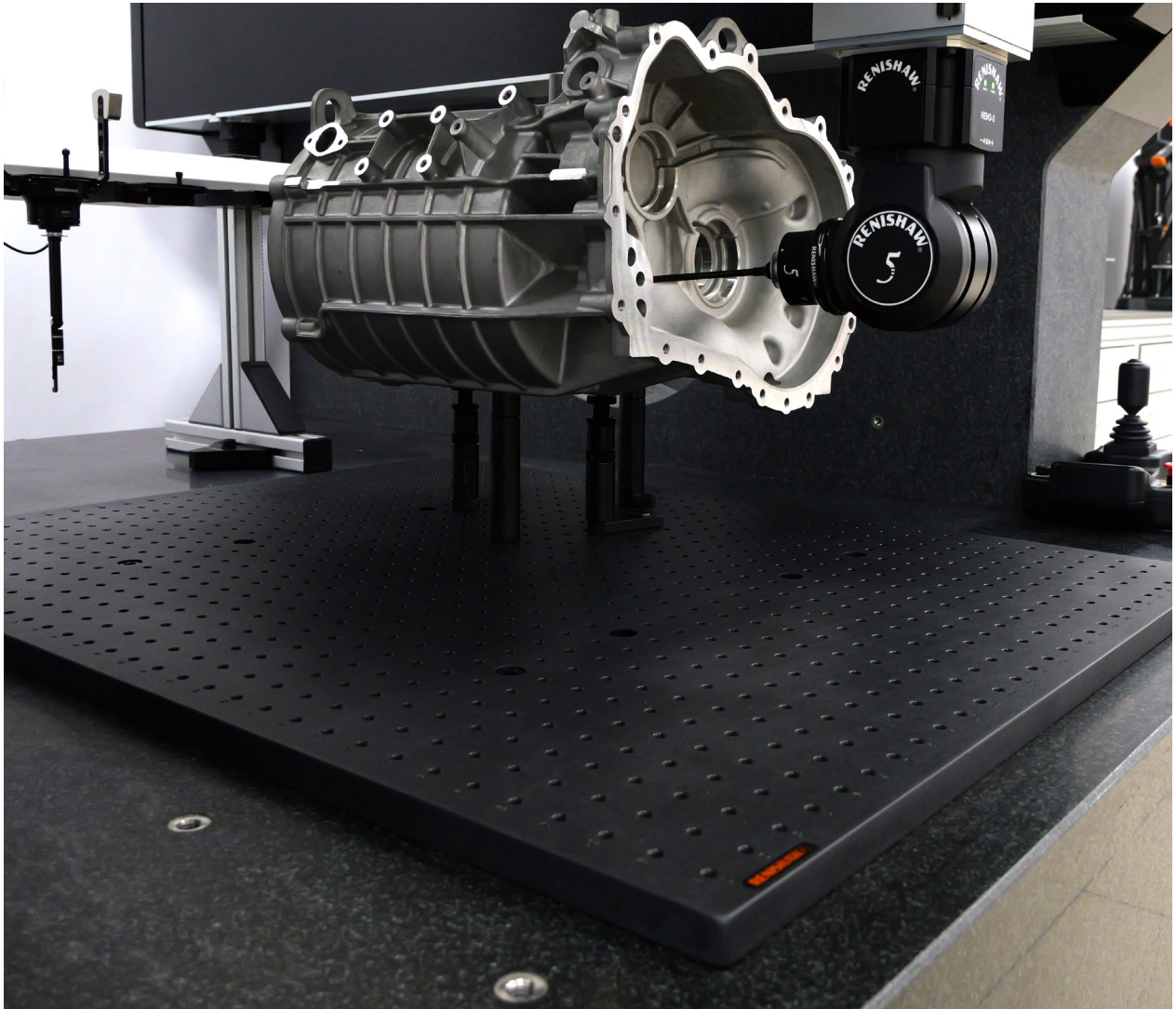


Metrology fixturing base plates for AGILITY® CMM systems



Contents

General information	3
Intended use	3
Warranty	3
Care of equipment	3
Changes to Renishaw products	3
Product compliance	3
Safety	4
Initial operation	4
Fixture plate installation	4
Cleaning and maintenance	5
Installing a single fixture plate	5
Installing two fixture plates	6
Bolt holes and insert location for specific AGILITY models	7
S 796	7
S 12129	7
S 9158	8
S 12209	9
S 162412	10
L 555	11
L 796	11
L 9158	12
L 122010	13
L 122410	14
L 123010	15
L 162012	16
L 162412	17
L 163512	18
AGILITY model user guides	19

General information

Intended use

The Renishaw AGILITY range of co-ordinate measuring machines are a highly accurate and robust solution for the dimensional inspection of manufactured parts. This manual covers the installation and system maintenance of metrology fixturing base plates for AGILITY CMMs.

