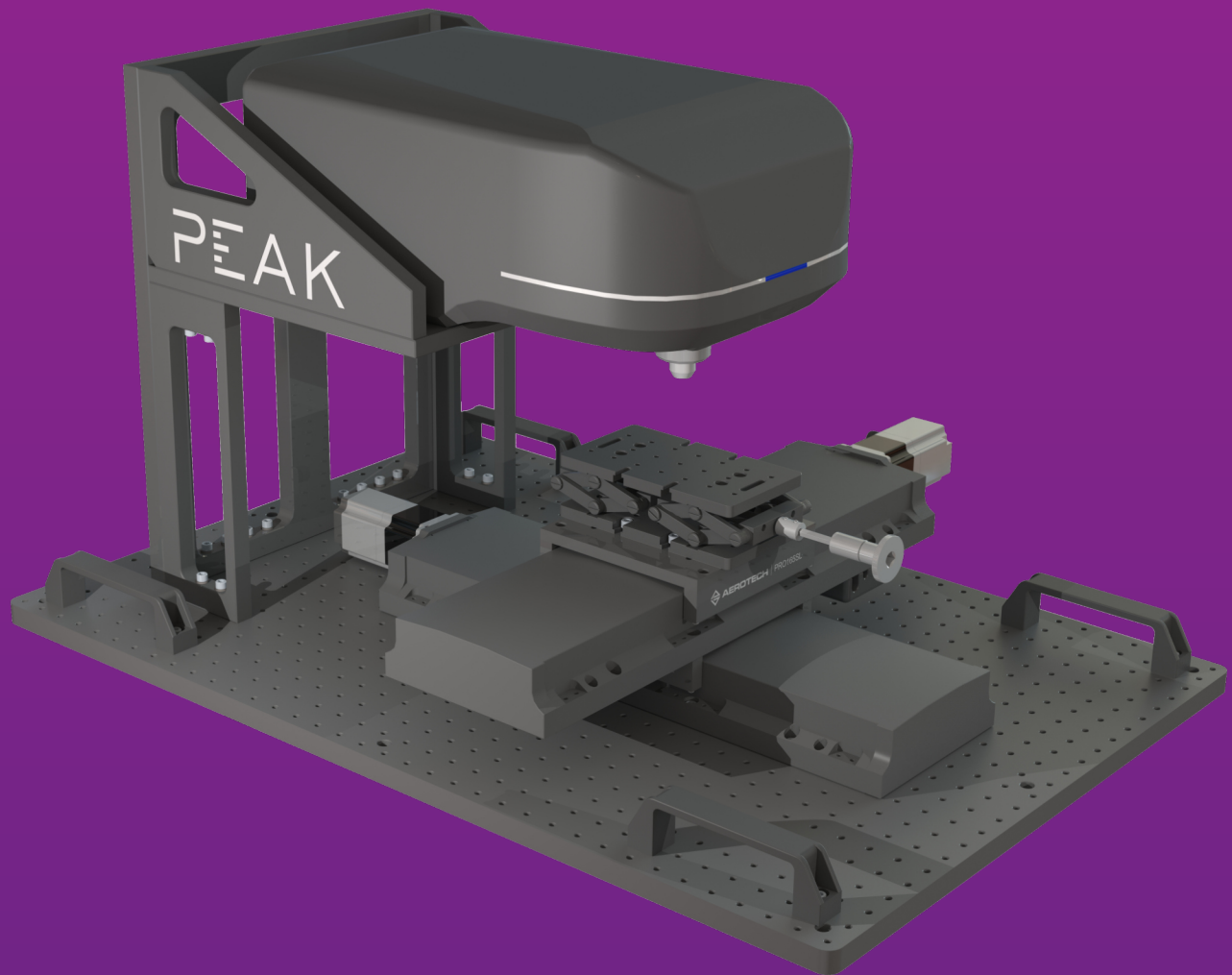


LF-BE

Large Format
Base Economy Platform



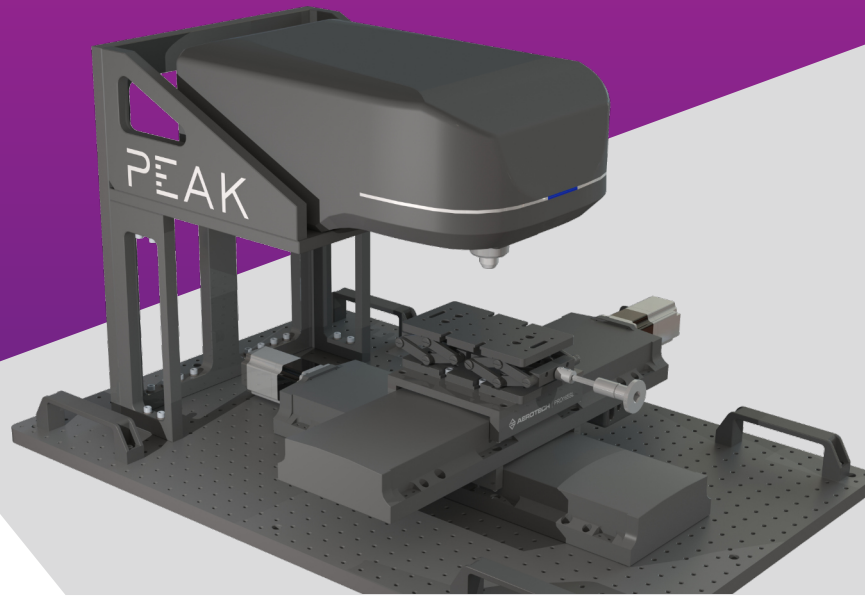
VK-X & VR Measurements,
Over Larger Areas

Contents

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| Example Part String | 5 |
| Examples of Ordering Options | 6 |
| What to Order from Keyence | 7 |
| Accessory Fixture Plates | 9 |

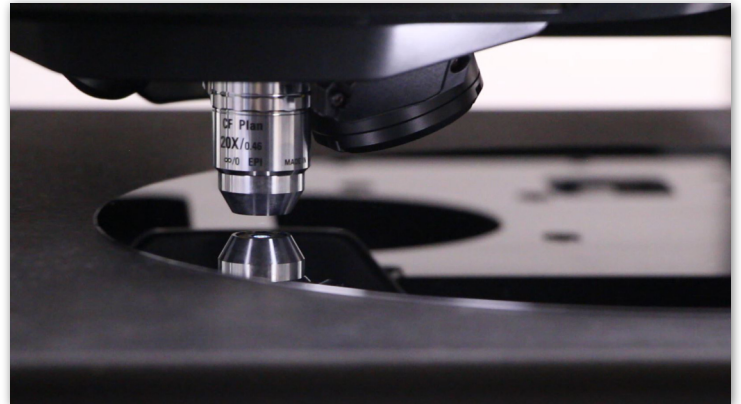
LF-BE

Large Format Base Economy Platform



How Does it Work?

Larger stages increase the measuring area and sample payload capacity. The motion is controlled directly by the internal Keyence stage controller and the user works 100% from the Keyence software interface (VK Viewer or VR Viewer).



Wafer scanning with the VK-X microscope

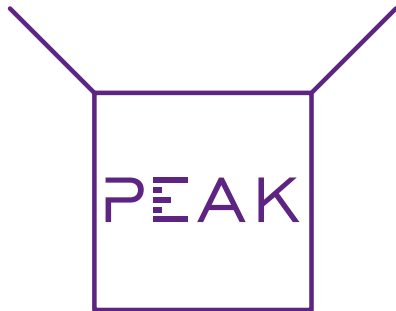


Works with Keyence VK-X and VR heads



**FAST DELIVERY
AVAILABLE**

**QUICK AND
EASY
INSTALLATION**



More Travel, More Payload

Quickly and easily upgrade your inspection volume to 310x310x60mm while also supporting payloads up to 35 kg (75 lbs). Start measuring your large parts quickly with the LF-BE - no rigging required, no special facility requirements, no hassle.

