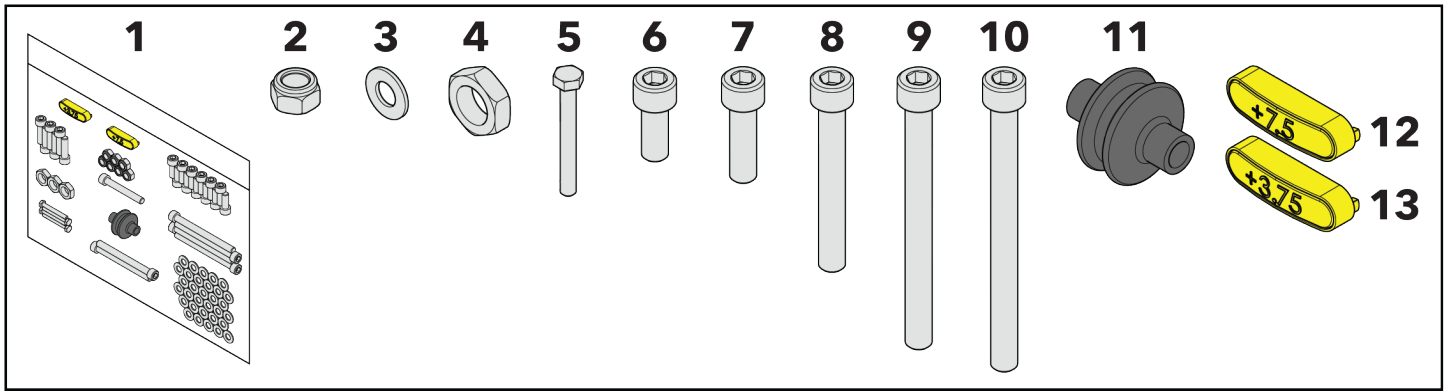
## Components

Item	Description	Qty.
1	Main Frame	1
2	Bottom Cross Brace	1
3	Top Cross Brace	1
4	Stability Bracket	1
5	Lower Pulley Assembly	1
6	Handle Assembly	1
7	Floating Pulley Assembly	1
8	Seat Pad	1
9	Back Pad	1
10	Lumbar Pad	1
11	Cable	1
12	Front Cap	1
13	Head Plate Assembly	1
14	Increment Weight Assembly	1
15	Multilingual Label Sheet	1
16	Weight Stack (Weight Plates)	1 (8)

## Hardware Kit

Item	Description	Qty.
1	Hardware Kit, CI-AB	1
2	Nut, M10 x 1.5, Hex Nylock	9
3	Washer, Flat 3/8"	34
4	Nut, M16 Hex Jam	3
5	Screw, M6, HCS, 50mm	4
6	Screw, M10 x 1.5, 25mm	12
7	Screw, M10 x 1.5, 35mm	6
8	Screw, M10 x 1.5, 75mm	1
9	Screw, M10 x 1.5, 110mm	1
10	Screw, M10 x 1.5, 120mm	5
11	Cable Ball Stop	1
12	Increment Weight Cap, LBS (7.5)	1
13	Increment Weight Cap, KG (3.75)	1

## Hardware Kit



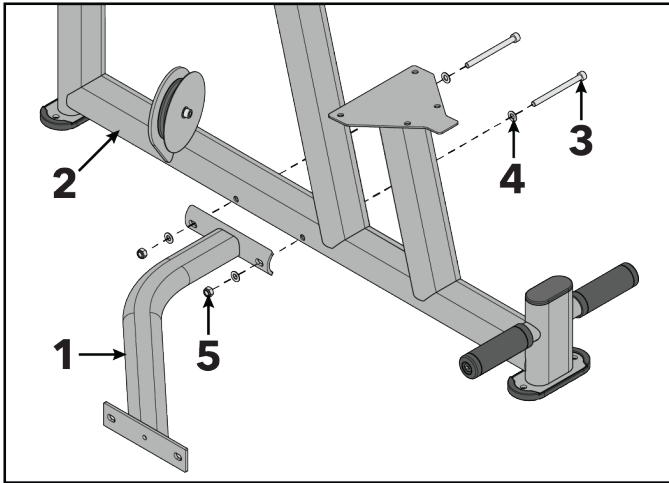
## Tools Required

- 7/16" Wrench
- 10 mm Wrench
- 17 mm Wrench
- 24 mm Wrench
- 7 mm Allen wrench
- 8 mm Allen wrench
- Torque wrench
- 10 mm Socket wrench
- 10 mm Ratchet wrench
- Crescent wrench
- Phillips screwdriver
- Rubber mallet

# Assembly Procedure

## Assemble Frame Components

1. Install screws, washers, and locknuts securing the bottom cross brace to the bottom of the main frame using an 8mm Allen wrench and a 17mm wrench.

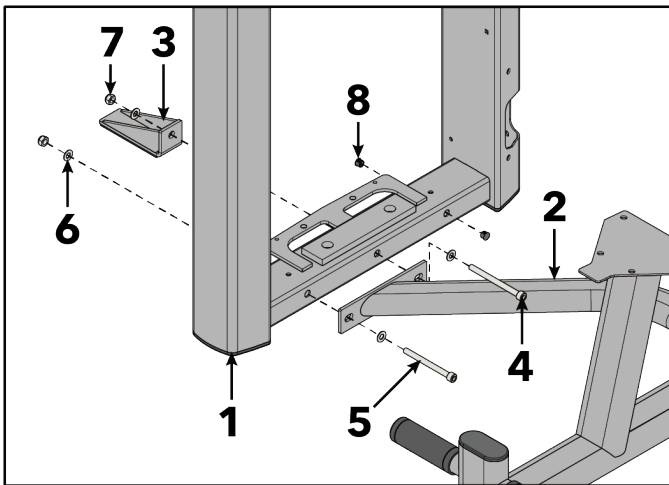


Item	Description	Qty.
1	Bottom Cross Brace	1
2	Main Frame	1
3	Screw, M10 x 1.5, 120mm	2
4	Washer, Flat 3/8"	4
5	Nut, M10 x 1.5, Hex Nylock	2



Hand tighten hardware.

2. Install screws, washers, and locknuts securing the stability bracket and tower to the bottom cross brace using an 8mm Allen wrench and a 17mm wrench.



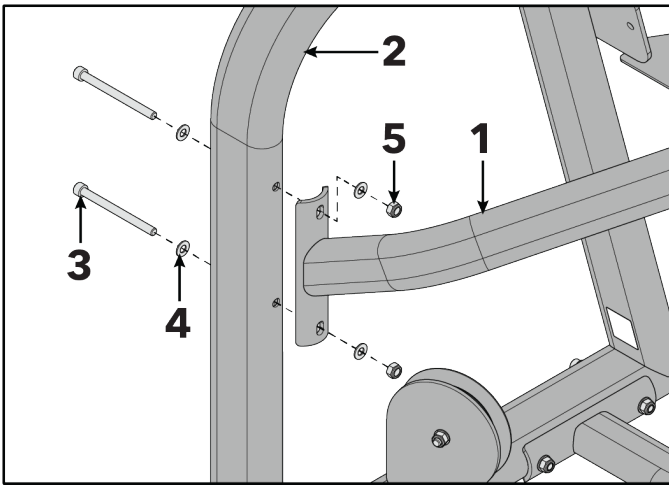
Item	Description	Qty.
1	Tower Frame	1
2	Bottom Cross Brace	1
3	Stability Bracket	1
4	Screw, M10 x 1.5, 120mm	1
5	Screw, M10 x 1.5, 110mm	1
6	Washer, Flat 3/8"	4
7	Nut, M10 x 1.5, Hex Nylock	2
8	Hole Plug, 1/2"	2



Hand tighten hardware.

3. Install hole plugs to the tower.

- Install screws, washers, and locknuts securing the top cross brace to the main frame using an 8mm Allen wrench and a 17mm wrench.

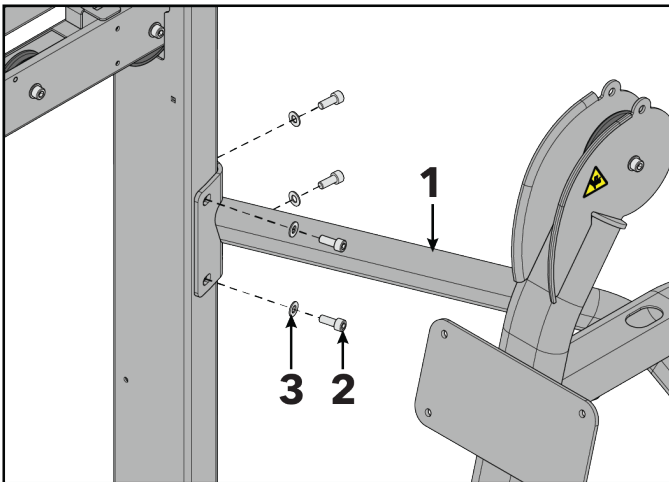


Item	Description	Qty.
1	Top Cross Brace	1
2	Main Frame	1
3	Screw, M10 x 1.5, 120mm	2
4	Washer, Flat 3/8"	4
5	Nut, M10 x 1.5, Hex Nylock	2



Hand tighten hardware.

- Install screws and washers securing the top cross brace to the tower using an 8mm Allen wrench.



Item	Description	Qty.
1	Top Cross Brace	1
2	Washer, Flat 3/8"	4
3	Screw, M10 x 1.5, 25mm	4

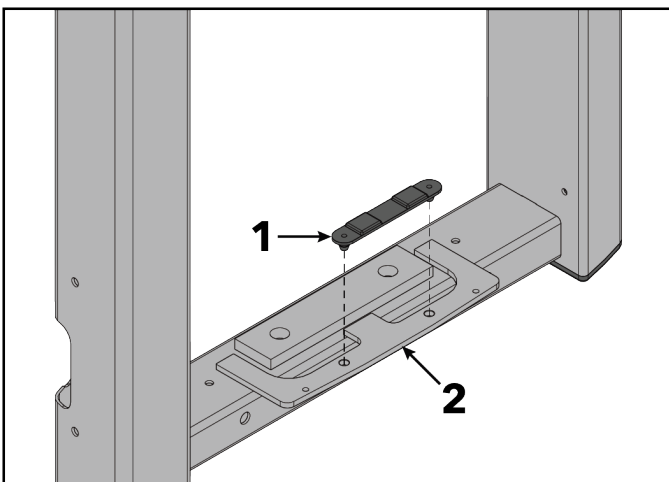


Hand tighten hardware.