CAUTION: The system must only be operated by staff who have followed a Renishaw approved training course, and in accordance with the instructions and advice contained in this manual. If in doubt about the particular requirements of your Renishaw AGILITY measuring system, contact your local Renishaw office for advice and guidance.

Warranty

Renishaw plc warrants its equipment for a limited period (as set out in our Standard Terms and Conditions of Sale) provided that it is installed exactly as defined in associated Renishaw documentation.

Prior consent must be obtained from Renishaw if non-Renishaw equipment (e.g. interfaces and/or cabling) is to be used or substituted. Failure to comply with this will invalidate the Renishaw warranty.

Claims under warranty must be made from authorised service centres only, which may be advised by the supplier or distributor.

Care of equipment

Renishaw probes and associated systems are precision tools used for obtaining precise measurements and must therefore be treated with care.

Changes to Renishaw products

Renishaw reserves the right to improve, change or modify its hardware or software without incurring any obligations to make changes to Renishaw equipment previously sold.

Product compliance

For product compliance, refer to the AGILITY compliance document (H-1000-0402). This can be obtained by contacting your local sales representative.

Safety

WARNING: Fixture plates may be over safe handling limits, therefore always ensure complete risk assessments, necessary PPE and caution is considered when undertaking installation.

WARNING: Each AGILITY CMM has a maximum weight capacity allowance. Include the weight of any fixture plate(s) and fixturing when in use. Maximum weights can be found in the user guide relevant to your AGILITY model (see page 19).

CAUTION: Always ensure that all maintenance tasks are fully understood before commencing. For information on how to perform user-specific maintenance tasks, refer to the user guide relevant to your AGILITY model (see page 19).

CAUTION: Only approved Renishaw components or materials must be used during care and maintenance of the AGILITY system. Failure to comply could lead to personal injury, damage to the system and invalidation of the system warranty.

Initial operation

When your AGILITY® system is delivered, we recommend that the crated machine be left, unopened, in an indoor location that is within ± 5 °C of the machine installation site, for a minimum of a week. This allows the system to acclimatise to the environment temperature prior to installation and commissioning.

Metrology fixturing base plate(s) must acclimatise to the working temperature of the environment before use. We recommend that each plate is left to acclimatise for a minimum of 24 hours prior to installation. The AGILITY system must be qualified prior to the installation of the base plate(s).

Fixture plate installation

The granite bed has M10 threaded inserts regularly spaced across the working area in a 200 mm × 200 mm grid pattern. This provides location mounts for the fixture plate(s).

Every set of plates is shipped with fasteners (M10 × 50 mm cap head screws). These allow the plate(s) to be bolted down using a 8 mm hex bit (not included).

CAUTION: Bolts tightened to the M10 threaded inserts should not exceed a torque of 30 Nm. Torque the bolts down to a maximum of 20 Nm.

Sets of multiple plates are shipped with identification tags, for example: plate one, plate two and plate three, to mark each plate once secured to the granite bed.

Cleaning and maintenance

CAUTION: Clean the AGILITY CMM thoroughly before installing fixture plates.

Use the following cleaning materials to provide general care to the system. See the relevant COSHH data sheets for full safety instructions for each item.

IPA cleaner	Surface cleaner	Lint free wipes	Paper towel	Microfibre brush
				

- Ensure the granite bed is clear of parts, fixturing or calibration artefacts.
- Remove any large deposits of dirt or dust with a vacuum cleaner or brush.
- Apply a sufficient amount of surface plate cleaner to the granite bed.
- Clean the granite with paper towels, ensuring that all excess cleaner is removed and the bed is dry.
- If required, use a vacuum cleaner to remove any debris that has dropped into the M10 inserts.