Specs

LF-BE Specifications

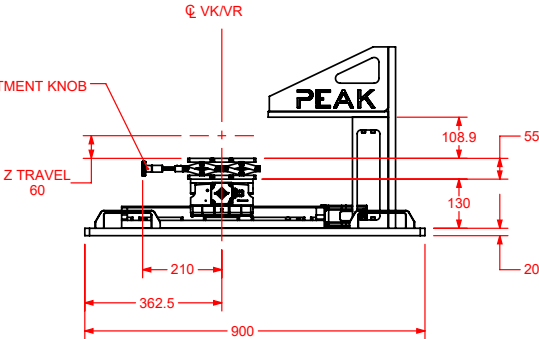
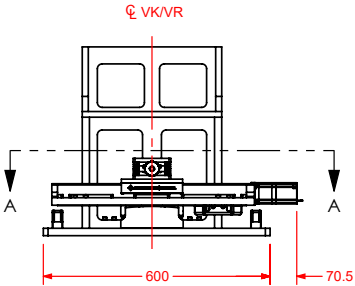
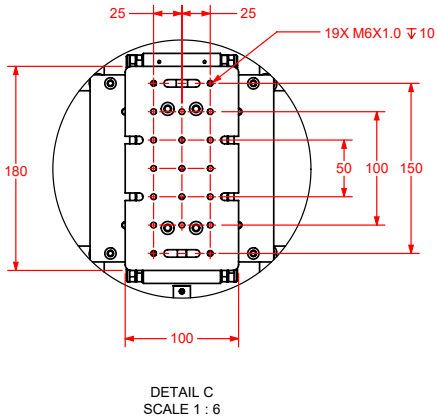
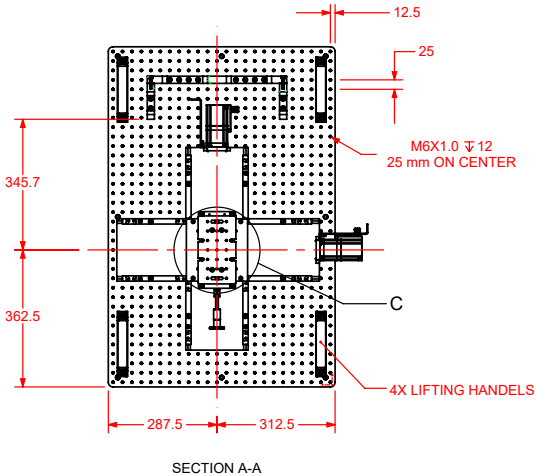
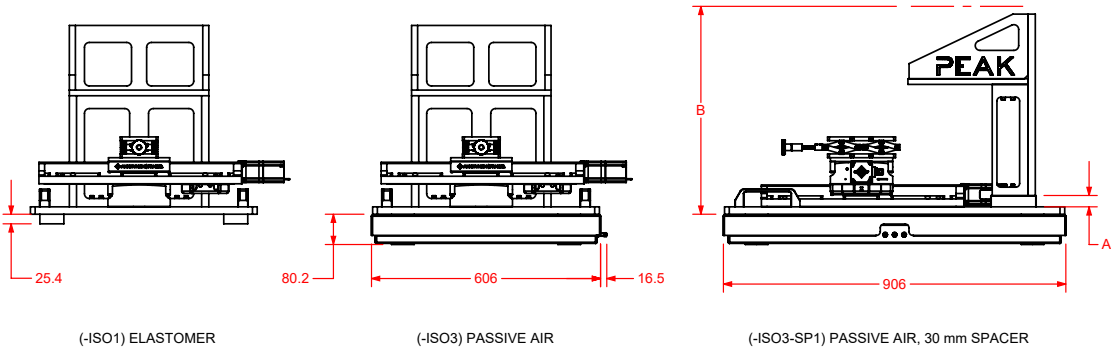
| | |
|--|---|
| Inspection Volume | 310 x 310 x 60 mm |
| Maximum Part Thickness | 210 mm (-SP5 option) with 60 mm Vertical Adjustment |
| XY Performance | |
| Accuracy | $\pm 10 \mu\text{m}$ |
| Repeatability | $\pm 1 \mu\text{m}$ |
| Max Jog Speed | 25 mm/sec |
| Mass Information | |
| Base System | 60 kg |
| Air Isolation (-ISO3, optional) | 28 kg |
| Tip Tilt Stage (-TIPTILT, optional) ¹ | 11 kg |
| VK-X / VR Measurement Head | 13 / 28 kg |
| Spacers (-SPx, optional) | 3 kg (per block) |
| Mechanical Specifications | |
| Payload Capacity | 35 kg |
| MTBF (Mean Time Before Failure) | 20,000 Hours |

