

KVC DRESSPACK RETENTION SYSTEM

Spring-Based Retract

Kinking Protection

Durable Mechanism



OVERVIEW

Introduction

The KVC Retention System is designed to manage and protect cables in industrial robots, ensuring safety, longevity, and optimal performance. This guide provides step-by-step instructions for assembling and installing the KVC Retention System onto a robot, ensuring a proper and secure fit.

Purpose

Efficient cable management for industrial robots to prevent wear, tangling, and damage during operation.

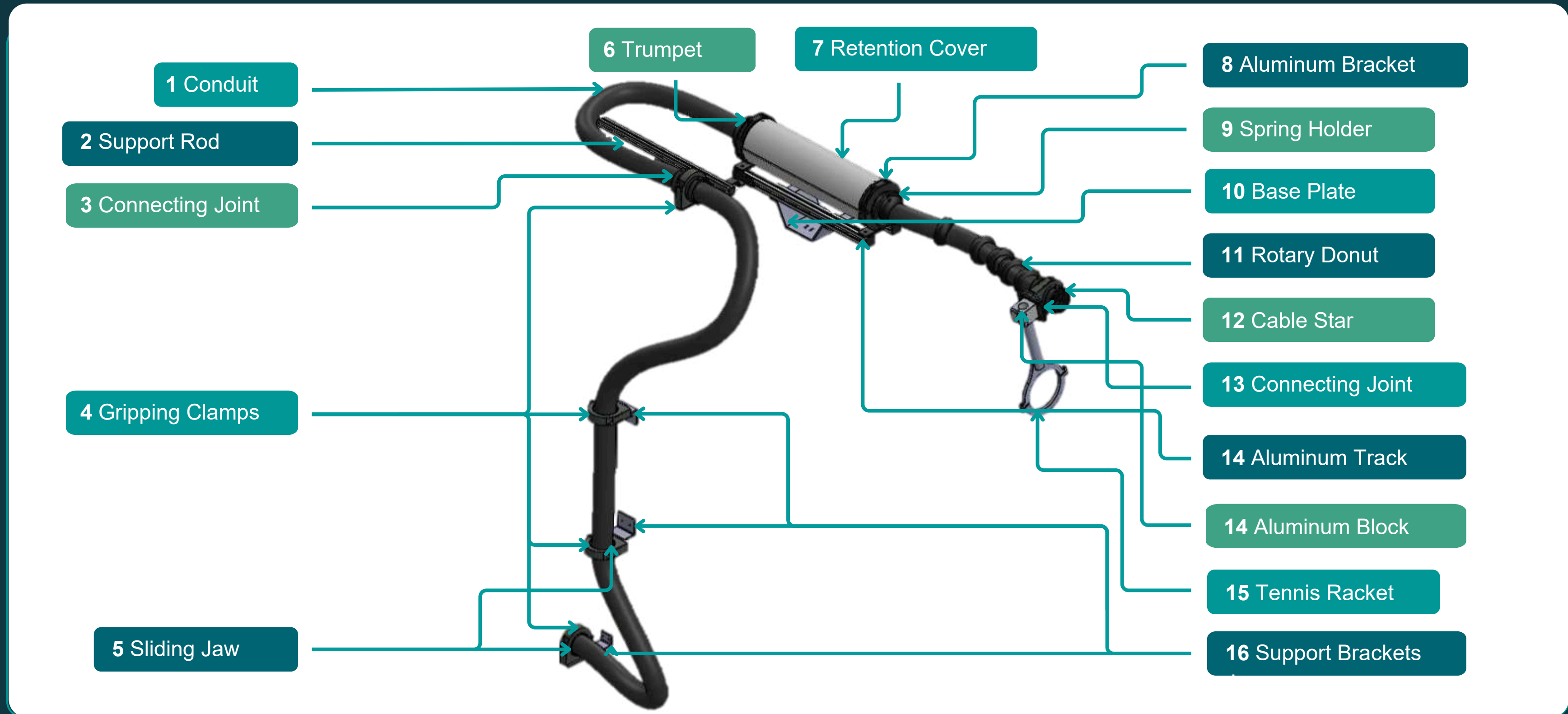
Key Components

Base plate, metal supports, cable management accessories, and tennis racket

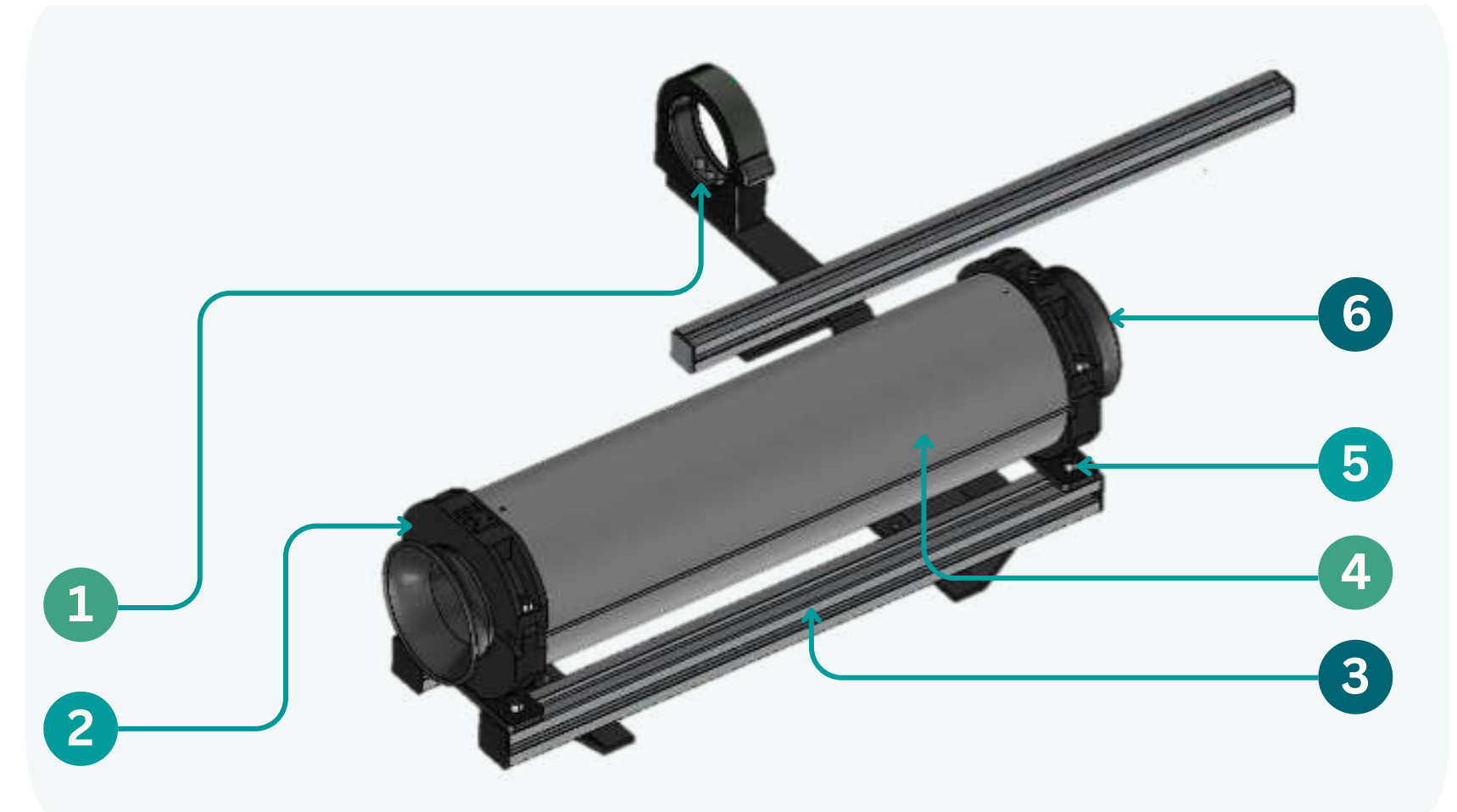
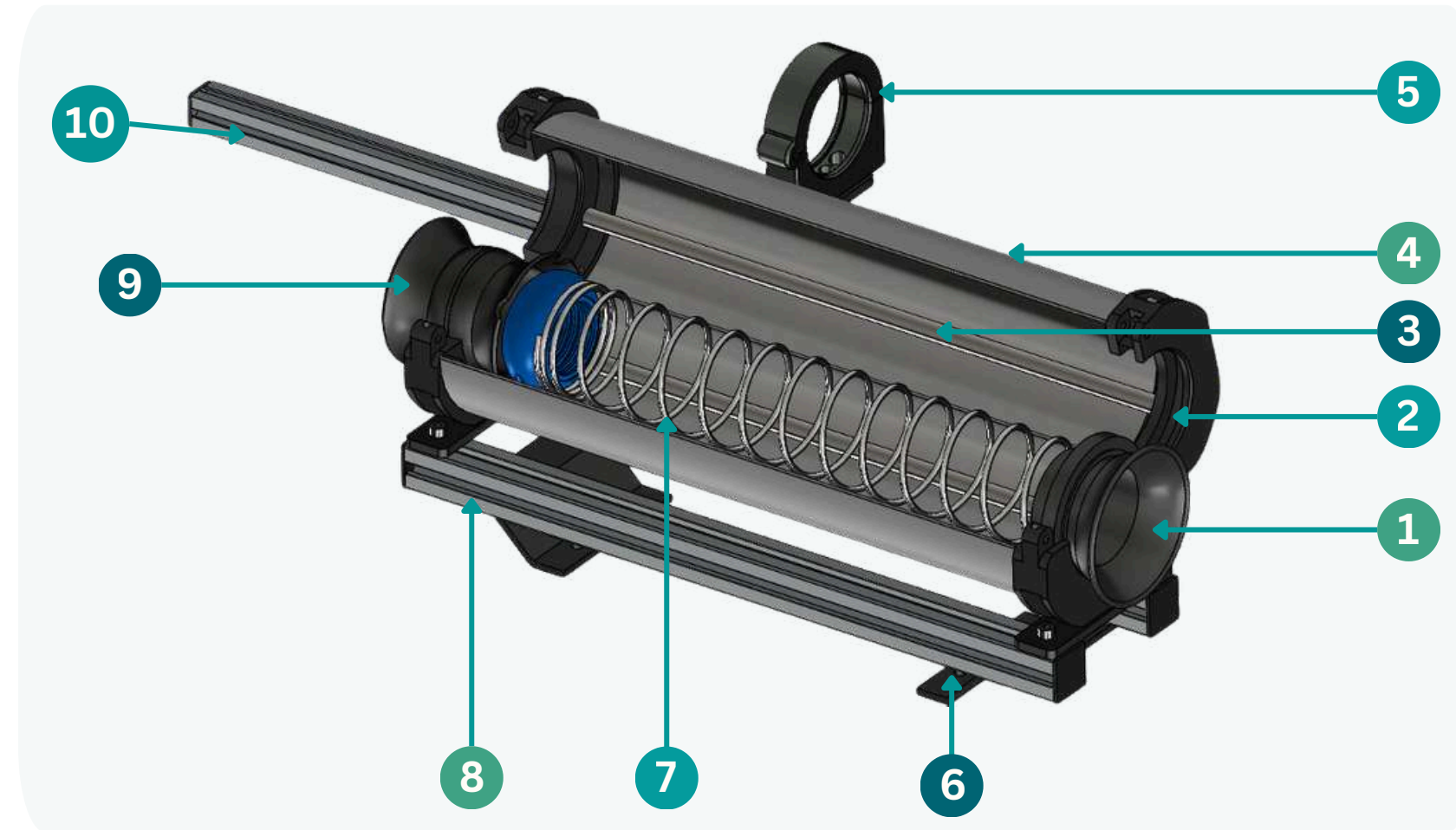