- Tighten all the hardware from Steps 1-5 to 20-25 ft-lb (27.1-33.9 Nm).

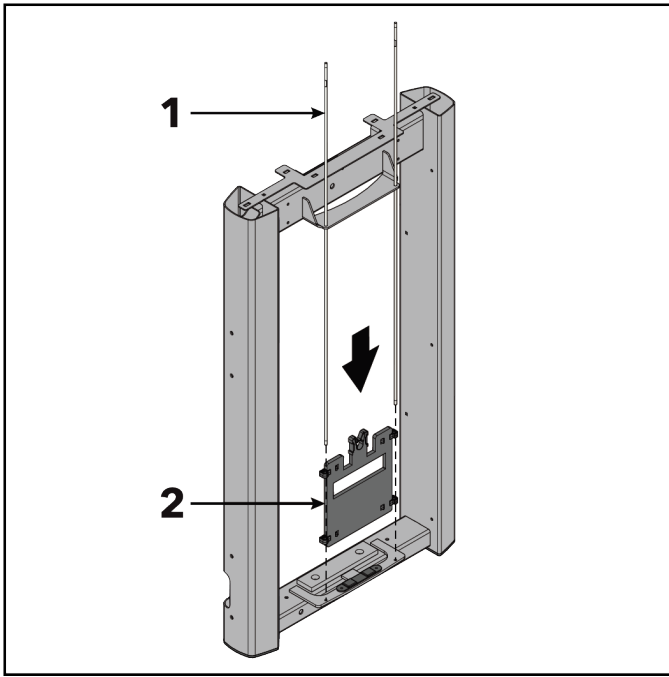
## Assemble Tower

- Install the increment weight bumper to the bottom plate of the tower frame.



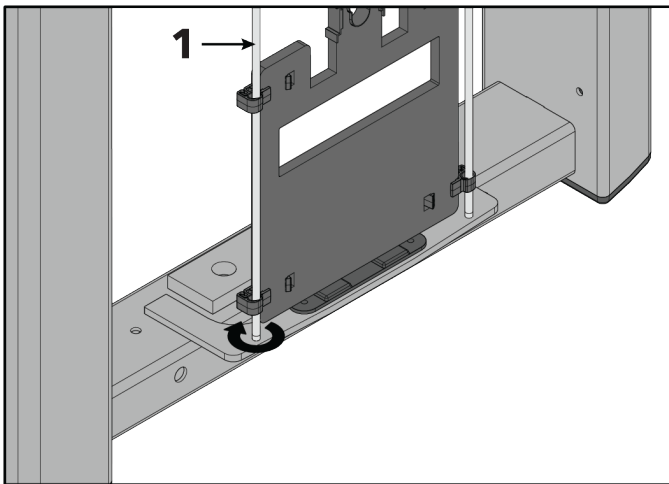
Item	Description	Qty.
1	Increment Weight Bumper	1
2	Tower Frame	1

- Slide increment weight guide rods through the top of the tower frame and down through the clips in the increment weight. Place increment weight guide rods into holes at the bottom plate of the tower frame.



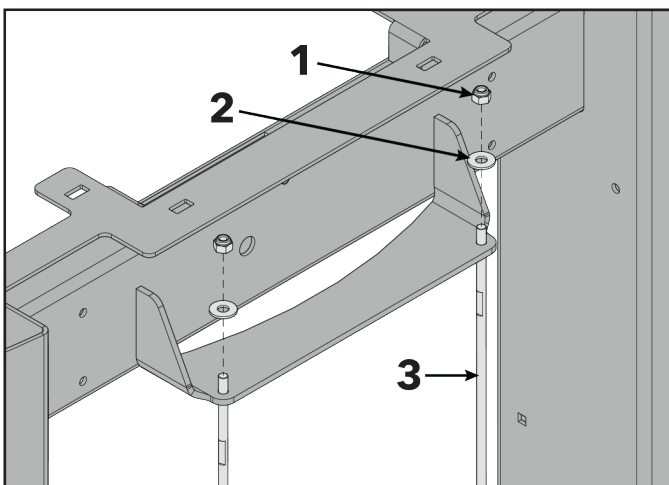
Item	Description	Qty.
1	Increment Weight Guide Rod	2
2	Increment Weight	1

- Thread increment weight guide rods into the bottom plate of the tower frame. Tighten using a crescent wrench.



Item	Description	Qty.
1	Increment Weight Guide Rod	2

- Install nuts and washers securing the increment weight guide rods to the top plate of the tower frame using a 7/16" wrench.

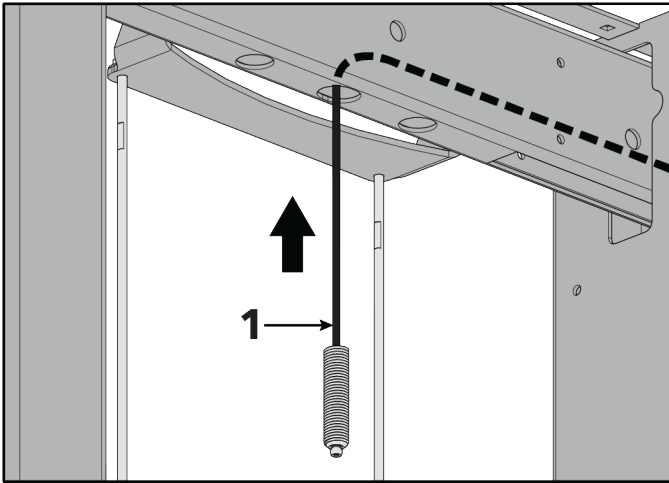


Item	Description	Qty.
1	Nut, 1/4" Nylock	2
2	Washer, Flat 1/4" ID	2
3	Increment Weight Guide Rod	2



Tighten hardware to 16-20 in-lb (1.8-2.2 Nm).

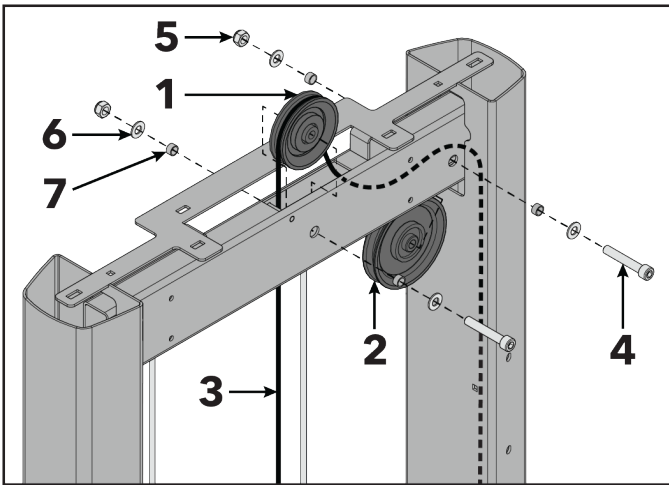
5. Route cable up through the top of the tower frame and down through the side tube of the frame.



Item	Description	Qty.
1	Cable	1

6. Install screws, washers, spacers, and nuts securing the pulleys to the top of the tower frame using an 8mm Allen wrench and a 17mm wrench.

**NOTE:** Make sure the spacers are centered and inside the tube wall.

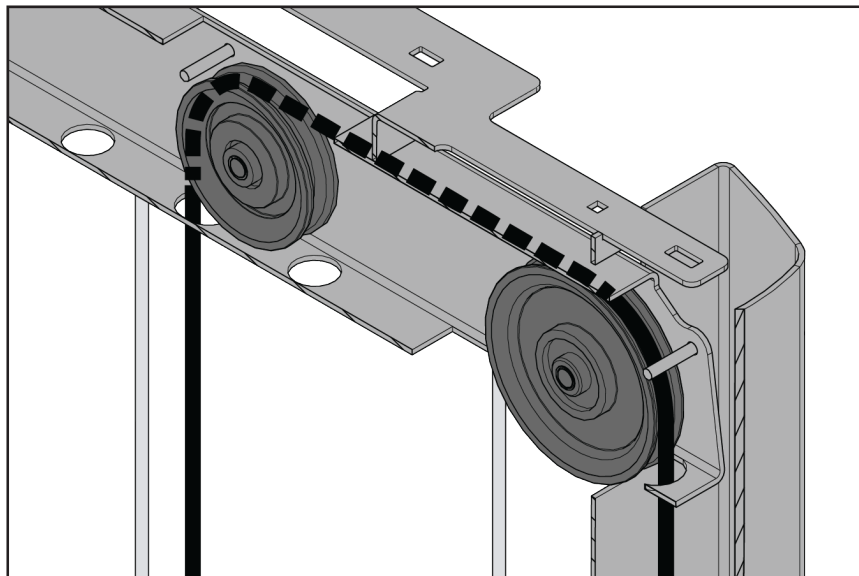


Item	Description	Qty.
1	Pulley, 3.5" OD	1
2	Pulley, 4.5" OD	1
3	Cable	1
4	Screw, M10 x 1.5, 55mm	2
5	Nut, M10 x 1.5, Hex Nylock	2
6	Washer, Flat 3/8" ID	4
7	Bushing	4



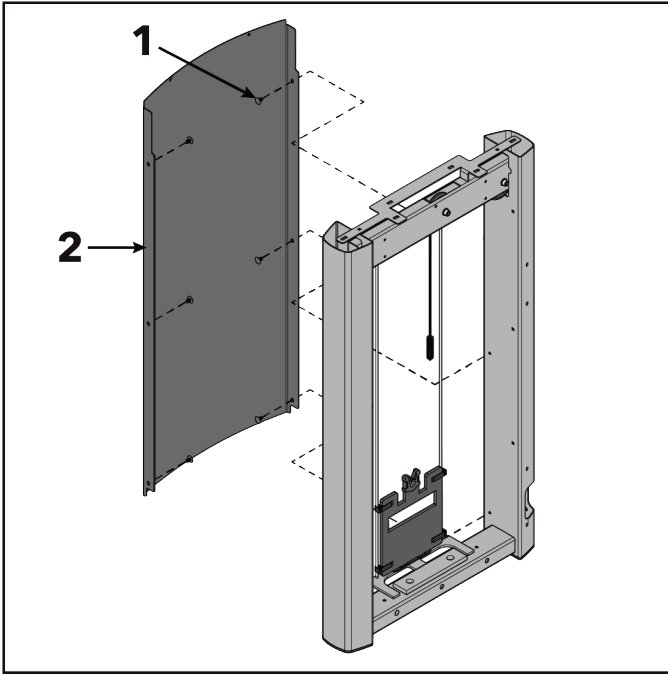
Tighten hardware to 14-16 ft-lb (19-21.7 Nm).