¹Tip-tilt stage sold on separate line, option required for integration

Dimensions

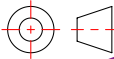
| AXIS | NOMINAL TRAVEL | LIMIT TRAVEL |
|------|----------------|--------------|
| X | 310 | 326 |
| Y | 310 | 326 |
| Z | 60 | 60 |

| SPACER | A | B -VK | B -VR |
|--------|-----|----------|----------|
| NONE | 0 | 511 | 558 |
| -SP1 | 30 | 541 | 588 |
| -SP2 | 60 | 571 | 618 |
| -SP3 | 90 | 601 | 648 |
| -SP4 | 120 | 631 | 678 |
| -SP5 | 150 | 661 | 708 |

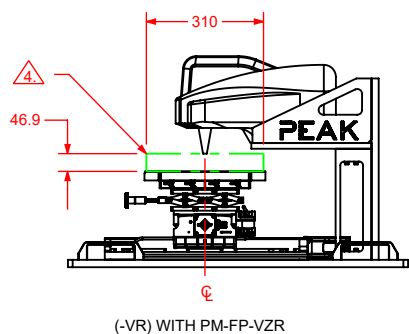
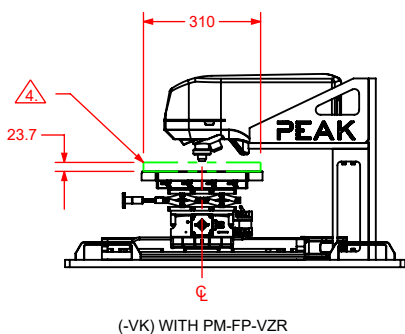
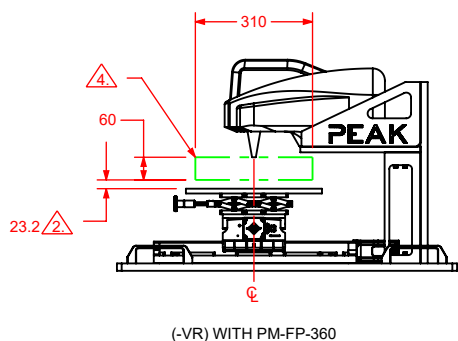
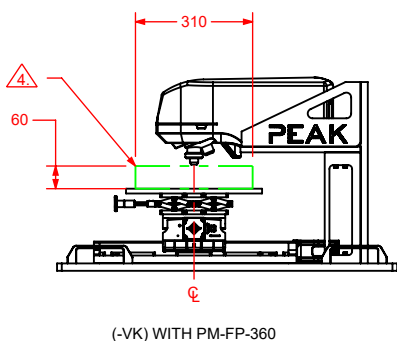
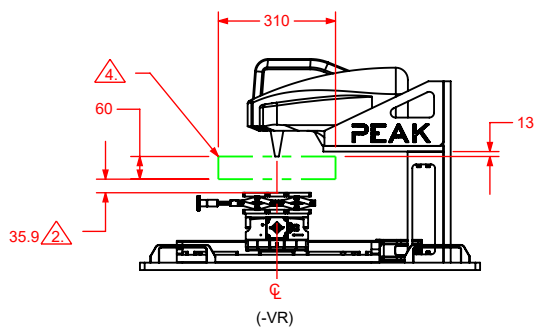
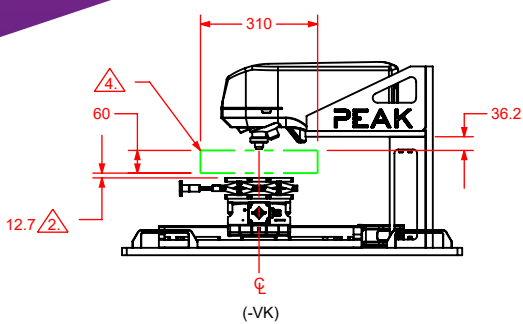


