

A delicately scaled, modular system of interconnected elements and suspended LED luminaires.

suspenders[®]

assembly instructions

Path Matrix

SONNEMAN[®]
A WAY OF LIGHT

February 3, 2025

Suspenders® Product Information and Warnings

Important

- **Always disconnect the power before installing or replacing Luminaires and before cleaning or other maintenance.**
- **Consult a qualified, licensed electrician to ensure correct branch circuit conductor.**
- Please read all included assembly instructions and warnings carefully before installation. Contact Customer Service if you have any questions or concerns. Before installation, please confirm that the fixture is compatible with your supply voltage and dimming system, if present.
- LEDs are highly sensitive electronic devices, and must be treated with care. Do not open any factory sealed compartments, and avoid touching the LEDs with your hands or any object.
- Although all our fixtures are equipped with protective devices, LED electronic systems are vulnerable to power surges and supply variations. Do not install LED fixtures on the same circuit as any motors, appliances, or HVAC systems.
- Do not remove or bypass any LED Driver or Transformer that is provided with the fixture, and do not replace or substitute with another power supply.
- Remote Power Supply installation must be done by a licensed electrician and in accordance with local building and electrical codes. Remote installations should be in an accessible location, as close to the fixture as possible. The appropriate wire gauge must be used to limit the voltage drop to no more than 5%.
- Fixtures must be wired in parallel on independent leads; do not "daisy chain" multiple fixtures together or wire them in series.
- All factory-made splices and connections must remain intact. LED circuits are carefully designed and built, and improper connections may damage the fixture.
- Any mounting hardware is provided for your convenience and should be used with discretion. Always use the appropriate hardware for the mounting surface.
- Suspenders power supplies feature short-circuit protection with automatic recovery, and will resume operation once the short-circuit condition is removed.
- Suspenders power supplies have 24V output.
- Suspenders must be installed in dry locations ONLY.

Power Feed

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 1 -Power Feed Location

Determine the **Power Feed** location using the reflected ceiling plan shown in Fig. 1. Follow installation instructions, in step 2 on page 3.