Complete Retention System

System Assembly Sequence



Retention System Detail



- | | |
|--------------------------|---------------|
| 1. SPRING HOLDER | 6. BASE PLATE |
| 2. ALUMINIUM BRACKET | 7. SPRING |
| 3. STAINLESS STEEL GUIDE | 8. BASE TRACK |
| 4. PROTECTIVE COVER | 9. TRUMPET |
| 5. HOLDING BRACKET | 10. SUPPORT |

- | | |
|----------------------|---------------------|
| 1. SUPPORT BRACKET | 4. RETENTION COVER |
| 2. ALUMINIUM BRACKET | 5. TRACK BASE |
| 3. ALUMINUM TRACK | 6. ALUMINUM BRACKET |

[Retention Assembly - Inner Detail]

[Retention Assembly - Outer Detail]

PREPARATION

Tools Required

Wrenches

Sizes 24-27mm

Screwdriver Set

Phillips and flathead

Marker Pen

For position marking

Allen Key Set

Metric sizes

Adjustable Spanner

For various bolt sizes

Safety Gloves

Required PPE

Adjustable Pliers

Multi-grip type

Mallet

Rubber or soft-face

Safety Glasses

Required PPE

PREPARATION

Components List

MAIN COMPONENTS

- 1 Base Plate
- 2 3-Side Metal Supports
- 3 Tennis Racket Assembly
- 4 Metal Mounting Brackets

CABLE MANAGEMENT

- 5 Clamps, Channels & Holders
- 6 Retention Clips
- 7 Fasteners (Bolts, Washers, Nuts, Screws)