NOTES:
 ∇ Z-AXIS SHOWN AT THE MINIMUM TRAVEL POSITION

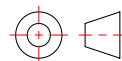
DIMENSIONS: MILLIMETERS



Dimensions



DIMENSIONS: MILLIMETERS



NOTES:

- 1 Z-AXIS SHOWN AT THE MINIMUM TRAVEL POSITION
- 2 MINIMUM PART THICKNESS OR FIXTURE HEIGHT REQUIRED TO REACH THE MEASUREMENT VOLUME
- 3 -SP(X) OPTION WILL INCREASE THE IMAGE PLANE HEIGHT BY THE CORRESPONDING "A" DIMENSION
- 4 MEASUREMENT VOLUME

| SPACER | A/3 |
|--------|-----|
| NONE | 0 |
| -SP1 | 30 |
| -SP2 | 60 |
| -SP3 | 90 |
| -SP4 | 120 |
| -SP5 | 150 |

Ordering

Required

LF-BE

-ISO1

-VK

-TIPTILT

-SP1

Product

Isolation

-ISO1: Elastomer

-ISO3: Passive Air

Microscope Head¹

-VR: VR-5100/5200/6100/6200

-VK: VK-X1050/1100/3050/3100

Accessory*

-TIPTILT²: ThetaX / ThetaY Stage

Spacer*

-SP1: 30 mm Spacer

-SP2: 60 mm Spacer

-SP3: 90 mm Spacer

-SP4: 120 mm Spacer

-SP5: 150 mm Spacer

* Optional - omit if not desired

¹ Provided by Keyence

² Tip-tilt stage sold on separate line, option required for integration

Ordering

What's included?

Base Product

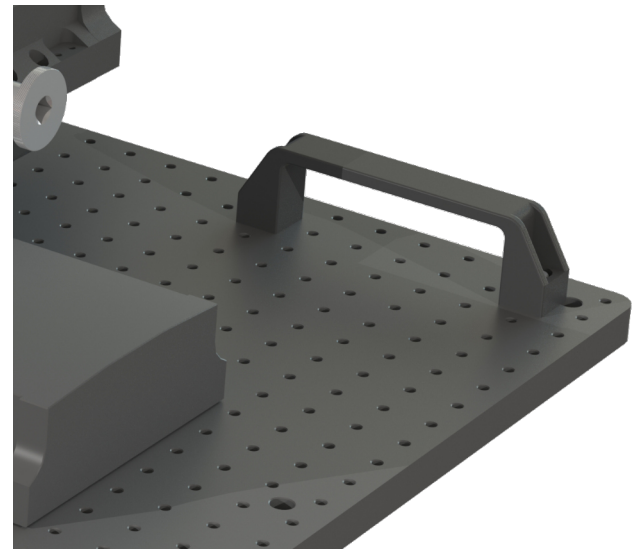
- Motorized XY stage
- Manual V stage
- Stage control cable to Keyence controller
- Lifting handles for easy positioning
- Breadboard baseplate
- Electric driver for quickly adjusting V axis

Isolation Plate (optional)

- One-time fill vibration isolation plate
- Manual pump for initial inflation



LF-BE Isolation Plate (-ISO3, optional)