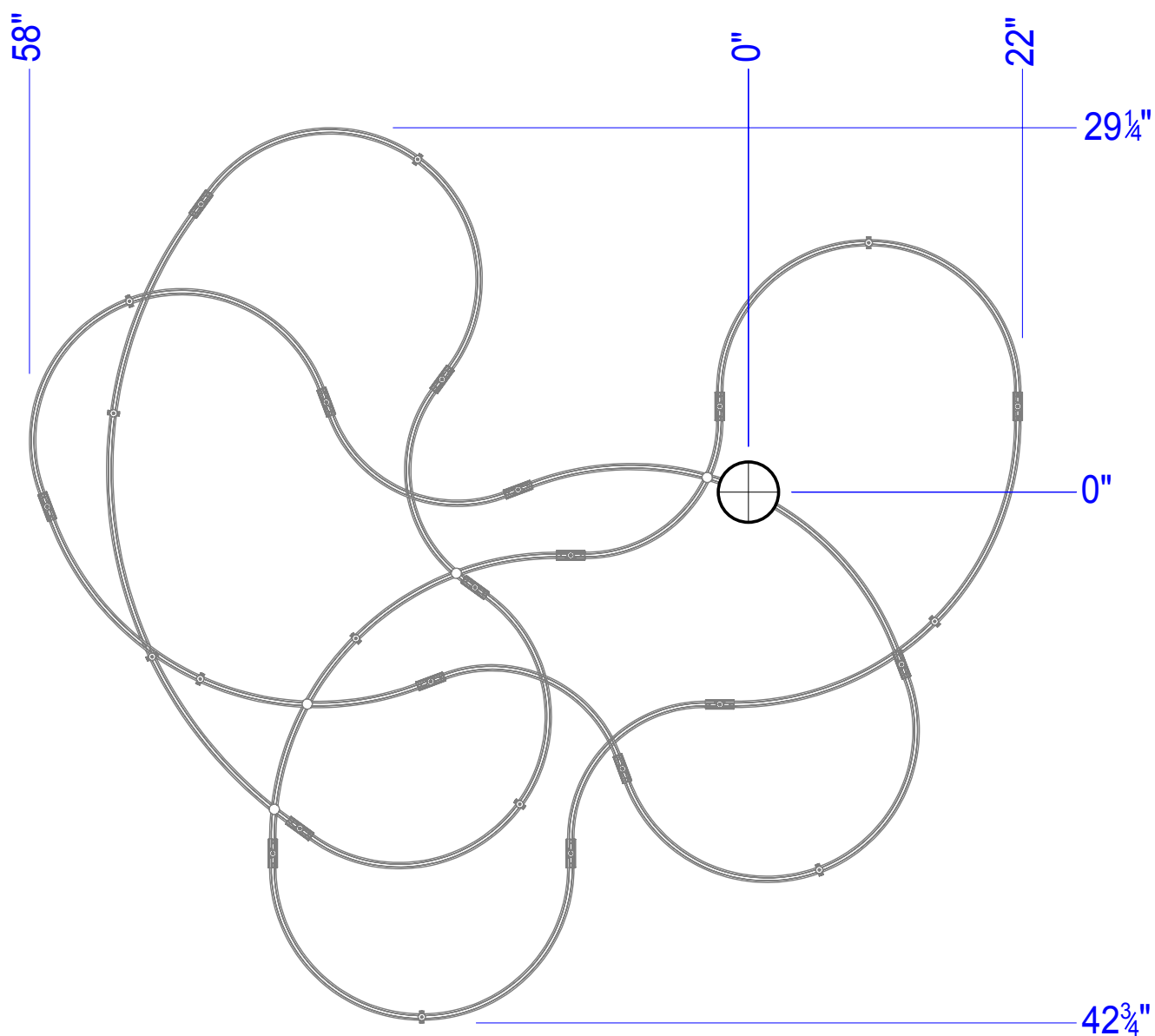


Fig. 1
Reflected Ceiling Plan

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Power Feed

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Important

- Always disconnect the power before installing or replacing components and before cleaning or other maintenance.
- Consult a qualified, licensed electrician to ensure correct branch circuit conductor.
Consulter un électricien qualifié pour vous assurer que les conducteurs de la dérivation sont adéquats.

Step 2 - Power Feed Installation

Shallow Single Double Power Feed (Fig. 2):

1. Shut off power to the **Branch Circuit**.
2. Install the **Power Supply** in a remote and accessible location in accordance with local electrical codes. You must use the appropriate wire gauge from the Power Supply to the **Power Feed** to limit the voltage drop to less than 5%.
3. Make appropriate electrical connections using wire nuts:
 - a. Connect the **Power Supply's** live wire (black) to the live supply wire.
 - b. Connect the **Power Supply's** neutral wire (white) to the neutral supply wire.
 - c. Connect the **Power Supply's** ground wire (green or green-striped) to the ground supply wire.
 - d. Connect one of the black **Power Feed** wires to one of the Power Supply output wires. Connect the other black Power Feed wire to the second Power Supply output wire.
 - e. Carefully place connections in Outlet Box.
4. Attach the **Mounting Plate** to the **Outlet Box** using the two (2) **Screws**.
5. Attach **Power Feed** to **Mounting Plate**. Secure using **Set Screws** and included **Allen Key**.
6. To adjust orientation of bushings:
Loosen **Set Screws** using included **Allen Key** and rotate **Power Feed** to the desired position.
7. Do not restore power until the end of step 10 on page 11.

Applies to Component:
1XA07DB05x

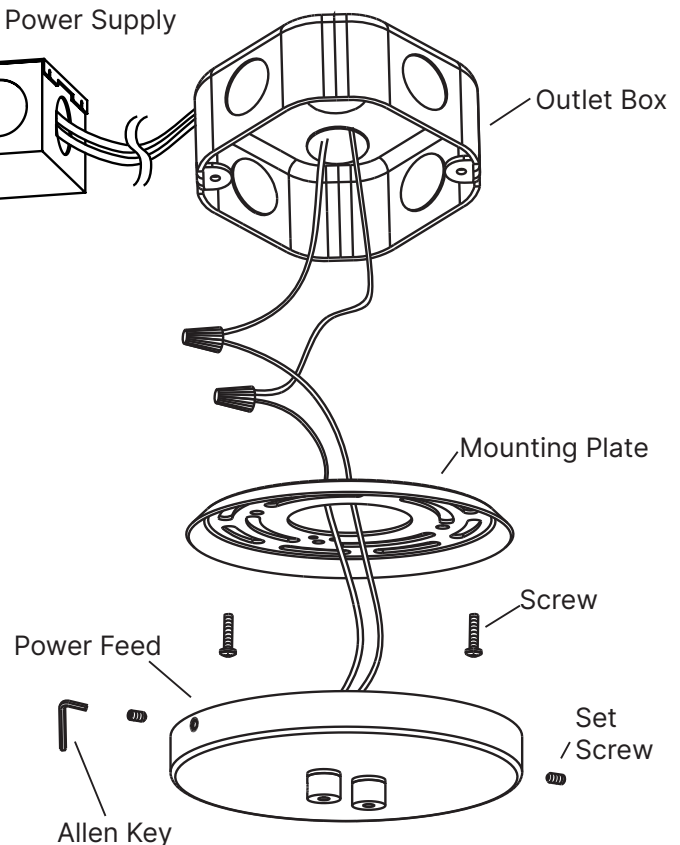


Fig. 2

Note

- This fixture is dimmable with 0-10V type dimmer ONLY.

Care Instructions

- **Dusting:** Use a clean, dry cloth.
- **Cleaning:** To protect the finish, avoid any harsh abrasives or chemicals.

Power Bars and Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Tier Definitions