Verify all components are present before beginning installation

1

INSTALLATION PROCEDURE

Preparation & Safety

Power Off the Robot

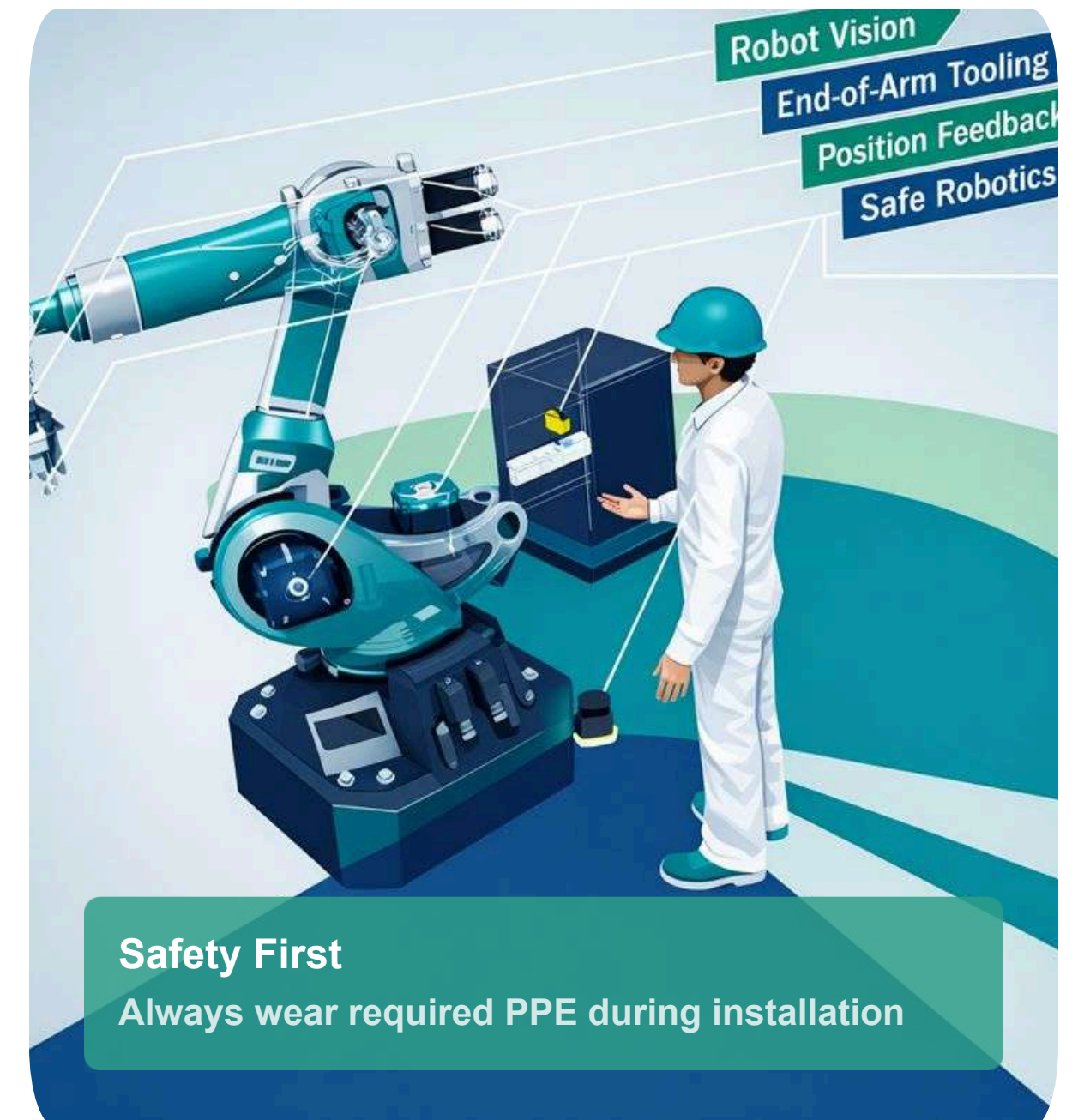
Ensure the robot is completely powered down and isolated from any electrical sources before beginning work.

Clear Installation Area

Remove any obstructions around the robot's work area to ensure safe and unimpeded installation access.

Mark the Positions

Using a marker, identify and label the mounting points on the J3, J2, and J1 axes for future reference during installation.



2

INSTALLATION PROCEDURE

Base Plate Installation

Align the Base Plate

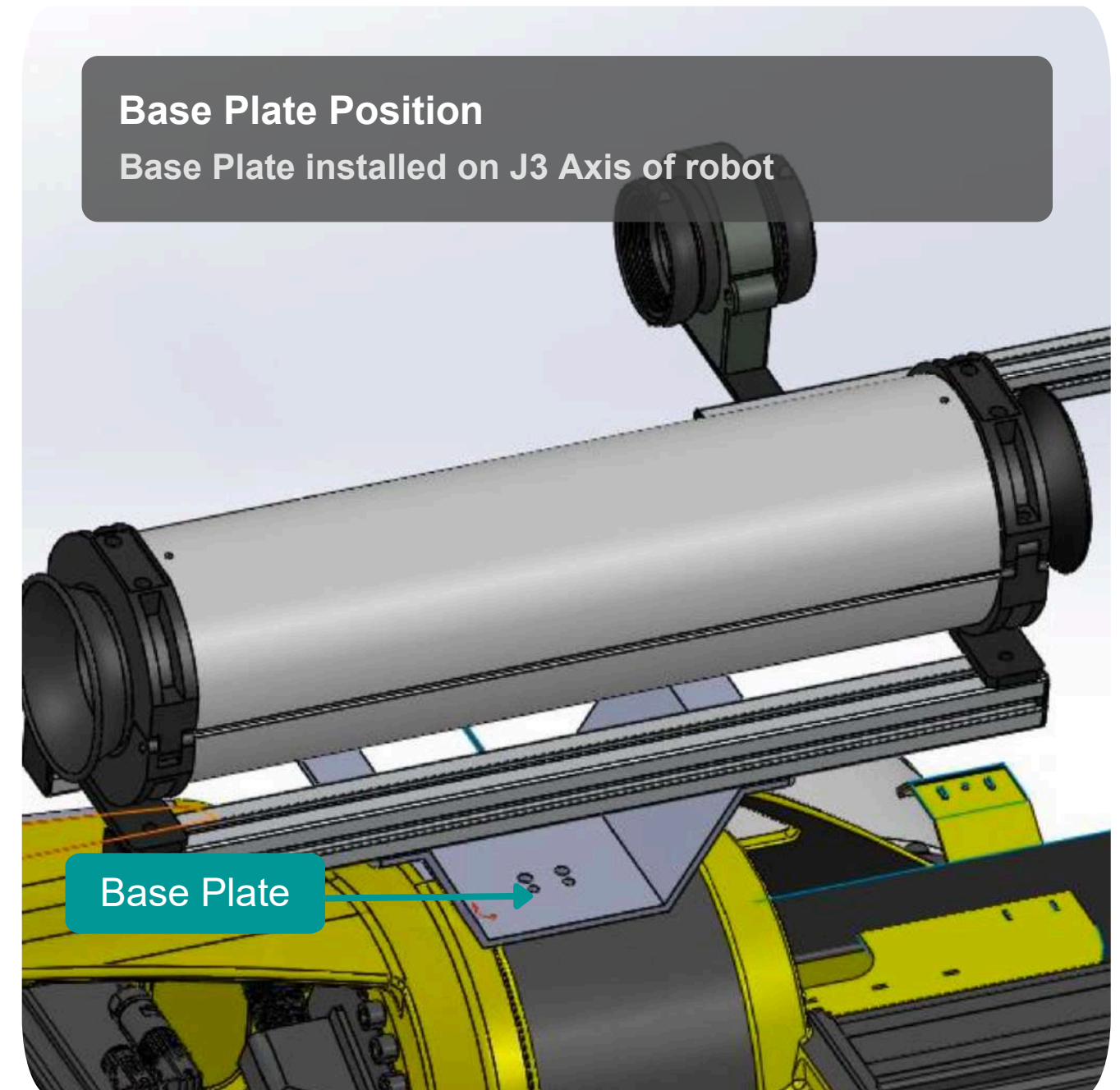
Place the base plate along with the KVC Retention system onto the J3 axis mounting area. Verify proper alignment before proceeding.