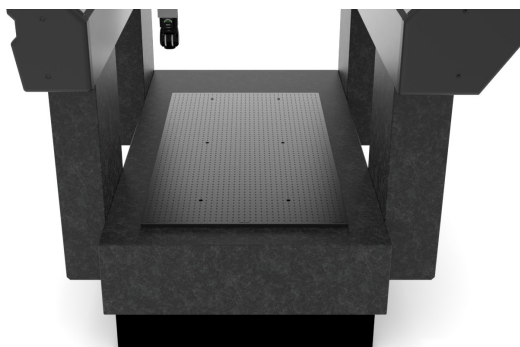
NOTE: Do not attach any components to the bed of the machine until it is completely dry.

Installing a single fixture plate

For details of which M10 inserts to choose when attaching your fixture plate, refer to the user guide relevant to your AGILITY model (see page 19).

Using the M10 × 50 mm cap head screws and an 8 mm hex key, tighten the bolts to 20 Nm.

CAUTION: Do not to exceed 30 Nm.



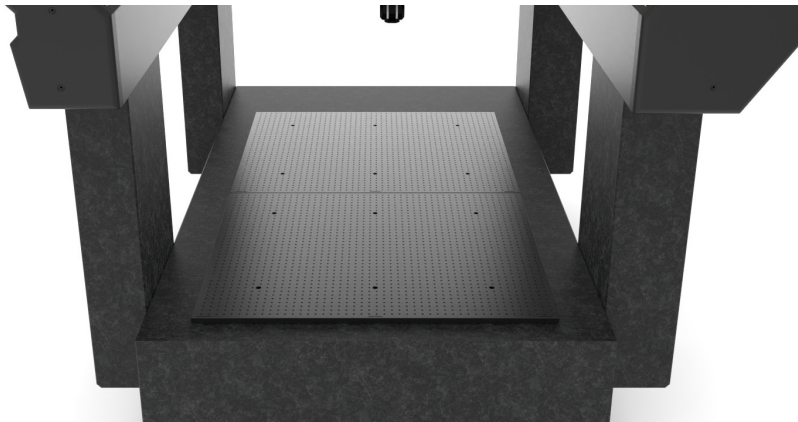
Installing two fixture plates

Align the two plates with the corresponding bolt holes (shown on pages 7 to 18) and loosely tighten using the M10 × 50 mm cap head screws and an 8 mm hex key.

Use a straight edge to square and space the plates accordingly.

Once aligned, bolt the plates down to the granite M10 threaded inserts to 20 Nm.

CAUTION: Do not exceed 30 Nm.



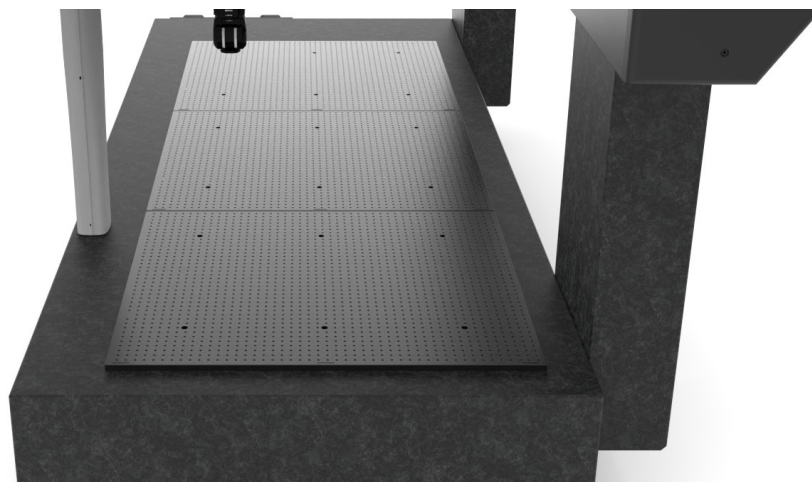
Installing three fixture plates

Align the three plates with the corresponding bolt holes (shown on pages 7 to 18) and loosely tighten using the M10 × 50 mm cap head screws and an 8 mm hex key.

Use a straight edge to square and space the plates accordingly.