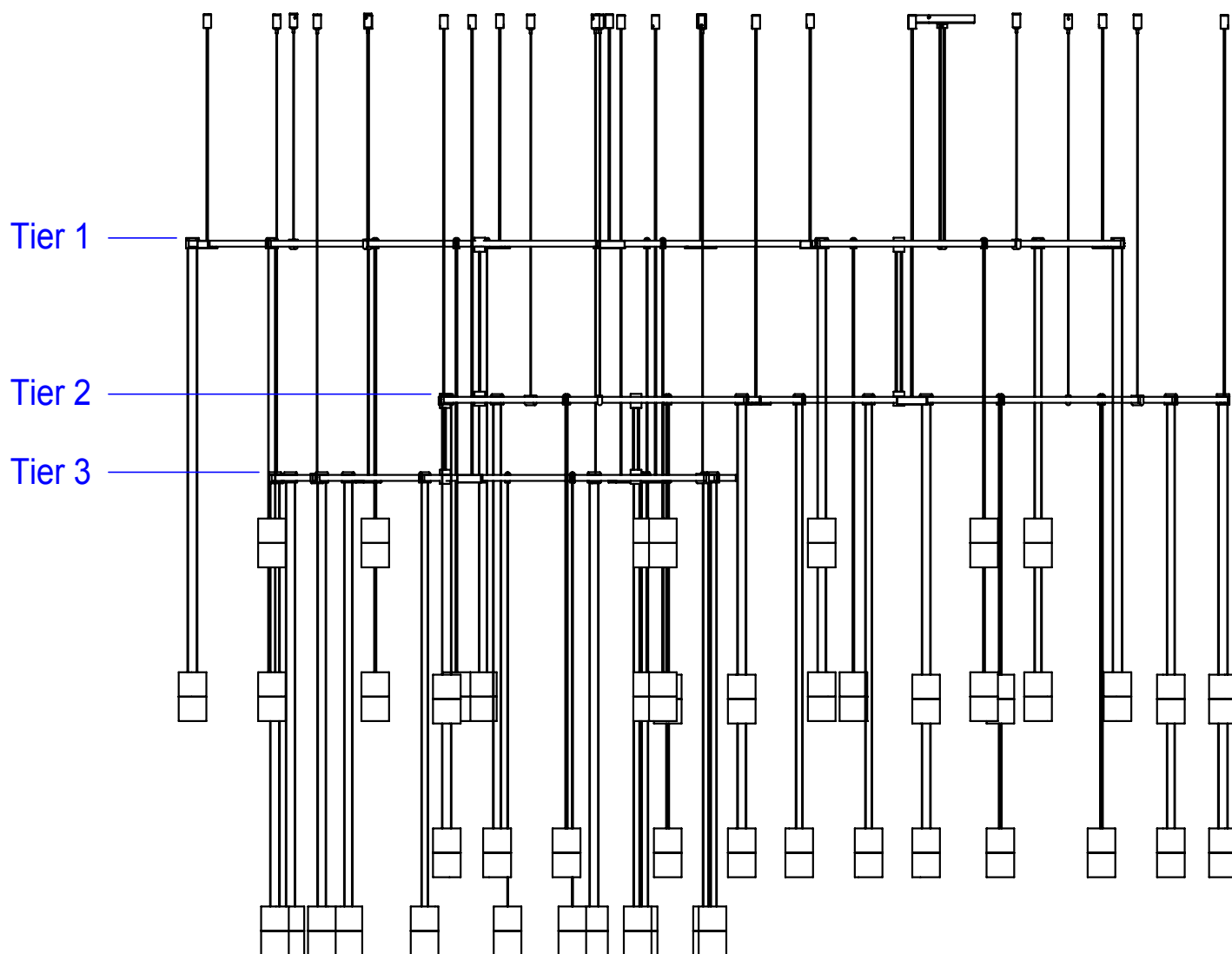


Fig. 3

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Power Bars and Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 3 - Tier 1 Hanger Locations

Determine locations for the Tier 1 Ceiling Hangers, Rotational Power Bar Hangers, and Power Bars as shown in Fig. 4. Assemble these components per instructions in steps 6 and 7 on page 8. Then proceed to Tier 2 on page 6.