LF-BE Lifting Handle and Breadboard baseplate

Control for your environment

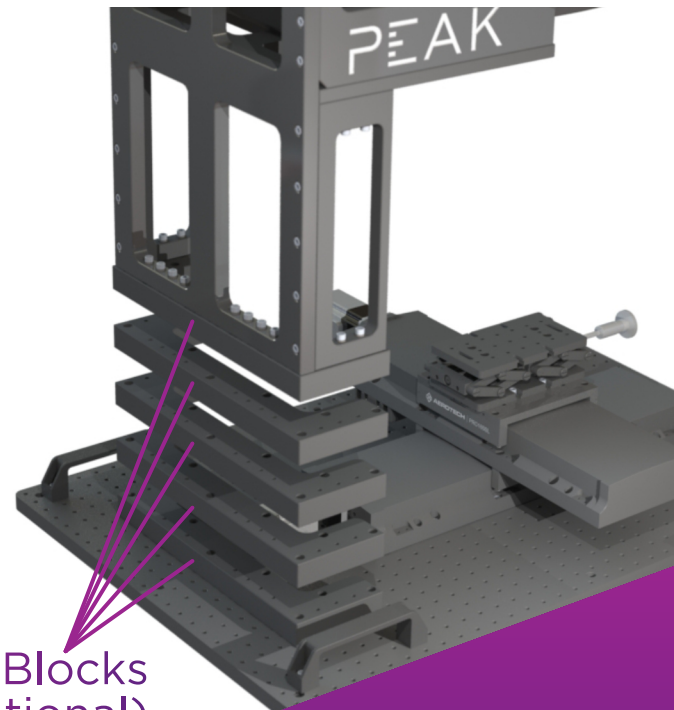
We'll work with you to characterize your floor vibrations and identify any necessary isolation measures to preserve measurement performance. Our standard air isolation systems are available to make sure your measurements are rock solid. See our [white paper](#) for full details.

Adapt to your needs

Thick parts? Add our spacer blocks to make room for your parts while preserving vertical adjustment. Easily add up to 150 mm of additional clearance.

Make part fixturing easy with our compatible Fixture Plates featuring both vacuum part holding or breadboard mounting options. See the end of this catalog for more details!

Need even more travel, higher performance, or advanced automation capabilities? See our [LF-B](#) and [LF-X](#) product lines for standard offerings up to 600x600 mm and/or advanced automation software designed to bring the VK-X into your production environment.

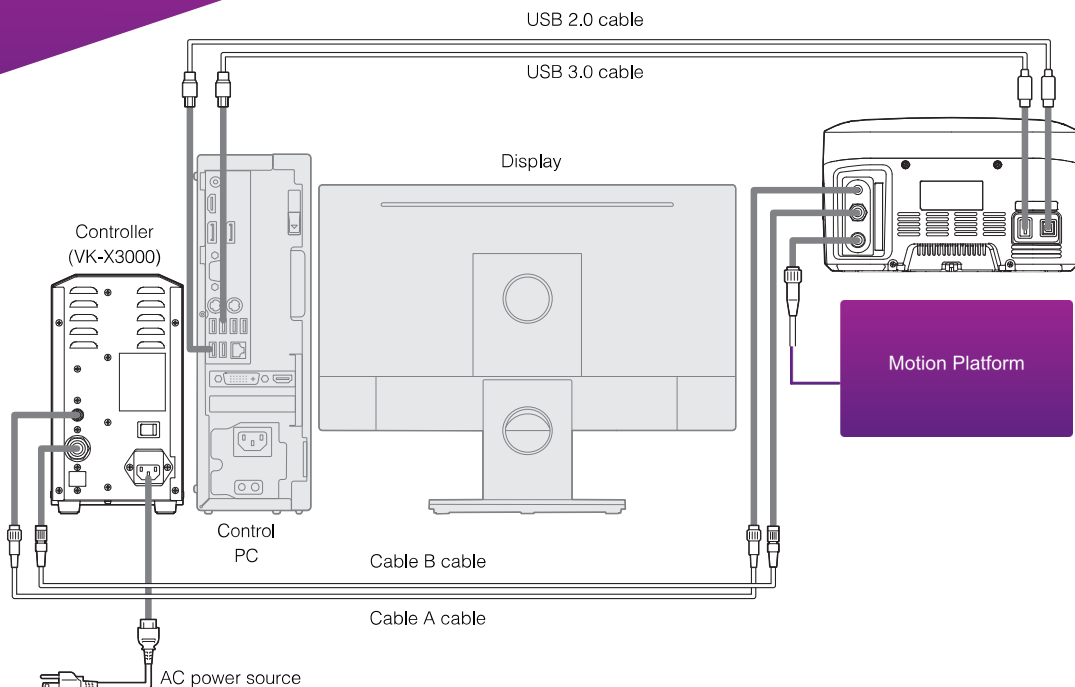


Spacer Blocks (Optional)

PEAKTM
METROLOGY

An AEROTECH Company

VK-X Kit



Complete the system

Peak provides all the motion equipment you need to be up and running in no time. The Keyence equipment listed below is required to complete the system. Have questions? Don't hesitate to [contact us](#) for answers on what is required.