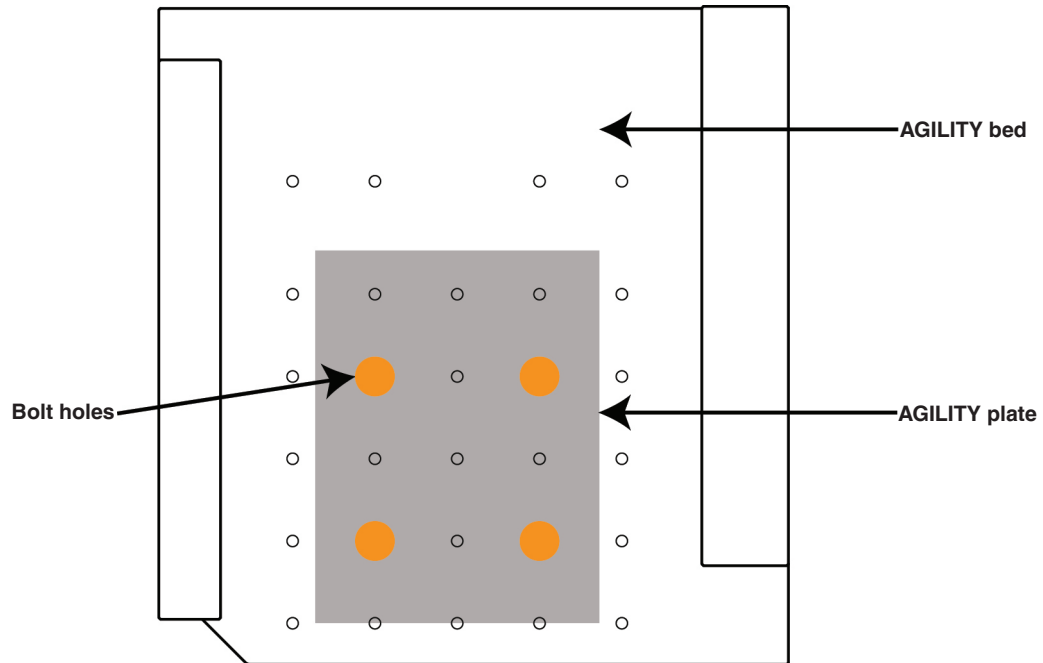
Once aligned, bolt the plates to the granite M10 threaded inserts to 20 Nm.

CAUTION: Do not exceed 30 Nm.