Secure the Plate

Insert M8 Allen bolts into the mounting holes and tighten securely using an Allen key. Ensure even torque distribution.

Verify Alignment

Ensure the base plate is level and aligned correctly with the robot's structure before proceeding to the next step.



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INSTALLATION PROCEDURE

Support Brackets Installation

Attach Retention System Components

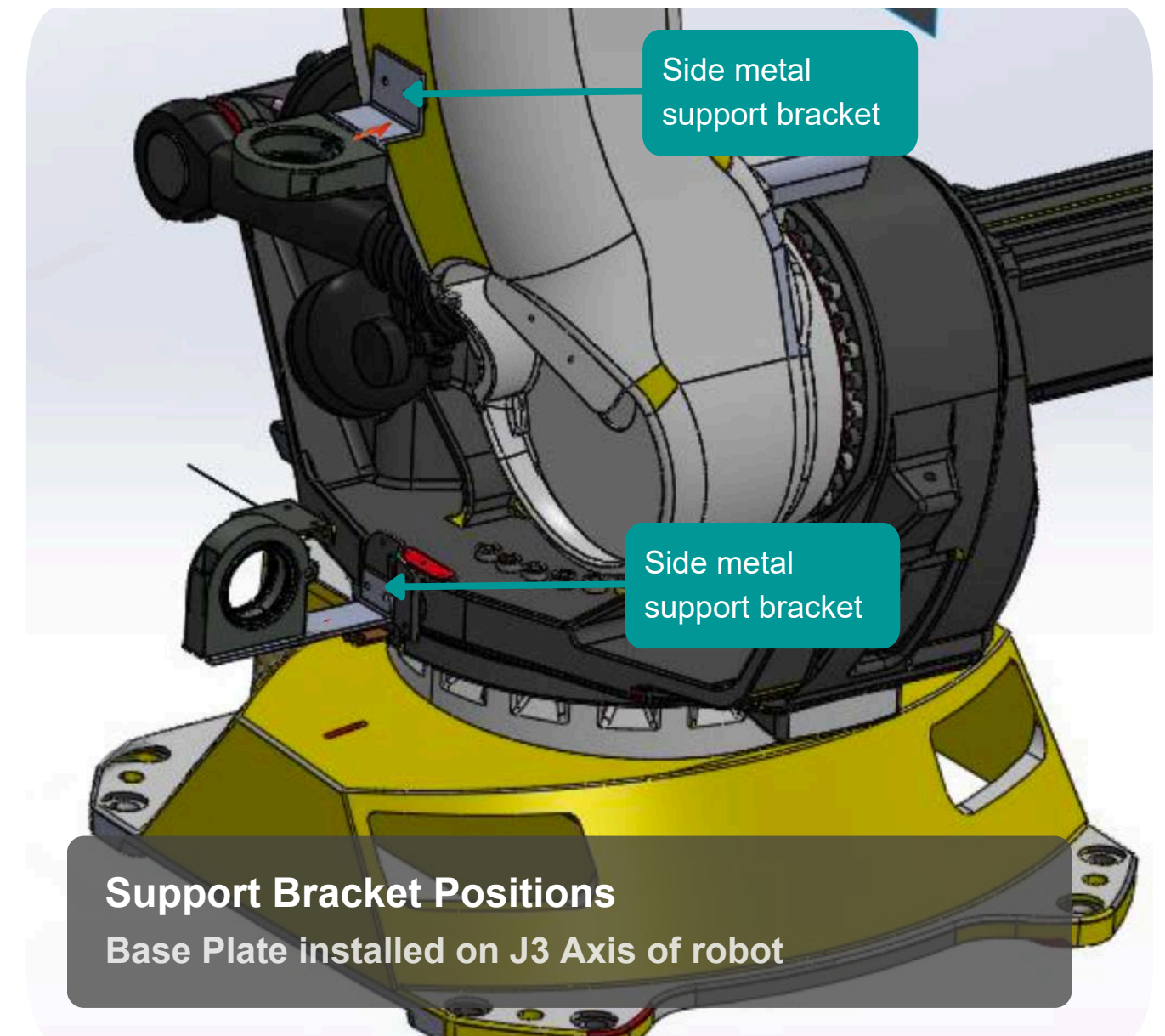
Attach the side metal support with bracket along the J2 and J1 axes according to the pre-marked locations from Step 1.