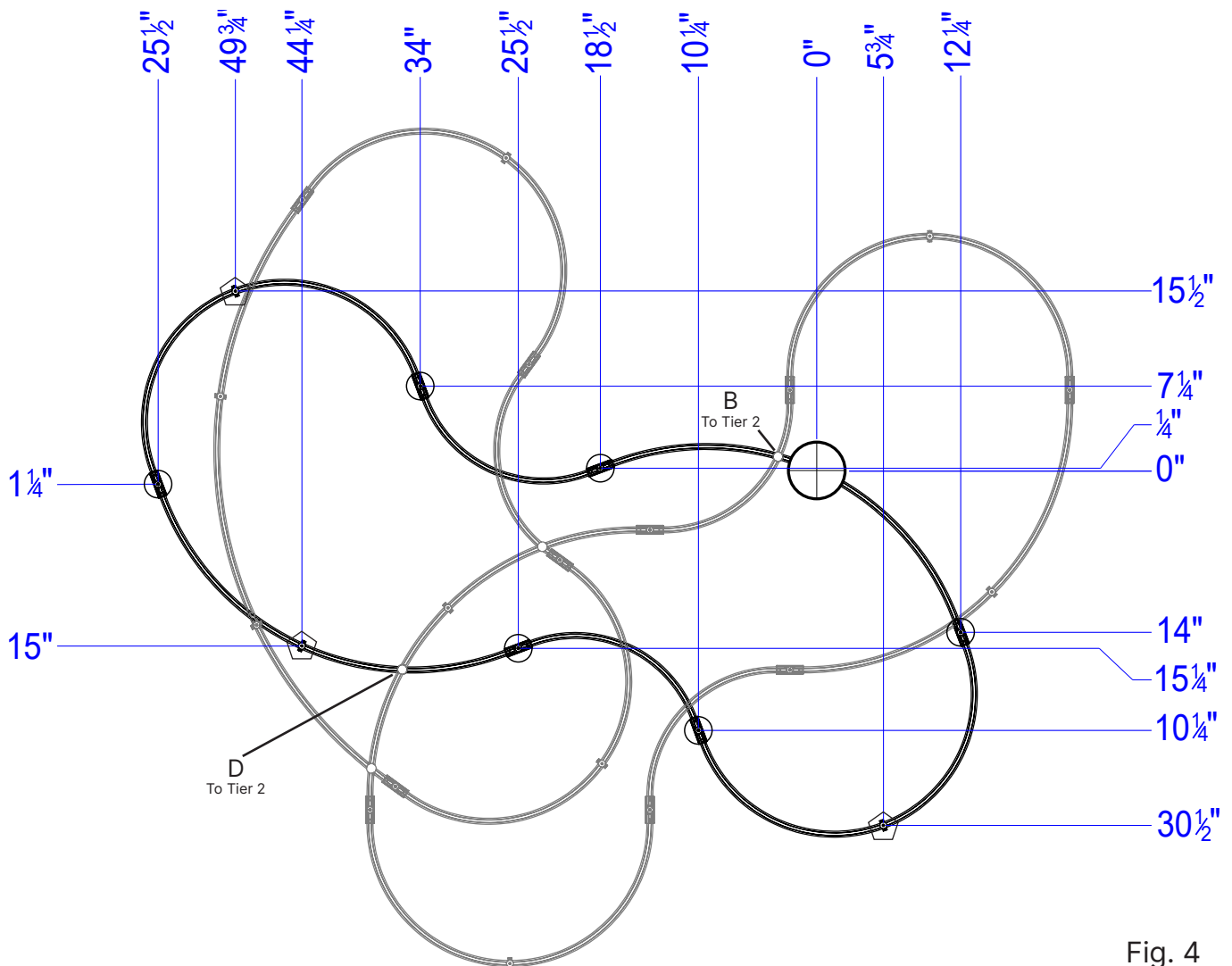


Fig. 4
Reflected Ceiling Plan

Ceiling Hangers	Rotational Power Bar Hangers
○ = 1XB02IB20x	A = 1XB03RD06x
◡ = 1XB02RB20x	B = 1XB03RD12x
	C = 1XB03RS06x
	D = 1XB03RS12x

Power Bars and Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 4 - Tier 2 Hanger Locations

Determine locations for the Tier 2 Ceiling Hangers, Rotational Power Bar Hangers, and Power Bars as shown in Fig. 5. Assemble these components per instructions in steps 6 and 7 on page 8. Then proceed to Tier 3 on page 7.