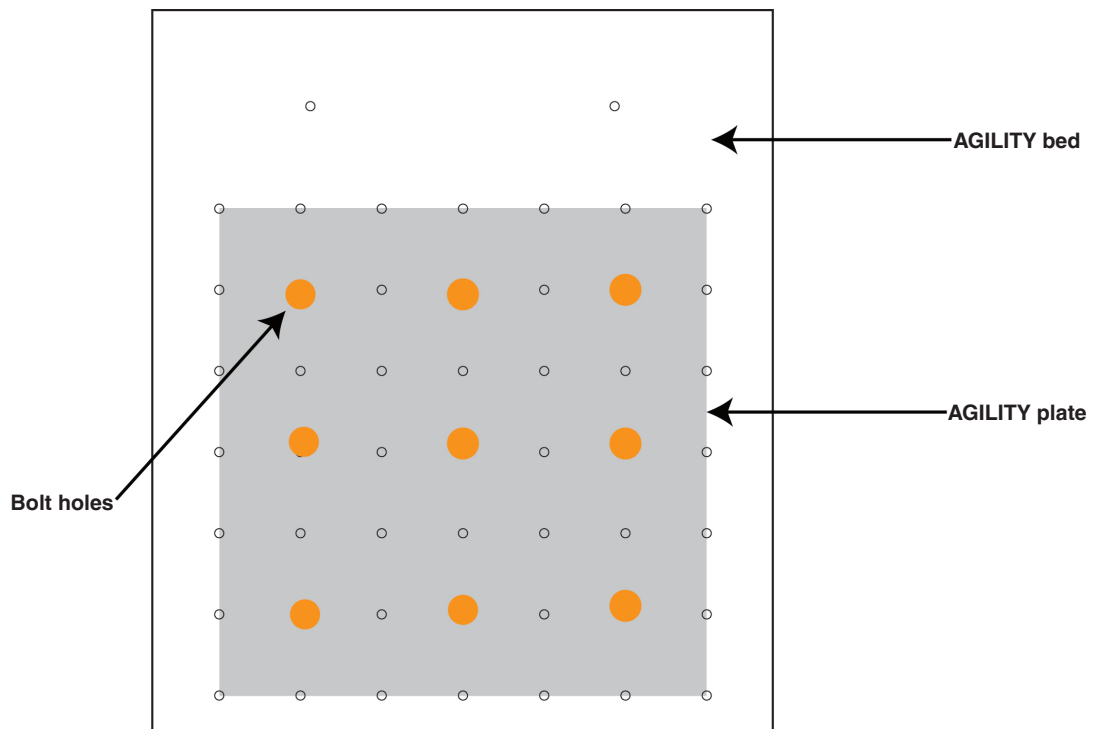


Bolt holes and insert location for specific AGILITY models

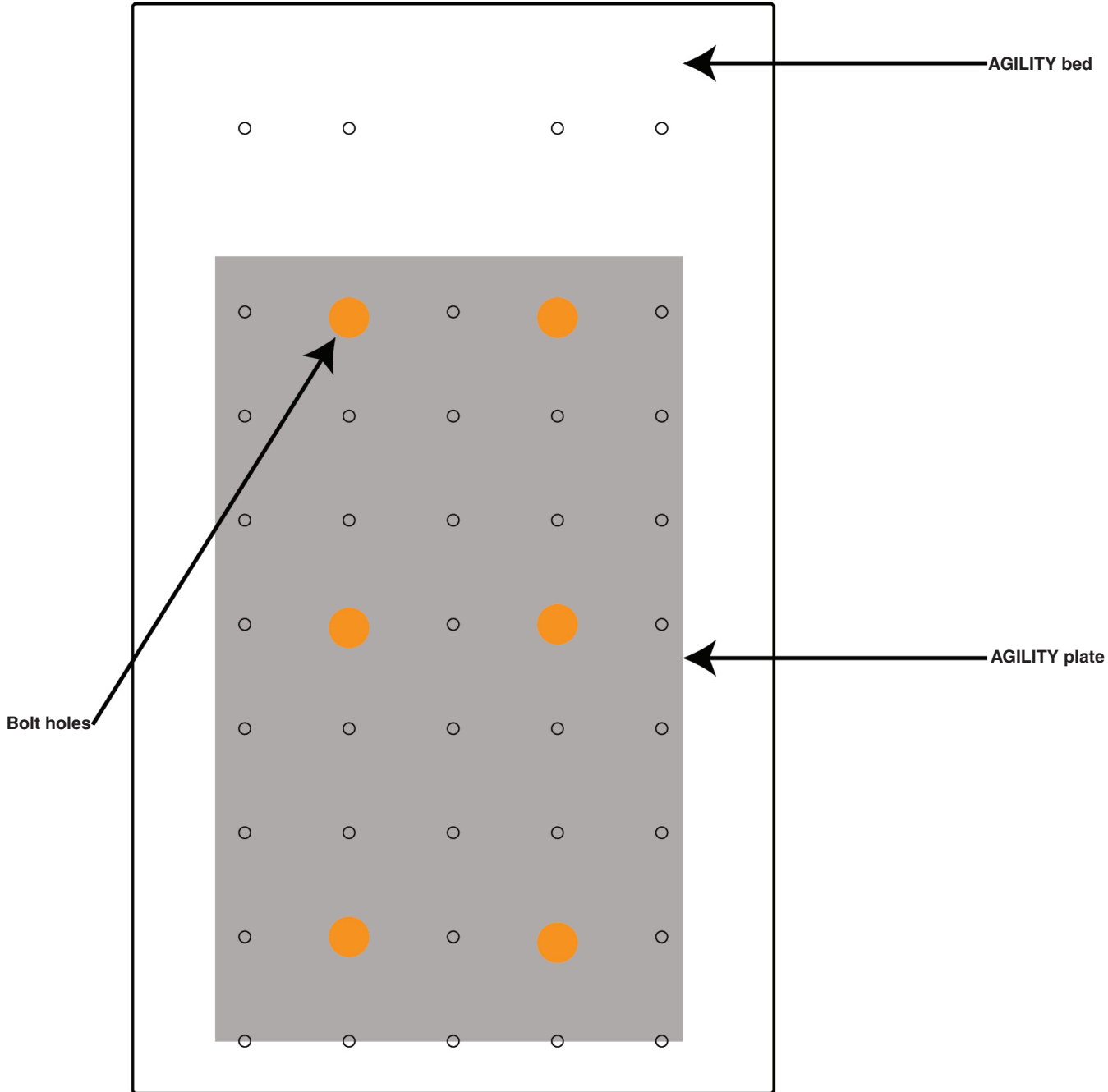