**NOTE:** Make sure cable is routed over the pulleys and underneath the pins in the tower frame.



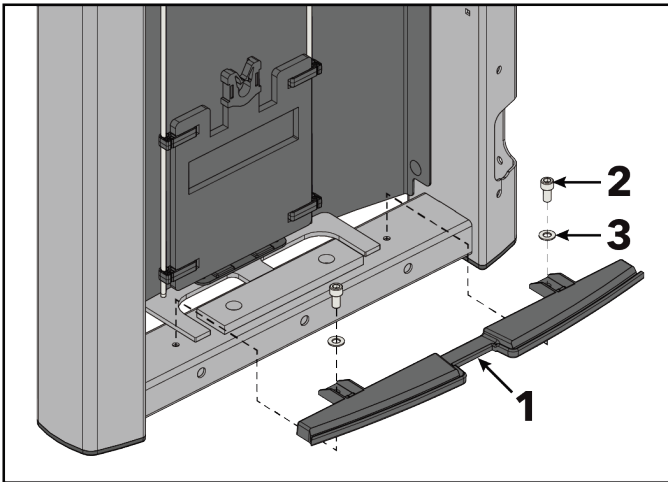
7. Flex rear shroud into position inside the tower frame.

8. Starting at the top, press the shroud retainers into the rear shroud securing it to the tower frame.



Item	Description	Qty.
1	Shroud Retainer	6
2	Rear Shroud	1

9. Install screws and washers securing the bottom cap to the bottom of the tower frame using an 8mm Allen wrench.

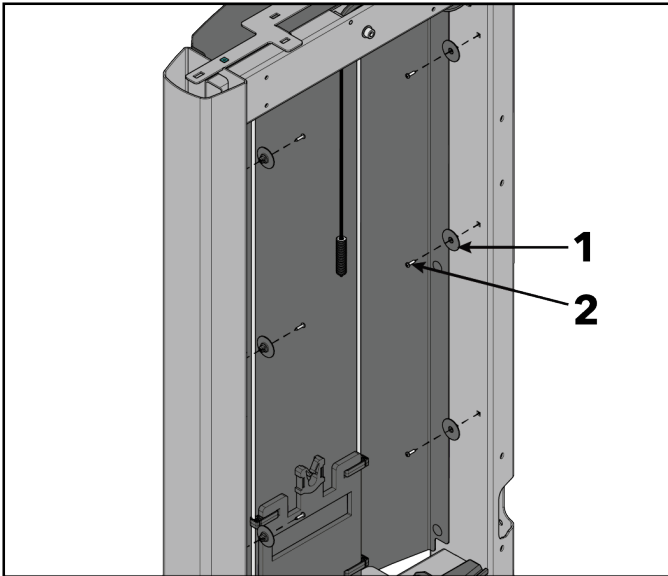


Item	Description	Qty.
1	Bottom Cap	1
2	Screw, M10 x 1.5, 20mm	2
3	Washer, Flat 3/8"	2



Tighten hardware to 8-10 ft-lb (10.8-13.5 Nm).

10. Install screws and shroud retainer grommets into the side tubes of the tower frame using a Phillips screwdriver.



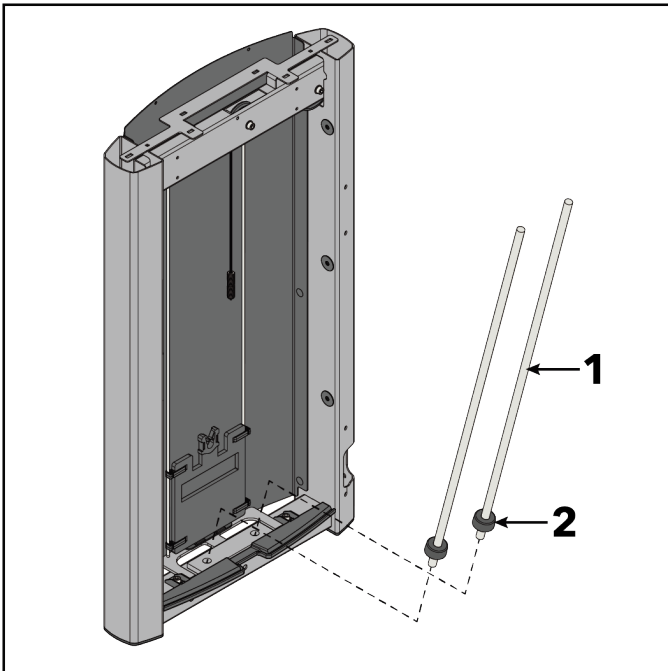
Item	Description	Qty.
1	Grommet, Shroud Retainer	6
2	Screw, M4.2 x 0.7, Phillips	6



Tighten hardware to 10-13 in-lb (1.1-1.5 Nm).

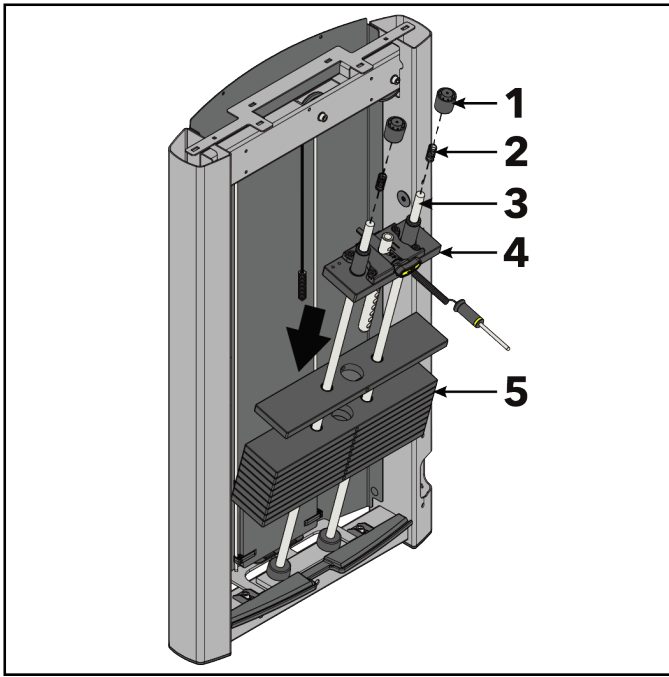
11. Slide weight stack cushions onto the guide rods.

12. Place guide rods with weight stack cushions into the holes at the bottom of the tower frame.



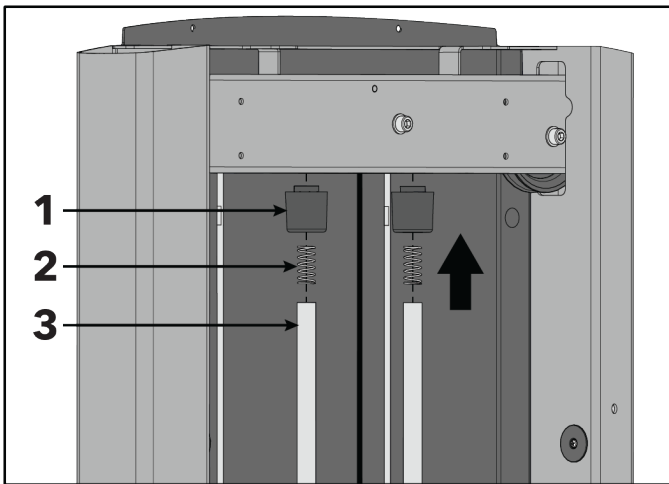
Item	Description	Qty.
1	Guide Rod	2
2	Weight Stack Cushion	2

13. Lean guide rods outwards and slide weight stack down guide rods onto weight stack cushions. Slide head plate assembly down guide rods and onto the weight stack.



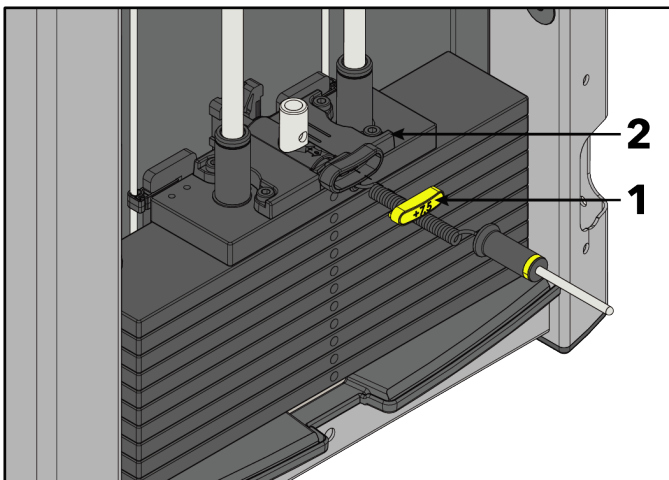
Item	Description	Qty.
1	Guide Rod Housing	2
2	Spring	2
3	Guide Rod	2
4	Head Plate Assembly	1
5	Weight Stack (Weight Plates)	1 (8)

14. Tip guide rods back into an upright position in the tower frame. Compress guide rod housings onto the springs and guide rods and fit up into the top of the tower frame.



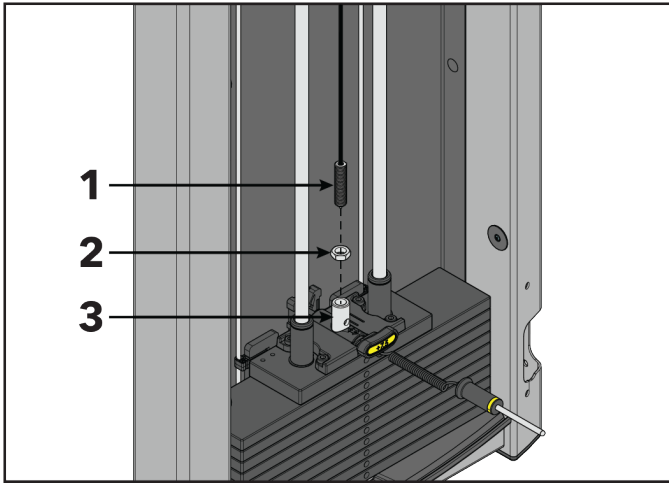
Item	Description	Qty.
1	Guide Rod Housing	2
2	Spring	2
3	Guide Rod	2

15. Select the LBS (7.5) or KG (3.75) option of the increment weight cap. Press increment weight cap into the head plate assembly.