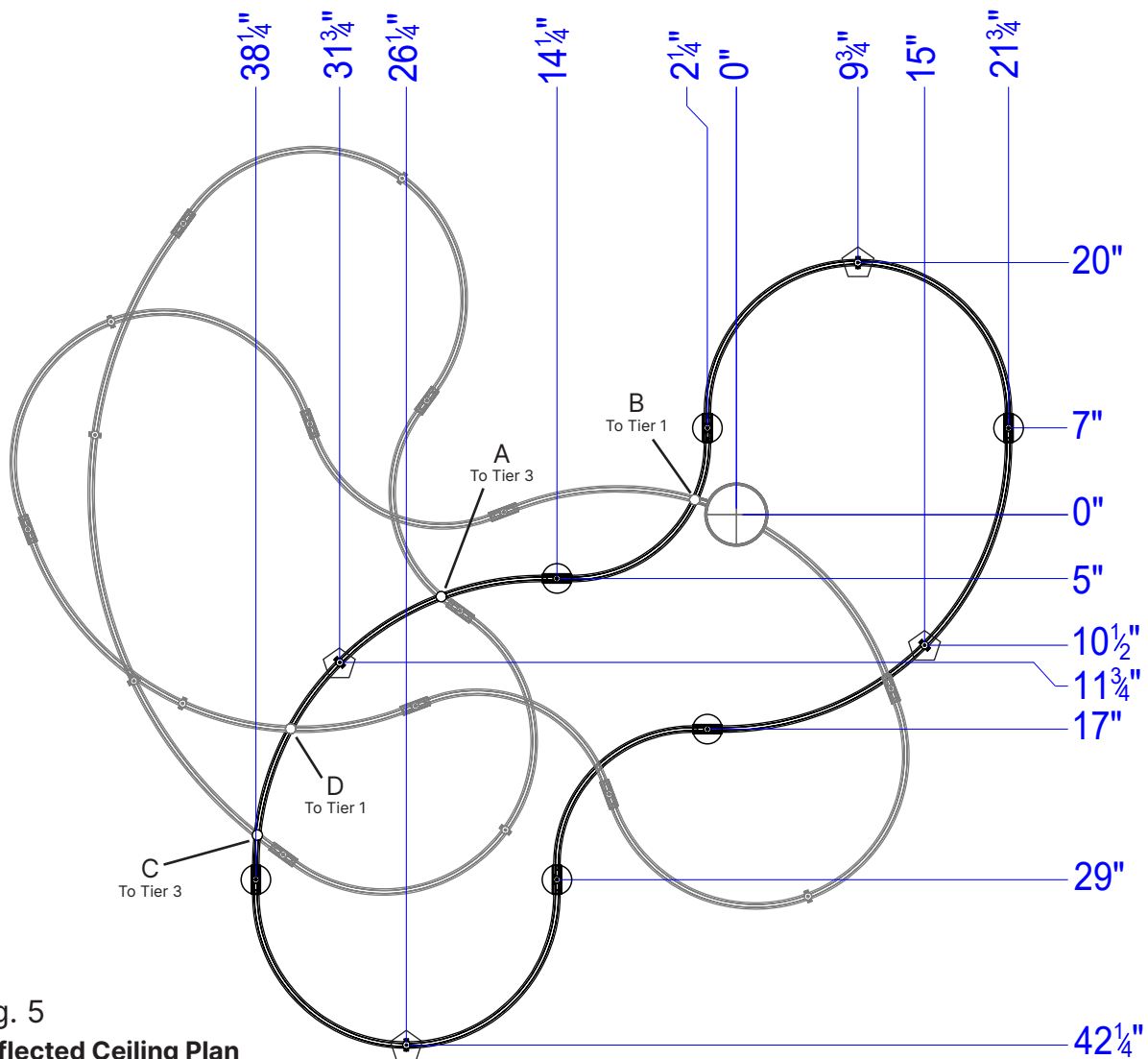


Fig. 5
Reflected Ceiling Plan

Ceiling Hangers	Rotational Power Bar Hangers
○ = 1XB02IB20x	A = 1XB03RD06x
◡ = 1XB02RB20x	B = 1XB03RD12x
	C = 1XB03RS06x
	D = 1XB03RS12x

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Power Bars and Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 5 - Tier 3 Hanger Locations

Determine locations for the Tier 3 Ceiling Hangers, Rotational Power Bar Hangers, and Power Bars as shown in Fig. 6. Assemble these components per instructions in steps 6 and 7 on page 8. Then proceed to Luminaire installation on page 9.

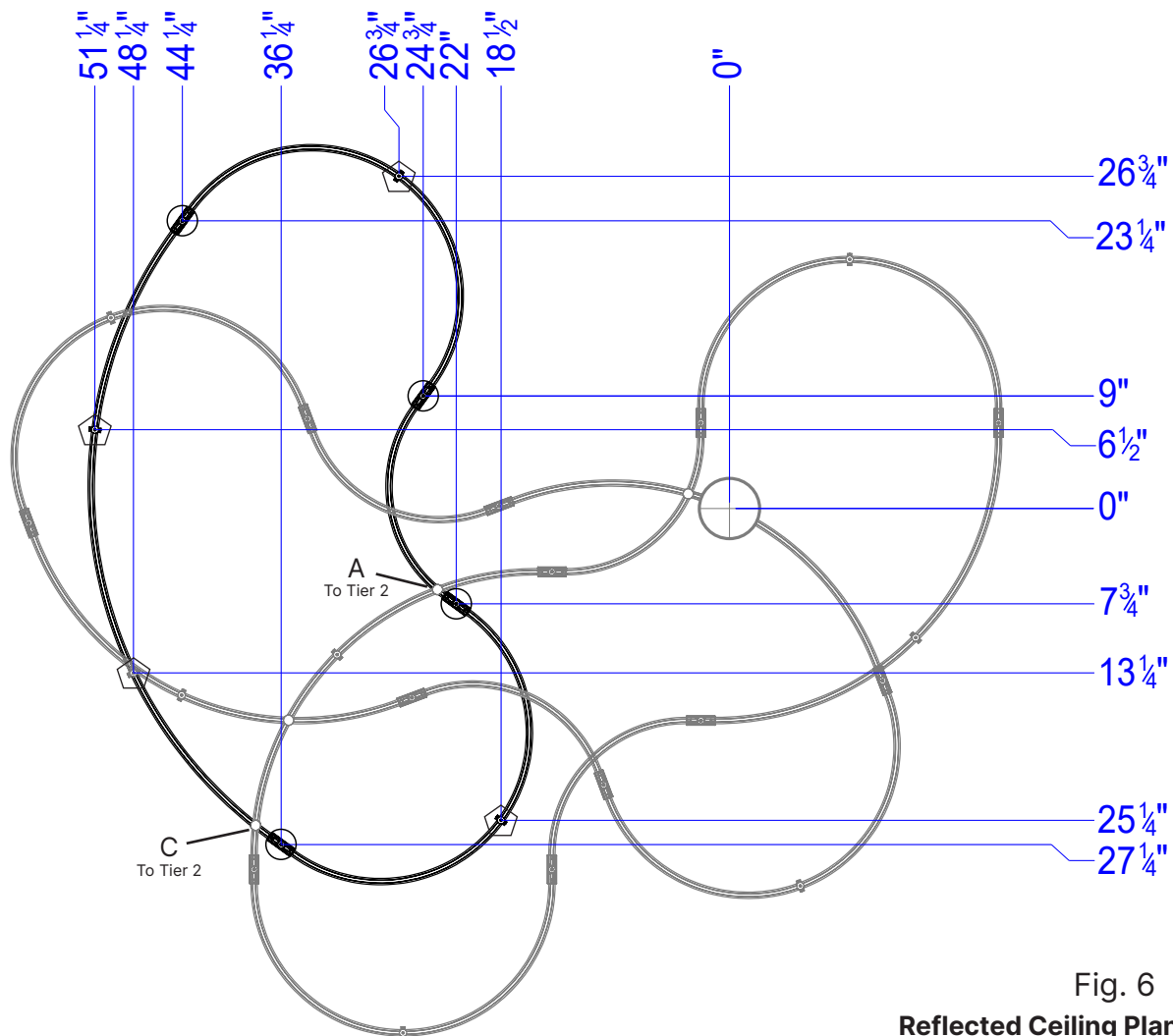


Fig. 6
Reflected Ceiling Plan

Ceiling Hangers	Rotational Power Bar Hangers
○ = 1XB02IB20x	A = 1XB03RD06x
◡ = 1XB02RB20x	B = 1XB03RD12x
	C = 1XB03RS06x
	D = 1XB03RS12x