Secure the Brackets

Attach support brackets to the robot using provided M5 Allen bolts and washers. Tighten firmly while ensuring alignment and stability.

Check Stability

Ensure the metal supports are firmly mounted without any excessive movement or play.



4

INSTALLATION PROCEDURE

Tennis Racket Mounting

Position the Tennis Racket

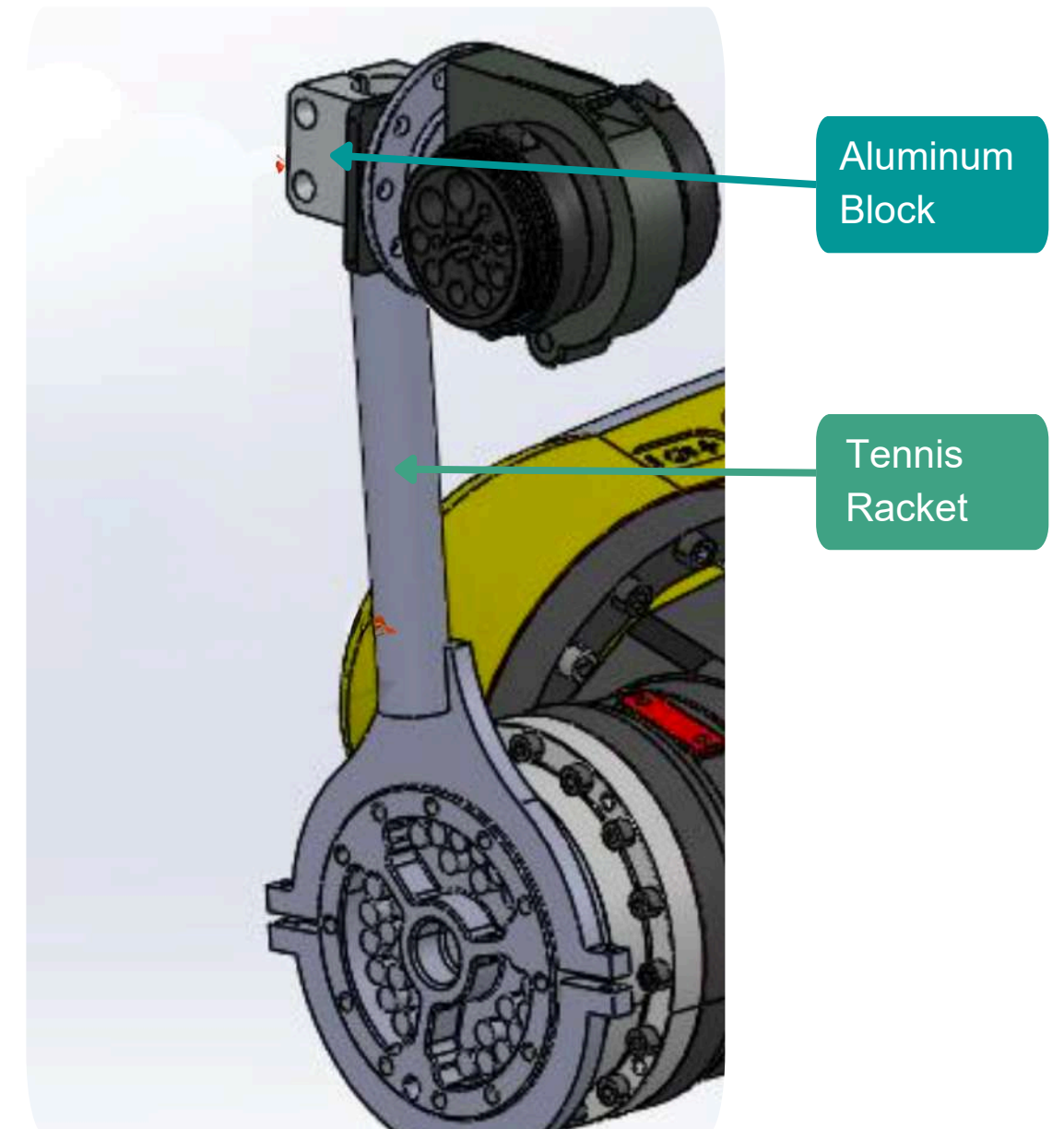
Align the tennis racket mount with the J6 axis mounting point using the Aluminum block and bracket (PASSB-70M).