Item	Description	Qty.
1	Increment Weight Cap	1
2	Head Plate Assembly	1

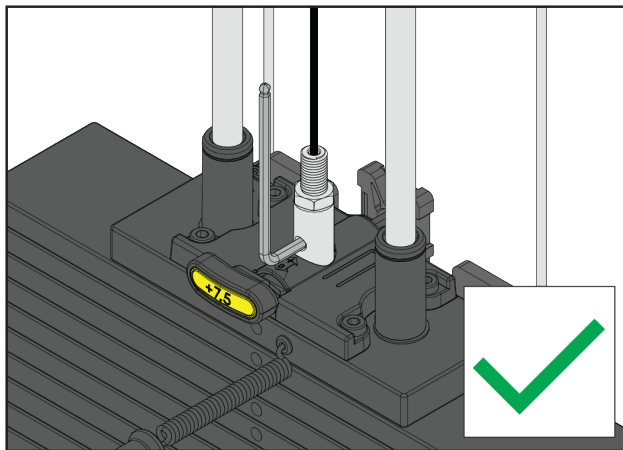
16. Thread cable end through the jam nut and into the head plate bayonet. See [Cable Handling Guide](#) for details.



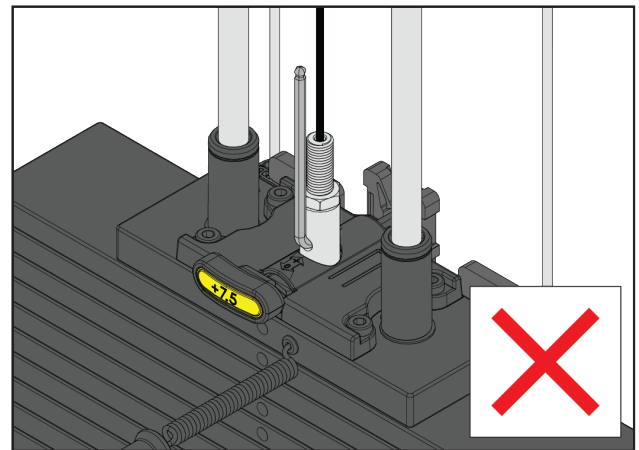
Item	Description	Qty.
1	Cable	1
2	Nut, M16 Hex Jam	1
3	Head Plate Bayonet	1

**NOTE:** Check proper thread engagement. To do so, attempt to pass a 7mm Allen wrench through the portal in the head plate bayonet. If it goes through, more threads are needed to meet the minimum requirement.

Correct Depth: Thread engagement exceeds minimum depth.

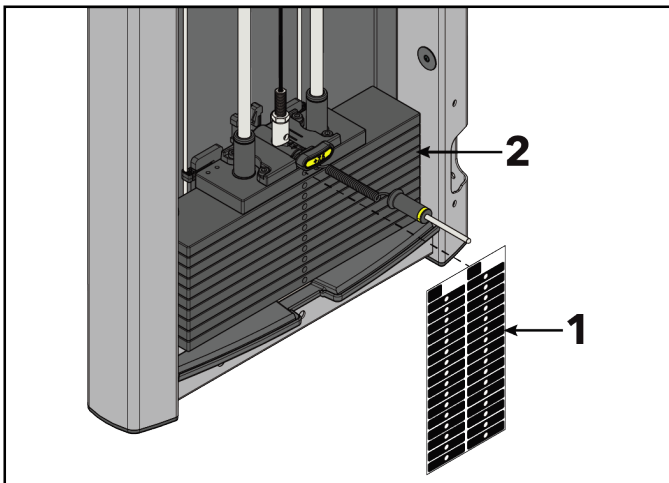


Incorrect Depth: Thread engagement not deep enough.



17. Select either the LBS or KG weight stack label. Remove backing from label and apply to weight stack.

**NOTE:** One weight stack label sheet, LBS or KG, is used for both weight stacks.

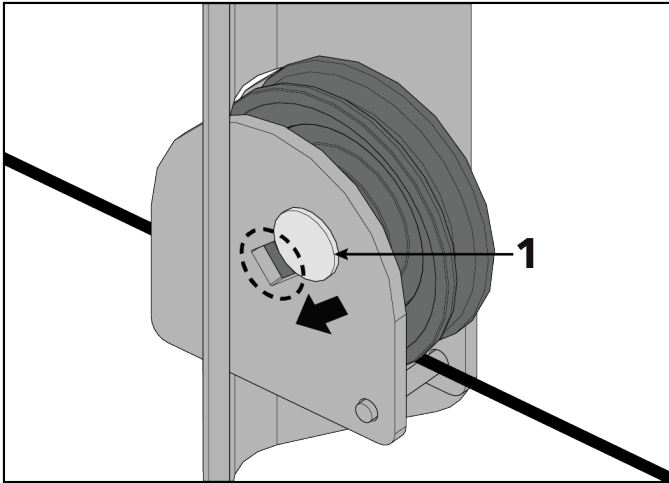


Item	Description	Qty.
1	Weight Stack Label	1
2	Weight Stack	1

18. Test the tower assembly.

19. Route cable out through hole at the bottom of tower side tube. Route cable through the lower pulley assembly.

20. Slide the carriage bolt to the end of the slot in the lower pulley assembly using a 17mm wrench.

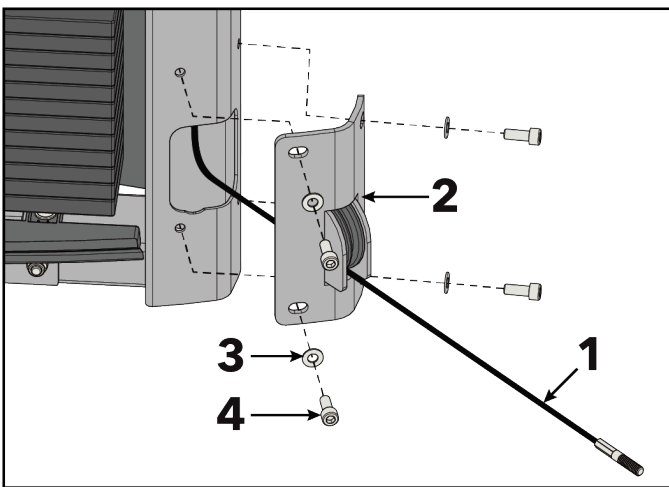


Item	Description	Qty.
1	Carriage Bolt, M10 x 1.5, 50mm	1



Tighten hardware to 20-25 ft-lb (27.1-33.9 Nm).

21. Install screws and washers securing the lower pulley assembly to the tower frame using an 8mm Allen wrench.

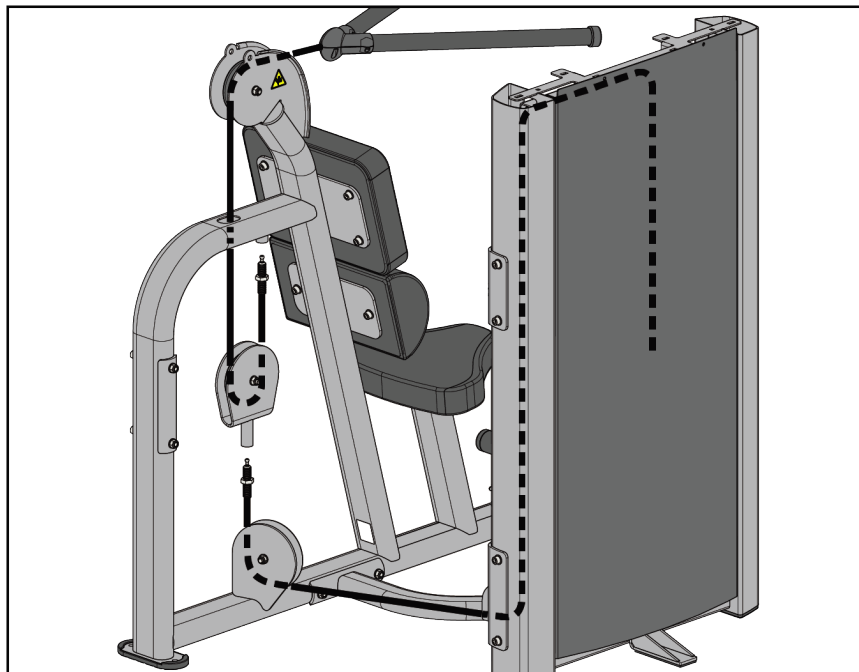


Item	Description	Qty.
1	Cable	1
2	Lower Pulley Assembly	1
3	Washer, Flat 3/8"	4
4	Screw, M10 x 1.5, 25mm	4

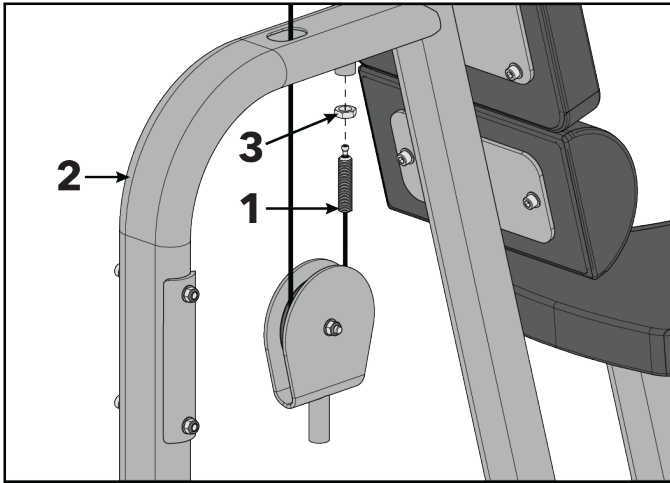


Tighten hardware to 20-25 ft-lb (27.1-33.9 Nm).