Microscope Head

VK-X1050*, VK-X1100*, VK-X3050, or VK-X3100

Controller

VK-X1000 or VK-X3000

Software

VK-A3 Viewer and Analyzer (comes standard)

VK-H3J Image Stitching Module (as needed)

VK-H3CA CAD Comparison Module (as needed)

Cables

Cable A and Cable B in 2 m lengths

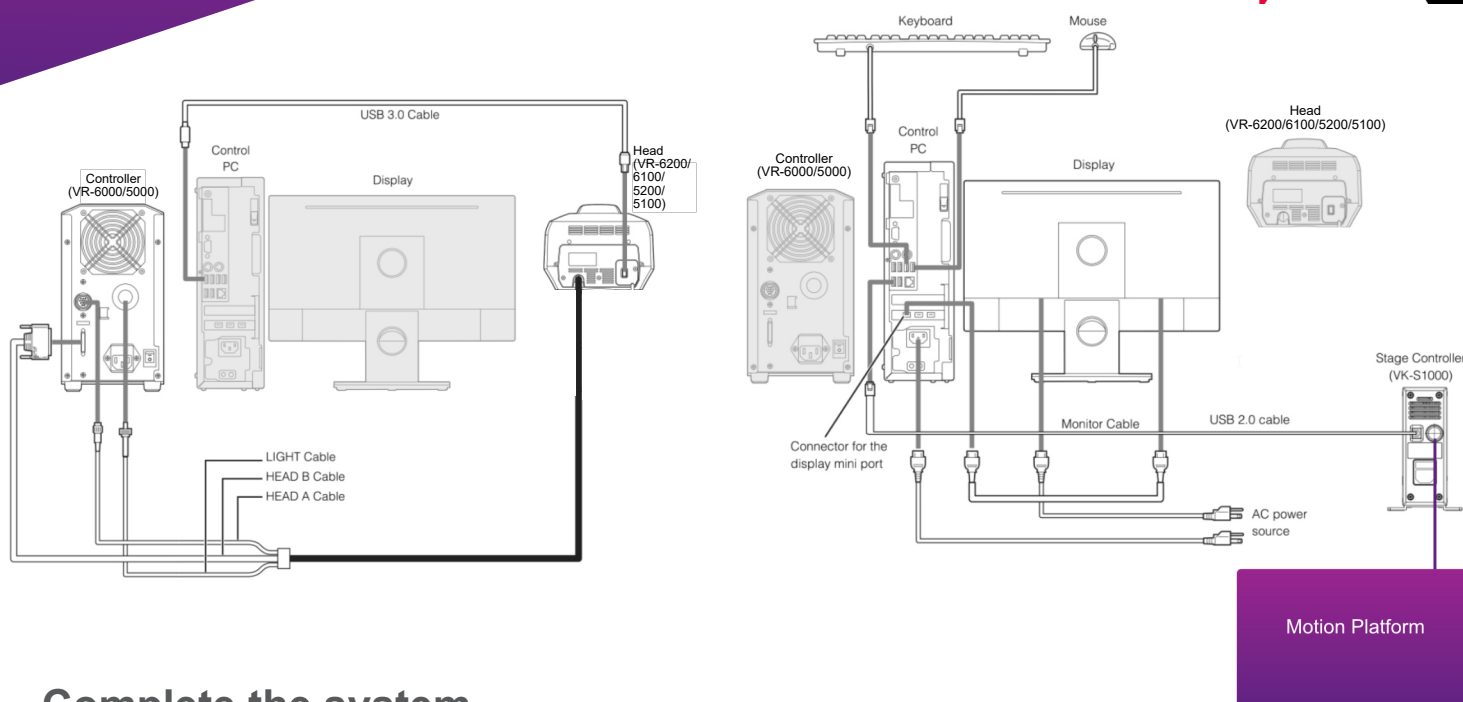
USB2.0 Type B Male to USB Type A Male in 2 m length

USB3.0 Type Micro B Male to USB Type A Male in 2 m length

Control PC

Provided by Keyence (optional)

*Contact Peak for support connecting previous generation VK models



Complete the system

Peak provides all the motion equipment you need to be up and running in no time. The Keyence equipment listed below is required to complete the system. Have questions? Don't hesitate to [contact us](#) for answers on what is required.