Power Bar Hangers and Ceiling Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 6 - Ceiling Hanger Installation

1. Install the **Mounting Bracket** to the ceiling with **Anchor** (if appropriate) and **Screw**, then screw the **Post** onto the Mounting Bracket (Fig. 7).
2. Pass the **Ceiling Hanger Cable** through the **Power Bar**, then through the center hole of the **Cover**, making sure the countersunk holes on the Cover are facing up. Attach the **Cover** to the **Hanger** using the two small **Phillips Screws** (Fig. 8).
3. Insert **Cable** into Post, then adjust to the desired length: to shorten, push the Cable up; to lengthen, push in the **Plunger** while pulling down on the cable, release the Plunger to lock. Cut off the excess cable where it exits the Post (Fig. 9). **NOTE: Do not cut the excess cable until the final layout is confirmed.**



Fig. 7

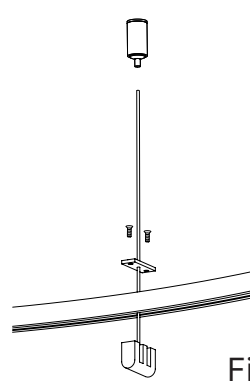


Fig. 8

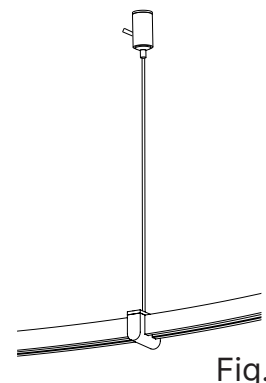


Fig. 9

Step 7 - Single and Double Rotational Power Bar Hanger Installation

1. Press down firmly on the top of the **Power Bar Hanger Hub** while pressing up on the bottom of the **Power Bar**, until the Power Bar Hanger Hub clicks into place (Fig. 10).
2. Insert the **Hanger Clip** through the **Hanger Hub** and press up on the Hanger Clip until Hanger Clip clicks into place (Fig. 11).
3. Press the **Hanger Rod** up against the Hanger Hub and screw on the **Hanger Sleeve** (Fig. 12). Be sure that the brass contacts on the Power Bar Hanger Hub are touching those on the Hanger Rod. **NOTE: Do not fully tighten the Hanger Sleeve yet.**
4. Rotate **Power Bar** to the desired position and secure by fully tightening the **Hanger Sleeve** (Fig. 13).
5. Repeat steps 1-4 for the rest of the **Power Bar Hangers**.

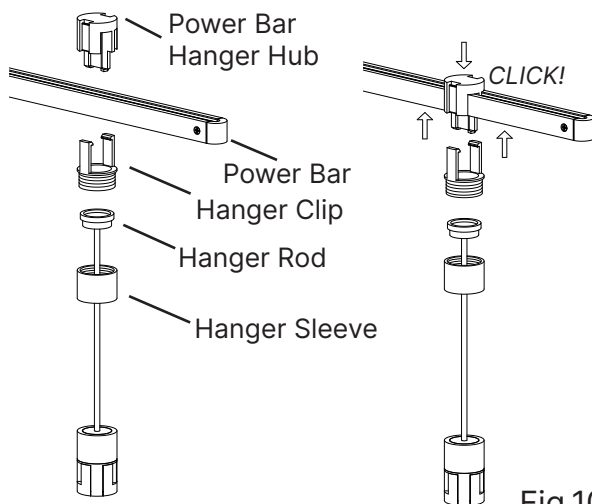


Fig. 10

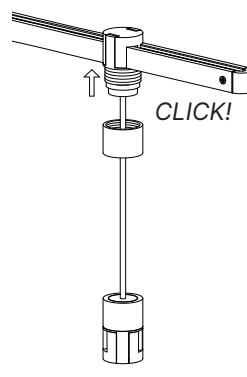


Fig. 11

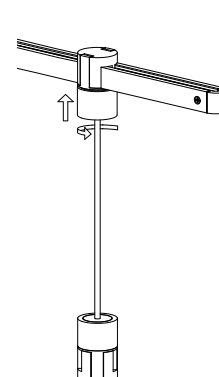


Fig. 12

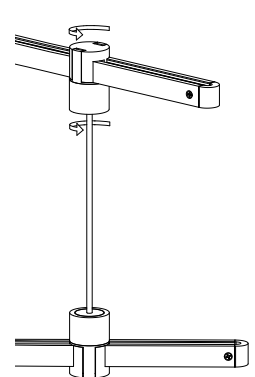


Fig. 13

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Luminaires

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 8 - Luminaire Locations

Determine locations for the Height Adjustable Luminaire Hangers as shown in Fig. 14. **NOTE: The locations are not dimensioned because they do not need to be precise.** Fig. 14 also indicates which hangers suspend 1pc or 2pcs Luminaires. Assemble these components per instructions in steps 9 and 10 on pages 10 & 11.