22. Route cables through pulleys brackets on the main frame and the floating pulley assembly.



23. Install cable and jam nut to the main frame using a 24mm wrench.

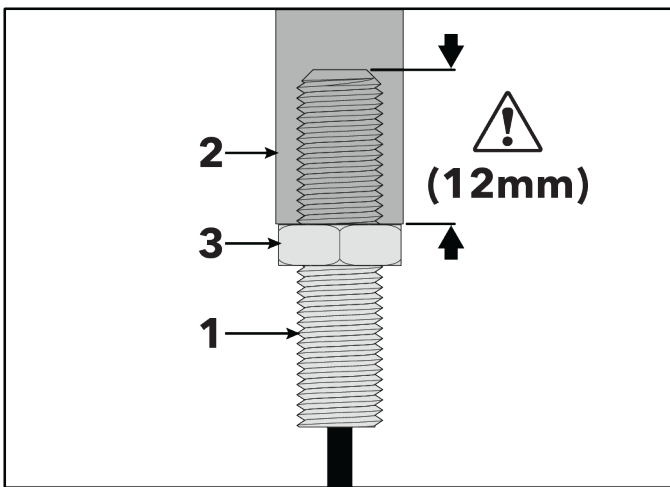


Item	Description	Qty.
1	Cable	1
2	Main Frame	1
3	Nut, M10 Hex Jam	1



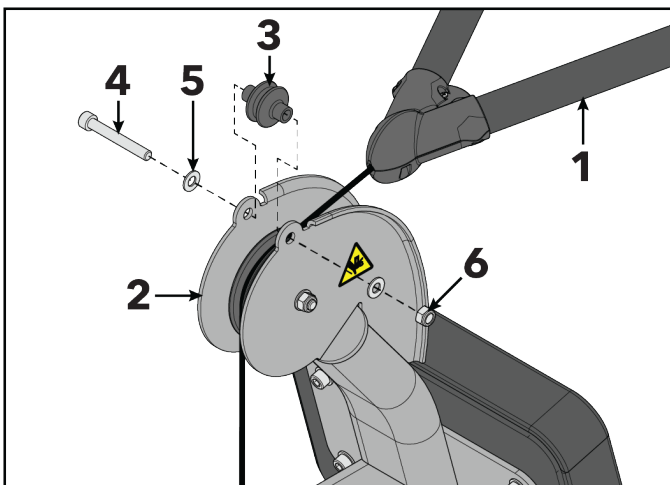
Tighten hardware to 20-25 ft-lb (27.1-33.9 Nm).

**NOTE:** Thread cable end through the jam nut and into the frame a minimum of 12mm.



Item	Description	Qty.
1	Cable	1
2	Main Frame	1
3	Nut, M10 Hex Jam	1

24. Install screws, washers, and locknuts securing the cable ball stop to the main frame using an 8mm Allen wrench and a 17mm wrench.

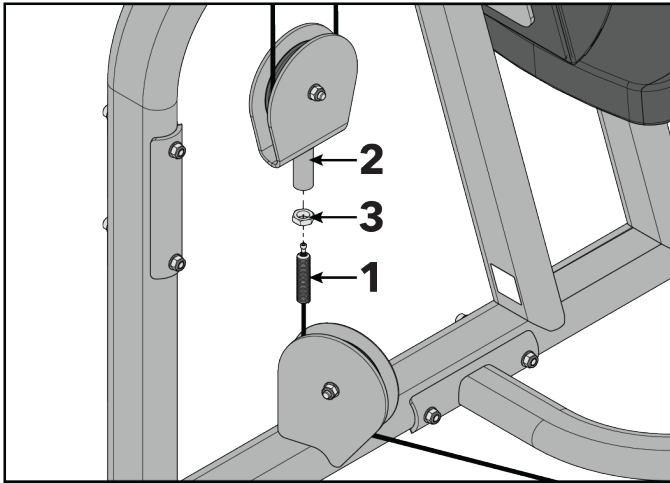


Item	Description	Qty.
1	Handle Assembly	1
2	Main Frame	1
3	Cable Ball Stop	1
4	Screw, M10 x 1.5, 75mm	1
5	Washer, Flat 3/8"	2
6	Nut, M10 x 1.5, Hex Nylock	1



Tighten hardware to 20-25 ft-lb (27.1-33.9 Nm).

25. Install cable and jam nut to the floating pulley assembly using a 24mm wrench.

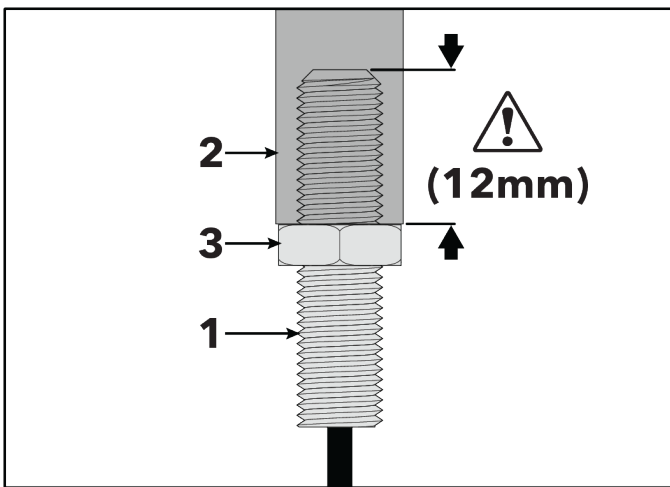


Item	Description	Qty.
1	Cable	1
2	Floating Pulley Assembly	1
3	Nut, M10 Hex Jam	1



Tighten hardware to 20-25 ft-lb (27.1-33.9 Nm).

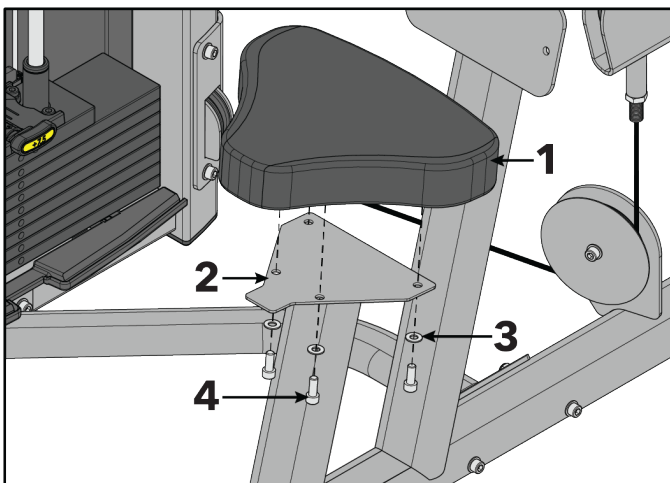
**NOTE:** Thread cable end through the jam nut and into the floating pulley assembly a minimum of 12mm.



Item	Description	Qty.
1	Cable	1
2	Floating Pulley Assembly	1
3	Nut, M10 Hex Jam	1

## Install Seat and Back Pads

1. Install screws and washers securing the seat pad to the main frame using an 8mm Allen wrench.

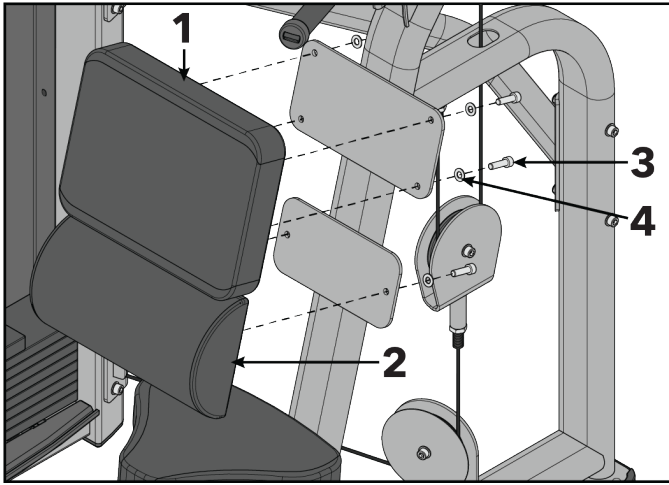


Item	Description	Qty.
1	Seat Pad	1
2	Main Frame	1
3	Washer, Flat 3/8"	4
4	Screw, M10 x 1.5, 25mm	4



Tighten hardware to 40-50 in-lb (4.5-5.6 Nm).

2. Install screws and washers securing the back and lumbar pads to the main frame using an 8mm Allen wrench.



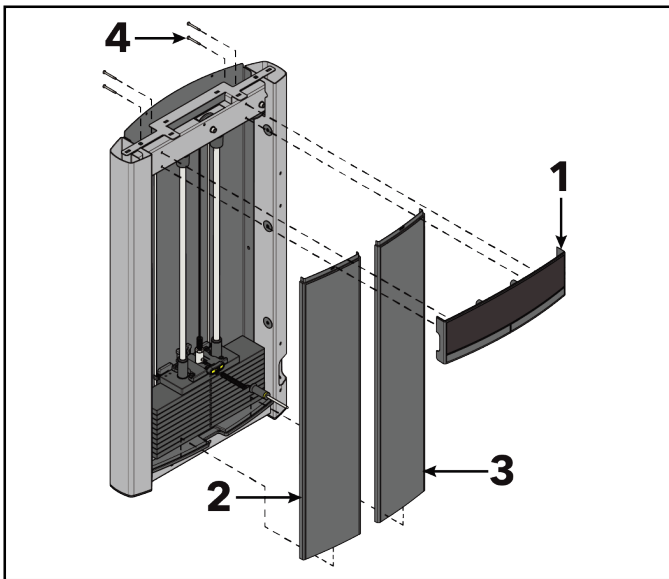
Item	Description	Qty.
1	Back Pad	1
2	Lumbar Pad	1
3	Screw, M10 x 1.5, 35mm	6
4	Washer, Flat 3/8"	6



Tighten hardware to 40-50 in-lb (4.5-5.6 Nm).