Fasten the Racket

Secure the racket using the bolts provided, ensuring the bracket is tight but does not hinder the robot's motion range.

Adjustment

Adjust the position if needed to ensure smooth operation during demonstration or production cycles.



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INSTALLATION PROCEDURE

Cable Routing & Conduit Installation

Plan the Cable Route

Plan the routing of the cables, ensuring that they do not interfere with any moving parts of the robot.

Install Spring Holder & Trumpet

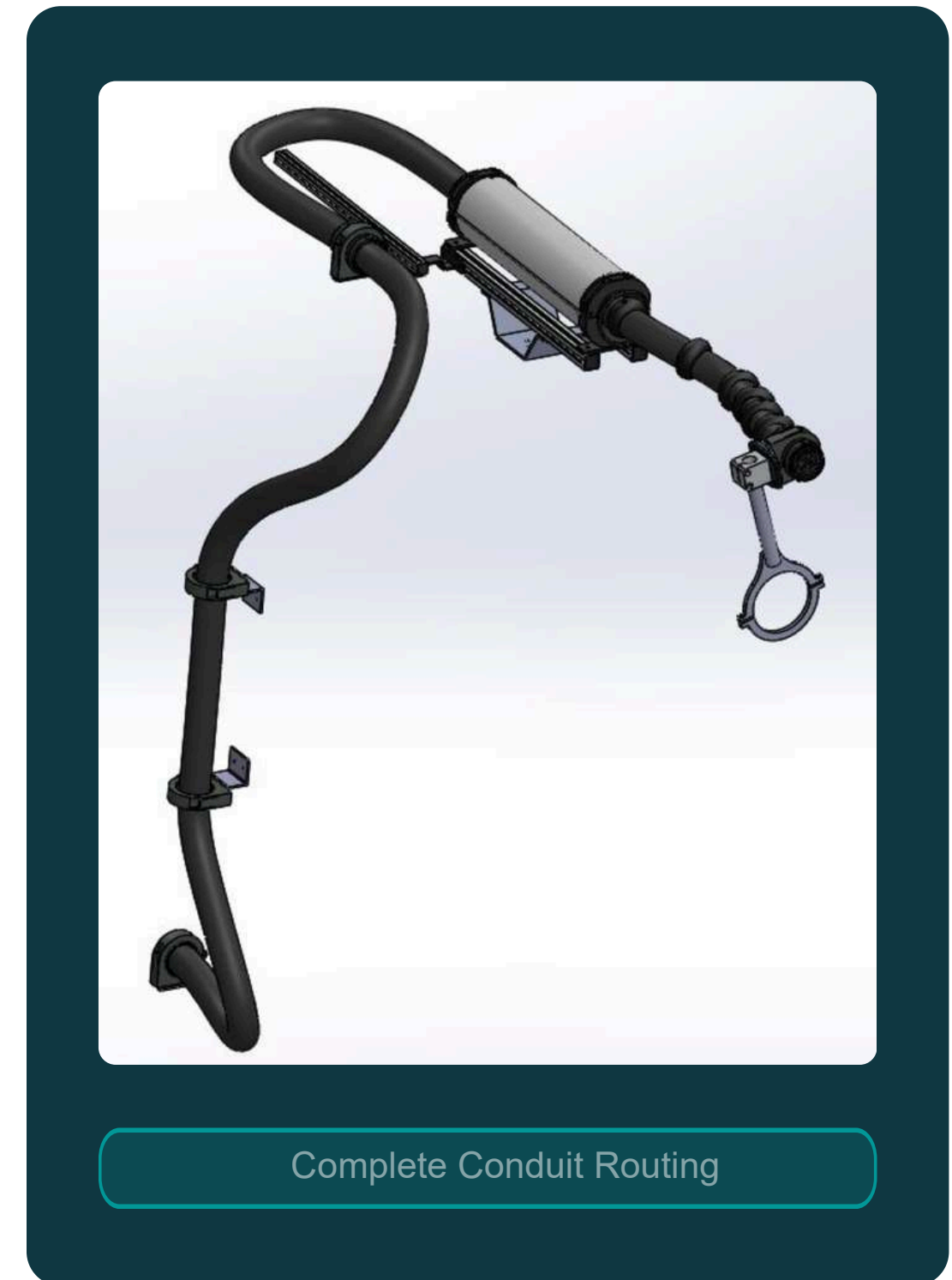
Open the retention position and secure the Trumpet (B00763-12) and Spring Holder (B00781-34), then close the cover.

Install Conduit

Use Sliding Jaw (PAGLB-70) and Connecting Joint (PAVGB-70) to guide the conduit along the robot arm, maintaining tension and avoiding slack.

Secure Conduit

Place conduit in the clamps and holders, ensuring cables are not over-tightened to prevent damage.