Microscope Head

VR-5100*, VR-5200*, VR-6100, or VR-6200

Controller

VR-5000 or VR-6000

Stepper Controller

VK-S1000K

Software

VR-A2 VR Viewer Software (comes standard)

VR-H4J Measurement Expansion Module (as needed)

Cables

USB2.0 Type B Male to Type A Male in 2 m length

USB3.0 Type A Male to Type A Male in 2 m length

Control PC

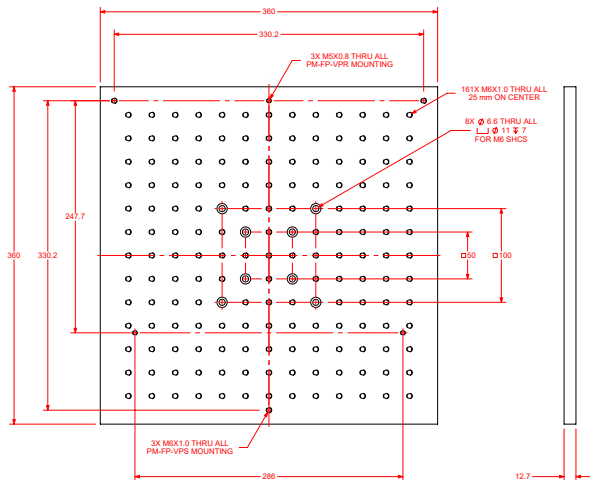
Provided by Keyence (optional)

*Contact Peak for support connecting previous generation VR models

Fixtures

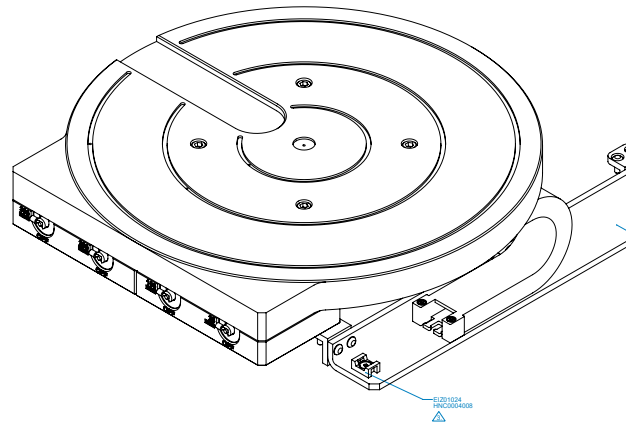
PM-FP-P360

360 mm Square Tooling Plate



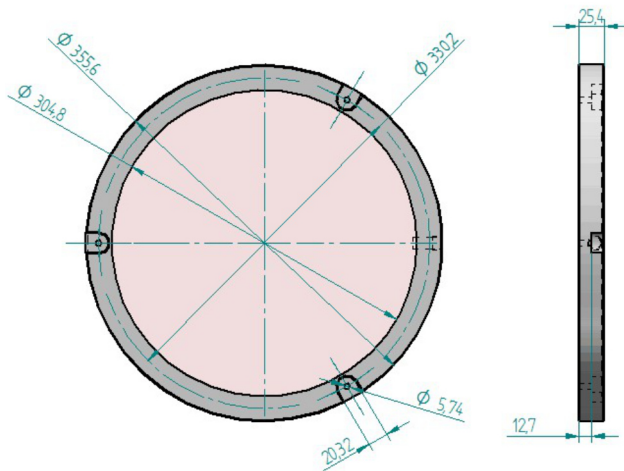
PM-FP-VZR

300 mm Dia Zone-Selectable Vacuum Chuck
Zones: 25, 100, 200, and 300 mm Diameters



PM-FP-VPR

300 mm Diameter Porous Vacuum Chuck



PM-FP-VPS

300 mm Square Porous Vacuum Chuck