## Install Front and Top Caps

1. Set front shrouds into the bottom cap. Install screws securing the front cap to the tower frame using a 10 mm wrench.



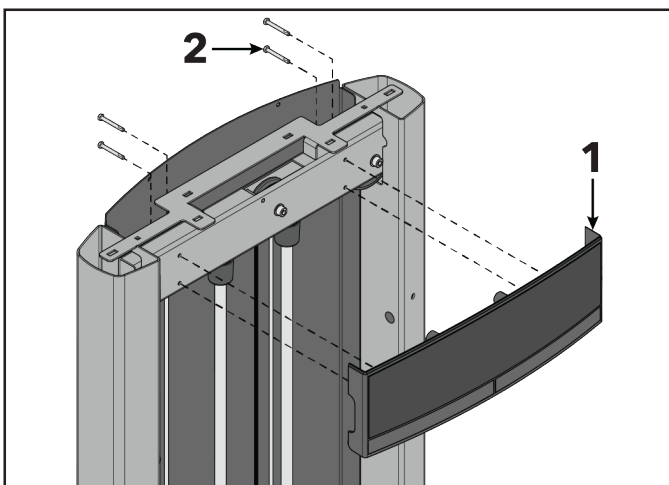
Item	Description	Qty.
1	Front Cap	1
2	Front Shroud, Left	1
3	Front Shroud, Right	1
4	Screw, M6, HCS, 50 mm	4



Tighten hardware to 10-13 in-lb (1.1-1.5 Nm).

2. Install screws securing the front cap to the tower frame using a 10 mm socket wrench and ratchet.

**NOTE:** Screw heads can be accessed from the top or bottom.



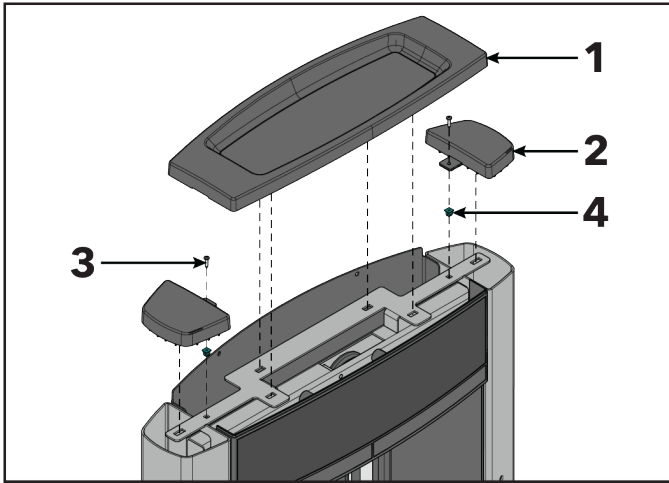
Item	Description	Qty.
1	Front Cap	1
2	Screw, M6, HCS, 50 mm	4



Tighten hardware to 10-13 in-lb (1.1-1.5 Nm).

3. Press grommets into holes at the top of the tower frame.

- Install screws securing the tube caps to the tower frame using a Phillips screwdriver.

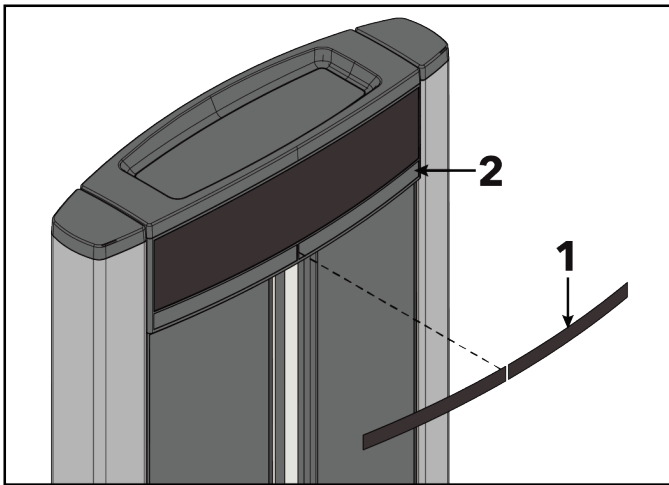


Item	Description	Qty.
1	Top Cap	1
2	Tube Cap	2
3	Screw, 8 x 3/4" Phillips	2
4	Grommet	2



Tighten hardware to 10-13 in-lb (1.1-1.5 Nm).

- Press top cap down into the holes at the top of the tower frame.
- Choose the appropriate language from the multilingual label sheet. Remove backing from multilingual label and apply to the left and right slots in the front cap.



Item	Description	Qty.
1	Multilingual Label with General Warning	1
2	Front Cap	1

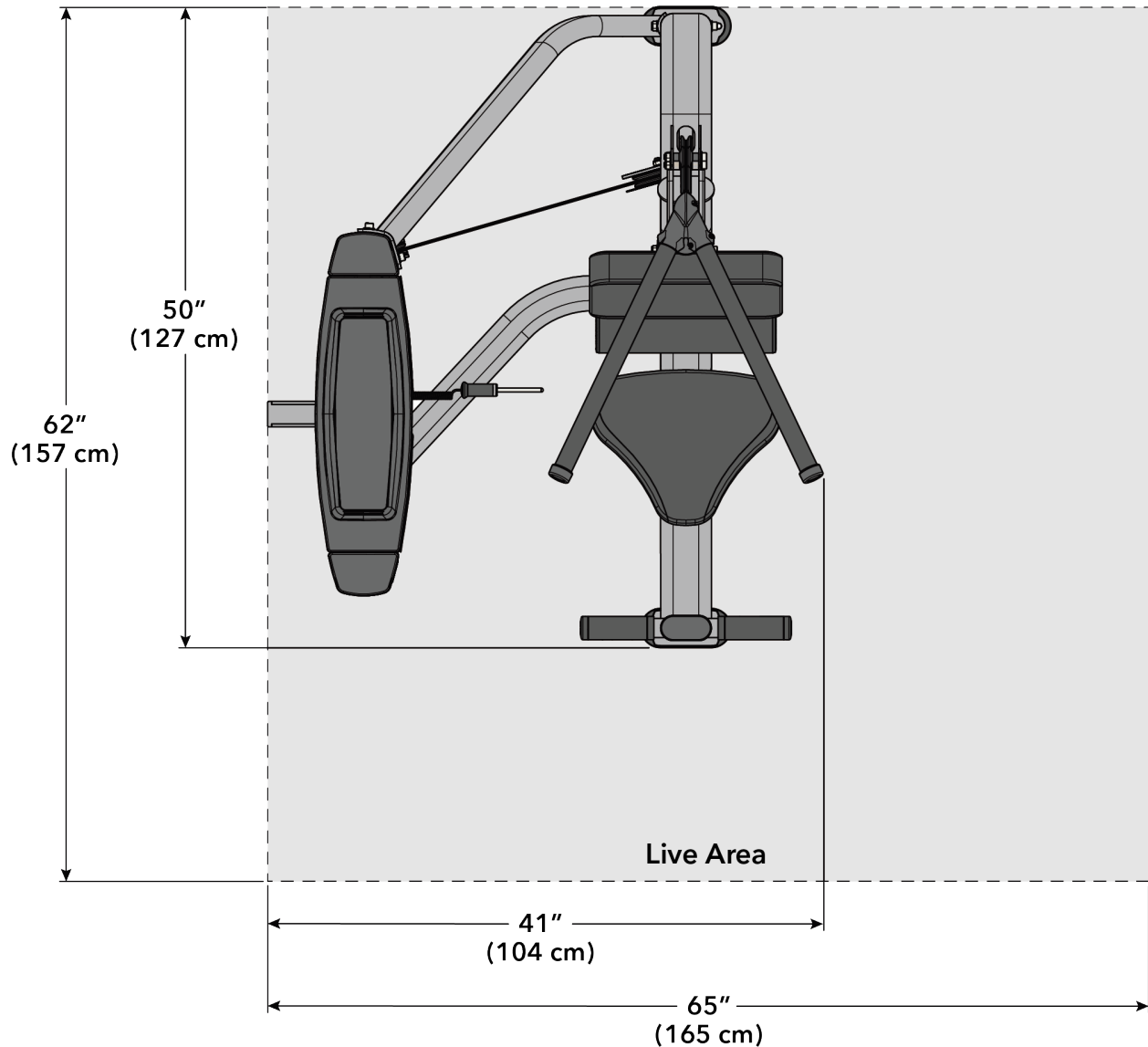
## Test Unit For Proper Operation

# Product Information

## Specifications

Machine Weight:	384 lbs.	174 kg.
Size (L x W x H):	in. = 50 x 41 x 53	cm = 127 x 104 x 135
Live Area (L x W x H):	in. = 62 x 65 x 77	cm = 157 x 165 x 196
Max User Weight:	300 lbs.	136 kg.
Weight Stack:	142.5 lbs.	71.25 kg.

**NOTE:** Weight Stack weight includes increment weight (7.5 lbs / 3.75 kg).



# Cable Handling Guide

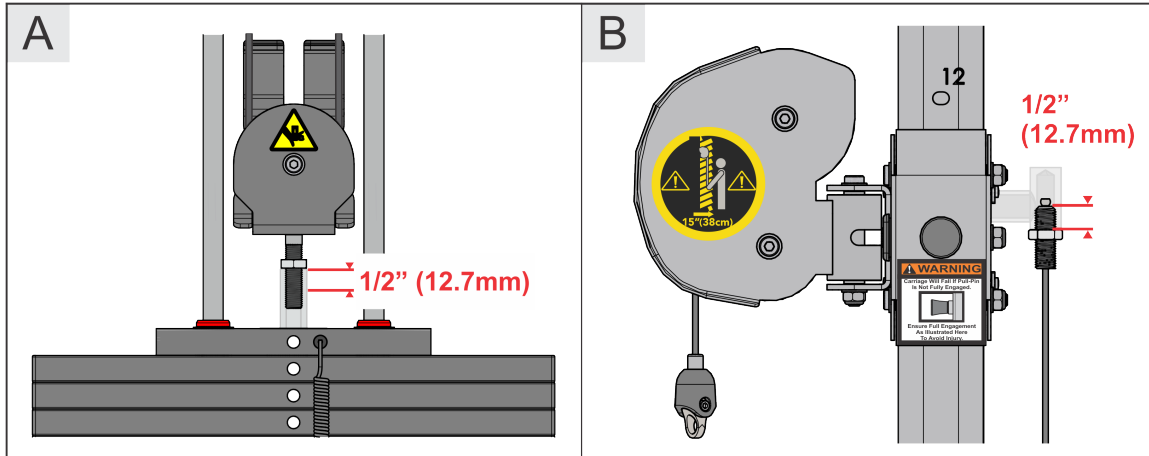
## Cable Terminations, Tensioning and Wear Guide

Cable Connections with threaded cable ends are required to be installed and maintained following the specifications identified below. Failure to follow these specifications can lead to the dislocation of the threaded cable during use and can cause serious injury. Along with securing the threaded cable end and jam nut, it is important to check the entire unit and ensure that all hardware is securely fastened and not left loose upon completion of cable installation.