Complete Conduit Routing

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IPOST-INSTALLATION PROCEDURE

Verification & Testing



Check All Fasteners

Double-check all fasteners for tightness and security. Apply thread locker if necessary.



Verify Cable Tension

Ensure that the cables and hoses are not overly taut or prone to entanglement during robotic movement.



Test Full Range of Motion

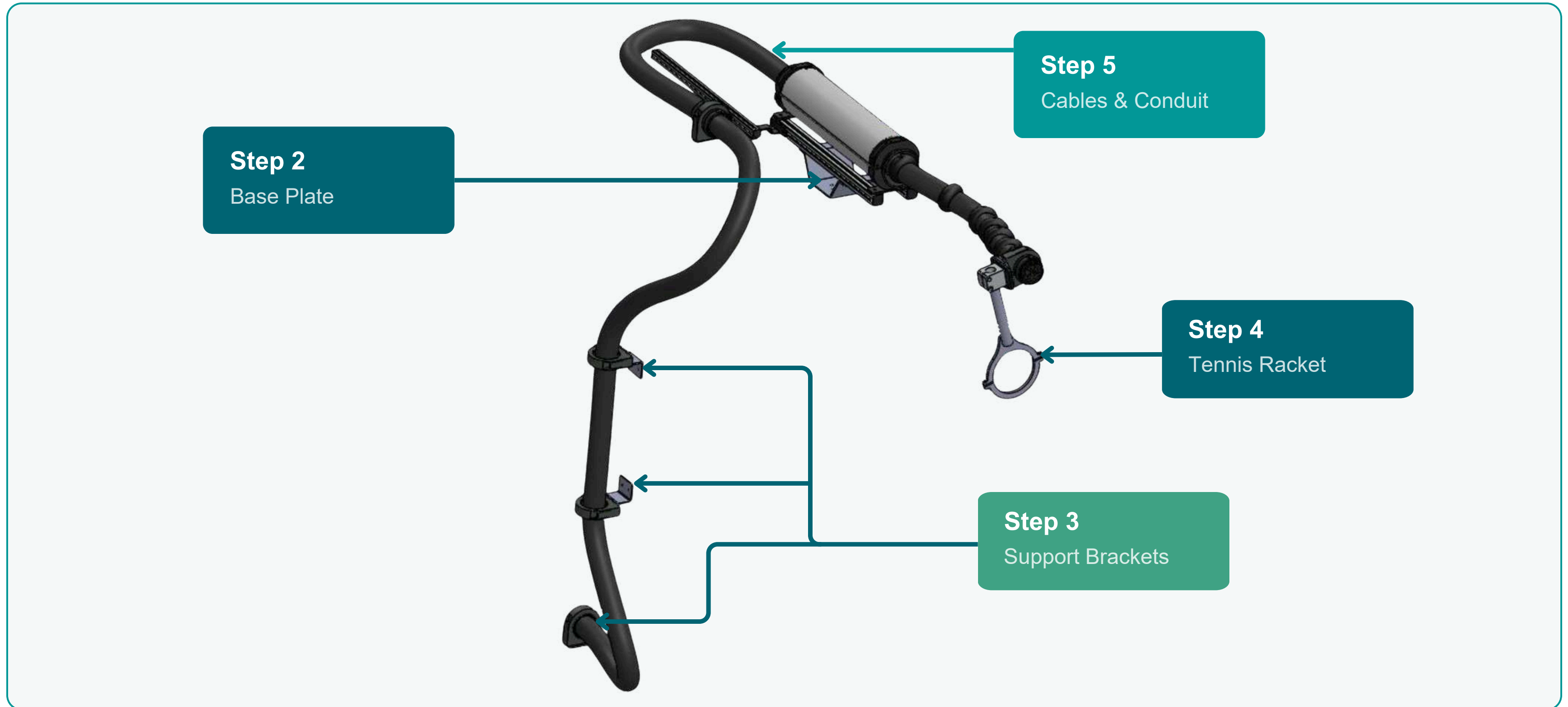
Test the full range of motion of the robot arm to verify that the retention system and dress pack function correctly without obstruction.



Conduct Test Run

Conduct a test run with the end effector to ensure proper installation and functionality during operation.

Complete Assembly Overview



Troubleshooting Tips

Cable Tension Issues

If cables or conduit are too tight, adjust the length of the clamps or add additional slack (loop) where needed. Ensure proper tension allows for full range of motion.

Bracket Misalignment

Loosen and realign the brackets if the robot's motion is hindered by the retention system. Verify alignment against reference marks before re-tightening.

Loose Fasteners

Apply thread locker to fasteners that may loosen during operation. Check fastener torque regularly during maintenance cycles.

For additional support, contact Kay Vybin Corporation technical team

Conclusion

- ✓ The KVC Retention System ensures efficient and safe cable management for industrial robots
- ✓ Follow all installation steps carefully for optimal performance and longevity
- ✓ Regular maintenance is key to long-term functionality and reliability

This guide is intended for technical demonstrations and provides a clear understanding of the KVC Dresspack Retention System installation process. Please also follow any further instructions as directed by the Kay Vybin technical team.

THANK YOU

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