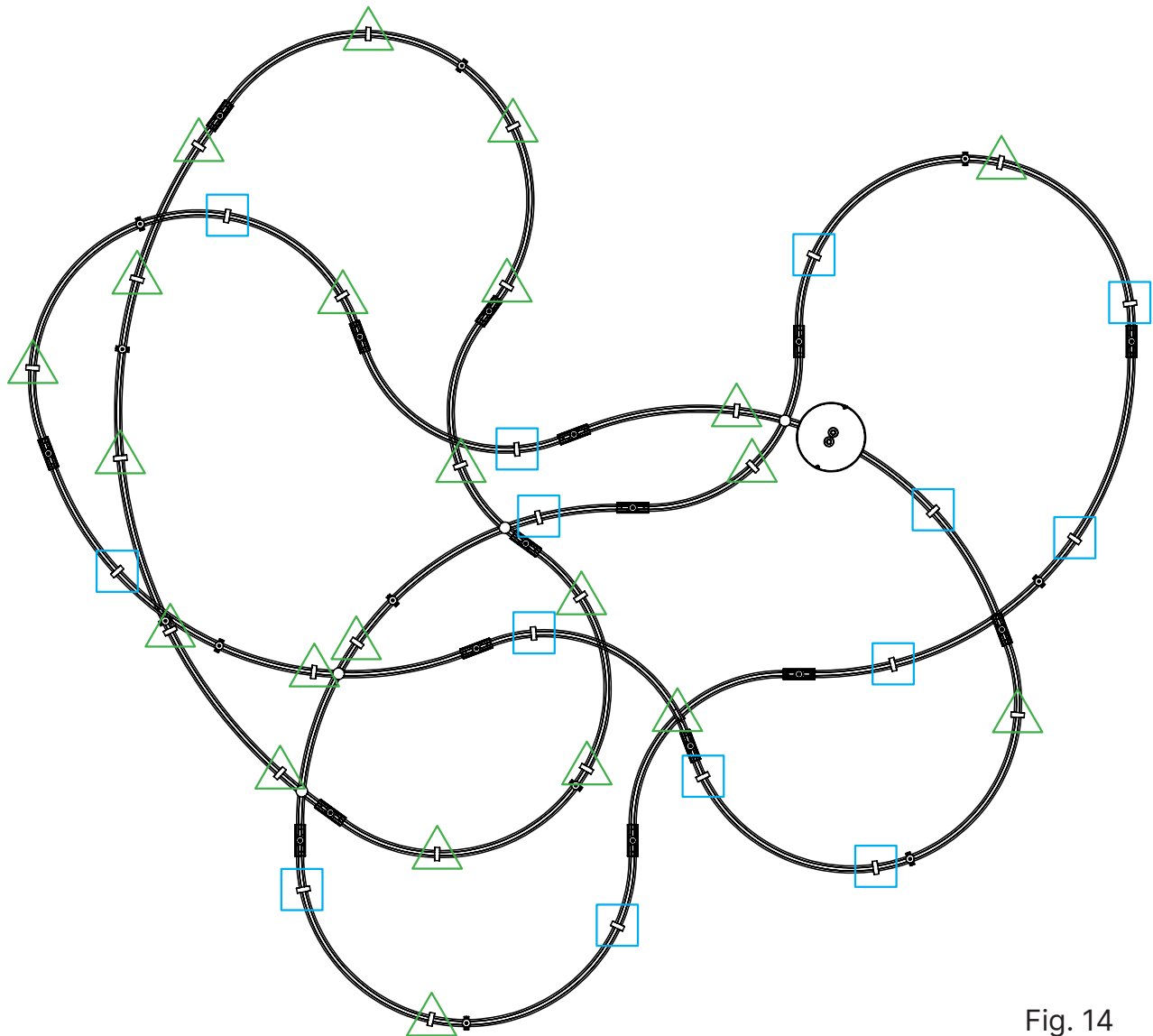
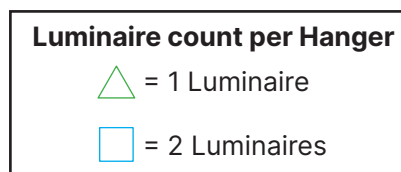


Fig. 14
Reflected Ceiling Plan



Height Adjustable Luminaire Hangers

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 9 - Height Adjustable Luminaire Hanger Installation

1. Align **Height Adjustable Luminaire Hanger** with **Power Bar** (Fig. 15) and press up on the bottom of the Hanger, while pressing down firmly on the top of the Power Bars until the Hanger clicks into place. (Fig. 16)
2. To remove, tilt hanger then pull down from **Power Bar** (Fig. 17).