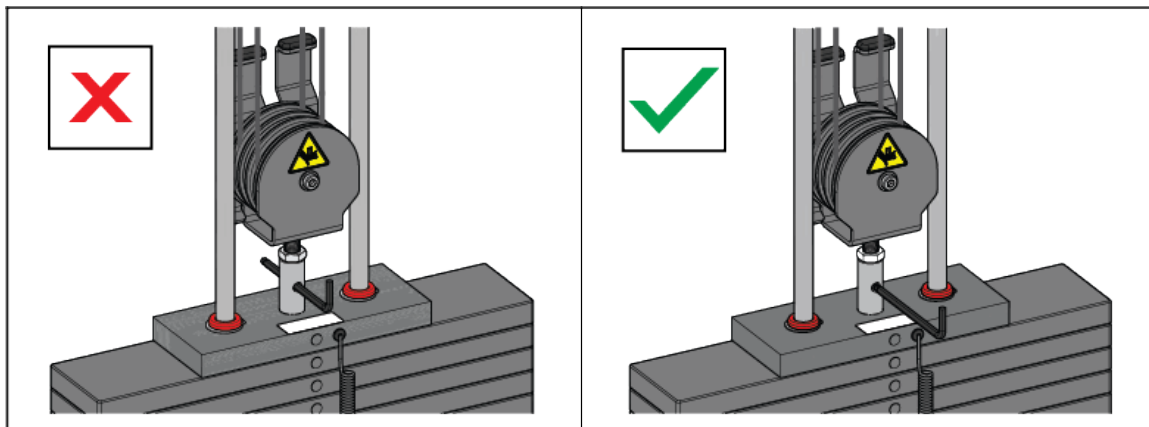
**WARNING:** Use of non certified “techs” note: Service warranties may be void if a non-Cybox-certified technician performs service work. Replacement of any strength cables should be performed by a Cybox certified technician.

## Cable Terminations

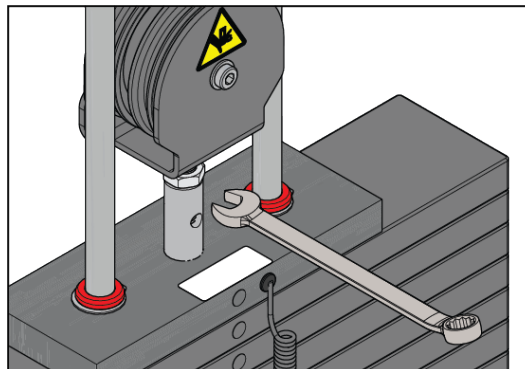
1. Cable must be threaded at least 1/2 inch (12.7mm) into termination points; at headplate (A) and frame/carriage (B).



2. Certain models are now equipped with a bayonet portal to assist checking proper thread engagement. To do so, attempt to pass a 7mm Allen wrench through the portal, if it goes through, more threads are needed to meet the minimum requirement.



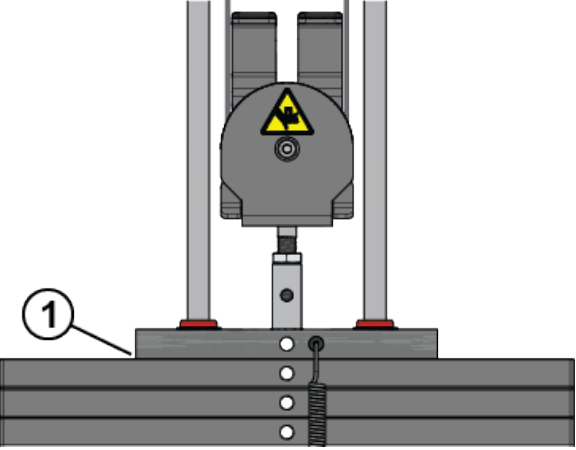
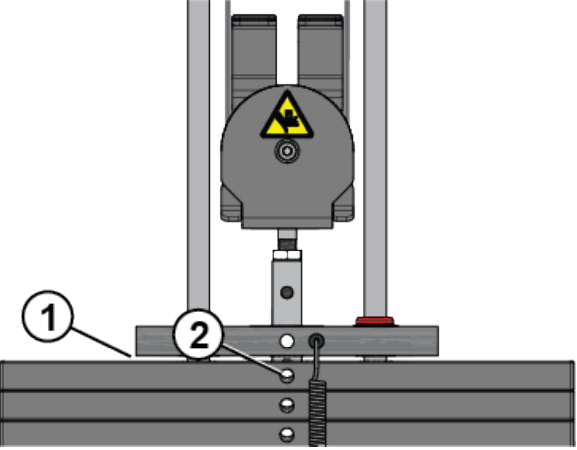
3. When proper thread engagement is reached, tighten jam nut to 20-25 FT-LBS (27.2 - 34.0 Nm) using a 24mm wrench.



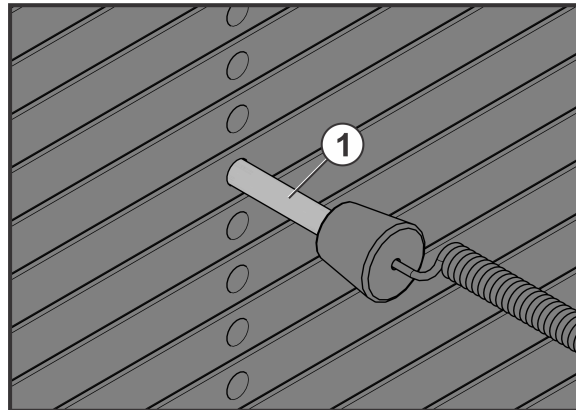
# Tensioning Cable

Cable should have enough tension so it stays seated into the pulley but not so tight that it pulls the head plate off the weight plate below it.

1. If the head plate has lifted, loosen the jam nuts at the terminations and loosen the threaded plugs a half turn until the head plate comes to rest on the weight plate below. Check that the cable's threaded plugs are engaged at least 1/2" (12.7mm) at each termination point.

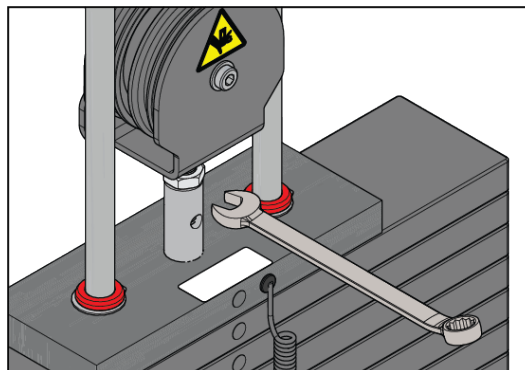
SEATED HEAD PLATE	SUSPENDED HEAD PLATE
	
<ol style="list-style-type: none"> <li>1. No gap</li> </ol>	<ol style="list-style-type: none"> <li>1. Gap</li> <li>2. Bayonet obstructing weight stack pin</li> </ol>

2. Ensure that the weight stack selector pin can fully engage into each weight plate.



Item	Description	Qty.
1	Weight Stack Selector Pin	1

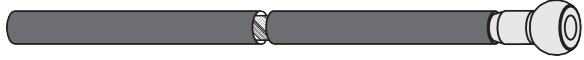
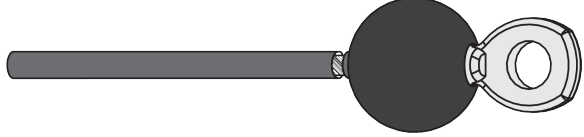
3. When proper thread engagement is reached, tighten jam nut to 20-25 FT-LBS (27.2 - 34.0 Nm) using a 24mm wrench.



## Strength Cable Wear Guide

Replace cable at first sign of any of the following:


### FRACTURES:

Casing can crack or fracture under strains during use. Any crack in the casing merits cable replacement even if no wire rope is exposed.	
Be especially observant for fractures near the components on the cable assembly - IE. Nylon Ball, Nico Loop, Threaded Plug, etc.	


### TWISTING/BINDING:

Inspect casing to ensure wire rope is not twisting within its casing. Any sign of the cable twisting should be replaced immediately.	
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### BULGING:

Internal wire rope strands can break within and coil causing a bulge to appear. Cable should retain same outside diameter throughout.	
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### FRAYED/EXPOSED WIRE ROPE:

Any exposed wire rope protruding through the casing or at either end.	
-----------------------------------------------------------------------	-------------------------------------------------------------------------------------


### FLATTENED:

Section of cable is compressed and will not retain its shape (outside diameter).	
----------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

### PERMANENTLY BENT:

Cable has 'kink' and prohibits cable from laying straight. Wire rope may be unraveling beneath casing and is compromised warranting replacement.	
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### ENDS SEPARATING:

Watch for component end of cable to pull away from cable assembly - look for exposed wire rope.	
-------------------------------------------------------------------------------------------------	--------------------------------------------------------------------------------------

# Bolt to Floor Guide

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## Introduction

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Life Fitness Family of Brands designs its products to be stable when used as designed. Because strength training is dynamic, we cannot predict how users will ultimately use the products in all circumstances. Therefore, Life Fitness Family of Brands recommends that strength training equipment be secured to a solid, level surface to stabilize and eliminate rocking or tipping over.

Each new unit shipped comes with a multi-language hangtag stating the importance of bolting the unit down as a safety precaution.

It is the facility's responsibility to adhere to local and regional building codes.

## Delivery and Installation Tips

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### All Anchors

- Fasteners must have minimum embedment in concrete floor, not including screed, regardless of wood/tile/rubber over sub-floor. (See *Anchor Types* for maximum sub-floor thickness between unit and concrete to equipment foot must be made of flooring or other material (i.e. no air gaps)).
- DO NOT reuse fasteners. Static and Dynamic anchors are designed for one-time use only.
- Factor in equipment's feet height when selecting fastener length.
- Factor in flooring thickness when selecting fastener length.
- It is also recommended to drill an additional 1/2" (12.7 mm) of depth beyond the length of the fastener being used to ensure that debris does not block the entry of the anchor.
- Minimum concrete compressive strength: 3000 psi (20 N/mm<sup>2</sup>).

### Anchoring

- All anchors must have a minimum embedment into concrete, regardless of wood/tile/rubber/screed over sub-floor.
- Dynamic anchors must have a minimum embedment depth in concrete to ensure maximum security and pull out force. See *Anchor Types* for embedment depth minimums.

### Building Codes

It is the facility's responsibility to adhere to local and regional building codes. Please verify with the customer to ensure that they are aware of this.

### Carpeting

If bolted down to carpet flooring, be sure to use a box cutter knife to cut the carpet threads around each foot. This will help avoid the carpet threads from being wrapped around and pulled by the drill bit.

### Competitor Product

The bolt down guidelines and procedures for *Cybex* products were determined by the company's Engineering and Installation Development groups. These guidelines include which anchors to use and positioning of the anchors are required for *Cybex* product.

- *Cybex* does not have that level of specification or engineering input for competitive product.
- *Cybex* installation teams are not permitted to anchor competitor equipment.

### Drilling

It is also recommended to drill an additional 1/2" (12.7 mm) of depth beyond the length of the fastener being used to ensure that debris does not block the entry of the anchor.

- This can be done by marking your drill bit with a piece of tape.
- While it is recommended that a vacuum be used to clean up debris, this will not account for all the debris that will settle at the bottom of the drilled hole.

## Anchor Types

Anchor		Subfloor between unit and concrete 0" to 1/2" (12.7mm) thick	Subfloor between unit and concrete over 1/2" (12.7mm) thick
Static	Imperial	KH-EZ 1/4" x 4"	KH-EZ 1/4" x 5"
	Metric	HUS-H 6mm x 120mm	HUS-H 6mm x 150mm

## Anchor Specifications

Static Anchor	Minimum Concrete Thickness	Minimum Drill Depth in Concrete	Minimum Concrete Embedment	Minimum concrete compressive strength
KH-EZ 1/4"	4-1/8" (105mm)	1/2" (12.7mm) beyond anchor length	2-1/2" (63.5mm)	3000psi (20 N/mm <sup>2</sup> )
HUS-H 6mm	3-3/32" (100mm)	25/64" (10mm) beyond anchor length	2-1/64" (55mm)	3000psi (20 N/mm <sup>2</sup> )


## Pullout Force

Cybex specifies Hilti™ static and dynamic anchors. According to the anchor manufacturer, the recommended design pullout force (in tension) for the specified anchors, when properly installed in cracked concrete, is provided in the side table. This table should be used for reference only; for additional and up-to-date information on the anchor capabilities or the design pullout force in other substrates, please consult Hilti directly at <https://www.us.hilti.com>.

Selected Anchor	Design Resistance in Tension *
KH-EZ 1/4" x 4"	830 lb
HUS-H 6MM x 120MM	3.3 kN
KH-EZ 3/8" x 4"	1535 lb
KH-EZ 3/8" x 5"	1535 lb
HUS-H 8MM x 120MM	3.3 kN
HUS-H 8MM x 150MM	3.3 kN
HSL-3 M 8/40	2000 lb
HST M12 x 115/20	8 kN
HST M12 x 195/200	8 kN
KB-TZ 3/8" x 3-3/4"	1615 lb

\* Design strength extracted from the Hilti Anchor Fastening Technology Manual issued September 2014.

## Tools Required

 **WARNING:** Adhere to manufacturer's equipment warnings and guidelines. Follow manufacturer's instructions for proper usage.

### Static Anchor

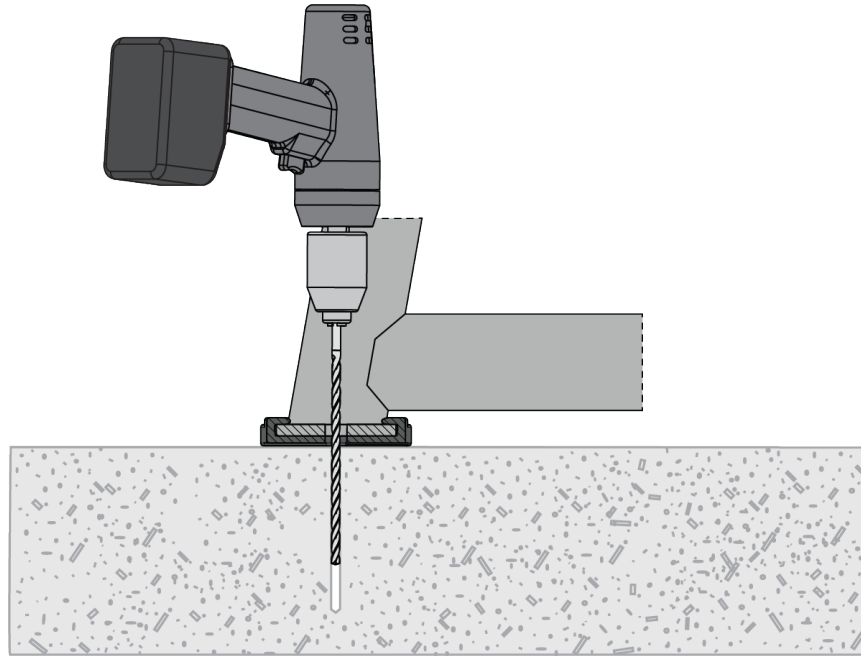
- Floor scanner / rebar detector (optional)
- 1" L-shape SDS rotary hammer
- 1/4" x 12" (6mm x 305mm) carbide drill bit (for 1/4" (6mm) anchors)
- 3/8" x 12" (8mm x 305mm) carbide drill bit (for 3/8" (8mm) anchors)
- Safety glasses
- Extension cord
- Impact wrench
- Vacuum (for debris)

## Static Anchor Procedure



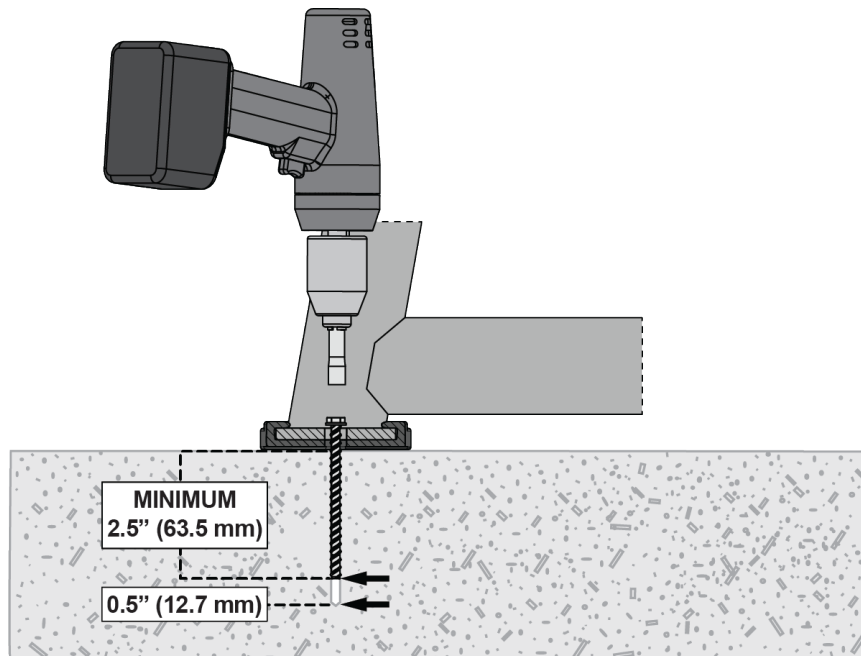
**CAUTION:** If it is possible that the length of your bolt will not provide the minimum requirement of 2.5" (63.5mm) of engagement, a longer anchor should be used.

1. Place unit into position to be mounted and cycle unit to set stance.
2. Each foot **must** get at least one static fastener.
3. Wearing protective glasses, drill down into the flooring to the required depth as perpendicular as possible, ensuring that the foot thickness is being accounted for; refer to *Anchor Selection* and *Foot Dimensions*.



4. Insert fastener and tighten to 18 Foot-Pounds (24Nm) for 1/4" (6mm) anchor or 40 Foot-Pounds (54Nm) for 3/8" (8mm) anchor.

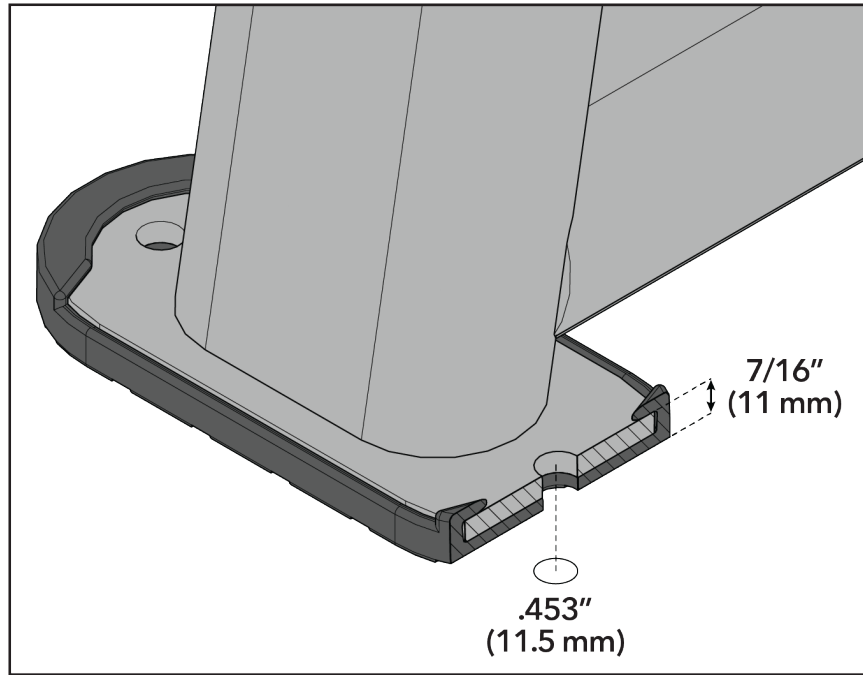
**NOTE:** If the legs/frame do not contact the mounting surface **DO NOT** pull down with the fastener or anchor. Loosen frame hardware and re-tighten to allow machine to align.



## Foot Dimensions

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Use below image to determine foot specifications.





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