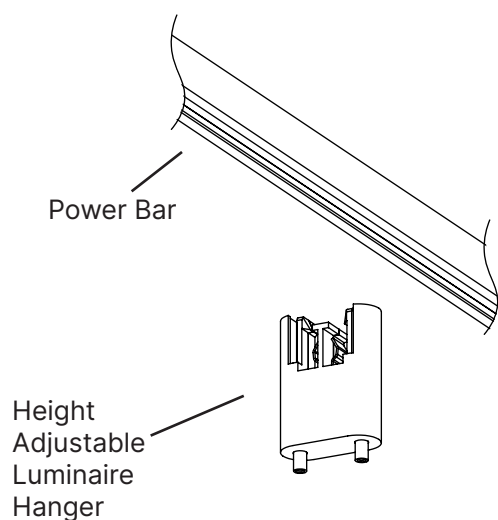


Fig. 15

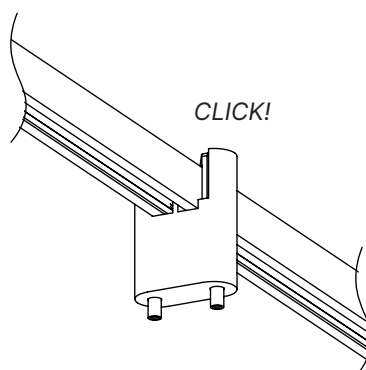


Fig. 16

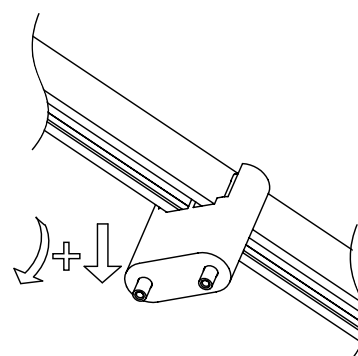


Fig. 17

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Height Adjustable Luminaires

Assembly Instructions

INSTRUCTIONS D'INSTALLATION

Step 10 - Through Cylinder Luminaire Installation

1. Insert **Power Cables** into **Plungers** of **Height Adjustable Luminaire Hanger** (Fig. 18)
CAUTION: When installing Power Cables into Height Adjustable Luminaire Hanger, make sure they are not twisted along the length.
2. Adjust to the desired length: To shorten, push the **Power Cable** up; to lengthen, push in the **Plunger** while pulling down on the Power Cable, release the Plunger to lock.
3. Insert **Power Cables** into holes of **Through Cylinder Luminaire** ensuring that the plungers are facing upward. If necessary, unscrew **Diffuser** to get easier access to **Plungers** (Figs. 19 & 20)
4. Adjust along cable to desired position: to raise, push the luminaire up while holding the cable below; to drop, slide **Through Cylinder Adjustment Tool** over power cables and press down on plungers to adjust height and spacing between luminaires, release the Plunger to lock (Fig. 23). Repeat process for up to 3 Through Cylinder Luminaires per cable set.
5. Once hanging heights are confirmed, cut off the excess cable where it exits the bottom of the lowest Etched Through Cylinder Luminaire (Fig. 21). Also cut off the excess cable where it exits the top of the Height Adjustable Luminaire Hanger.
6. To reduce the chance of twisting due to air current or accidental collision, install **Cable Clips** by pressing clip onto one cable and then on to other cable.
- Note: Cable Clips should be spaced no more than 3ft apart (Fig. 22).**
7. Restore power to the branch circuit.

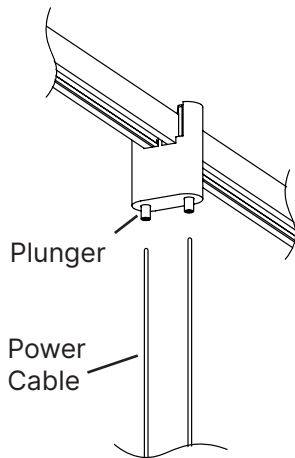


Fig. 18

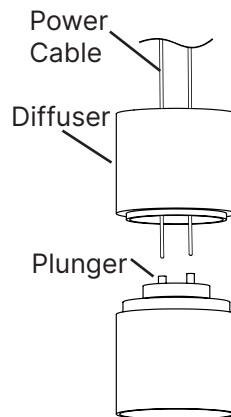


Fig. 19

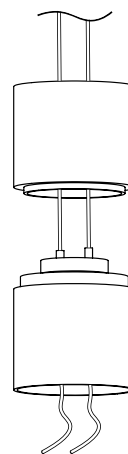


Fig. 20

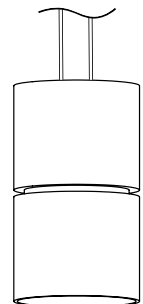


Fig. 21

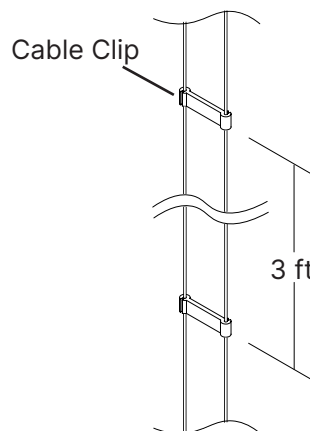


Fig. 22

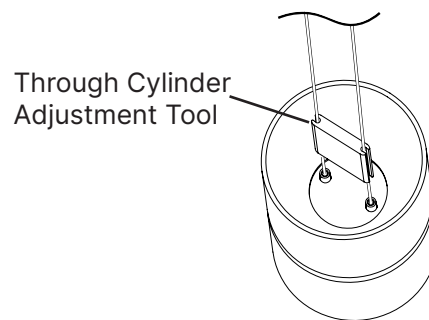


Fig. 23