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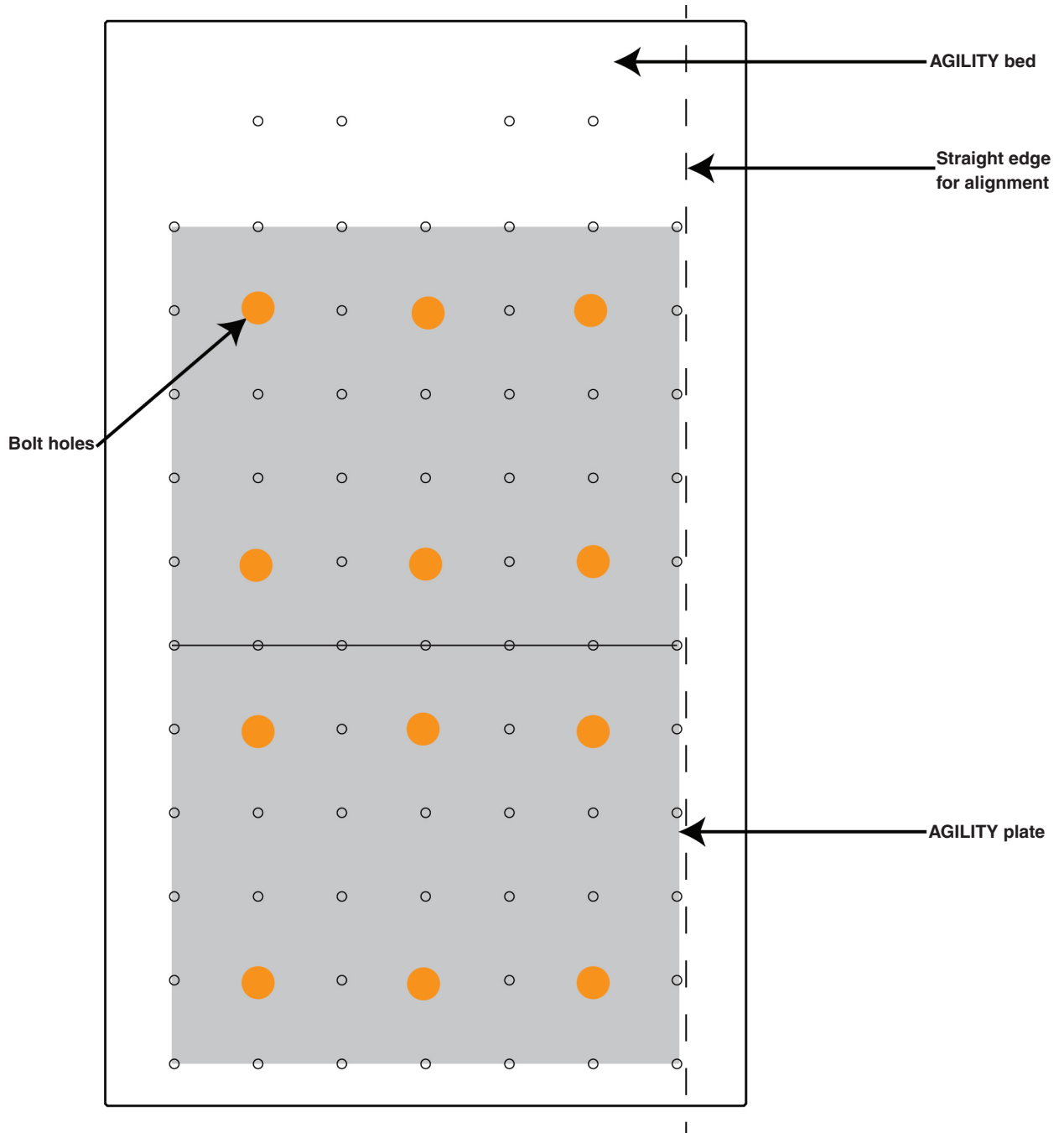
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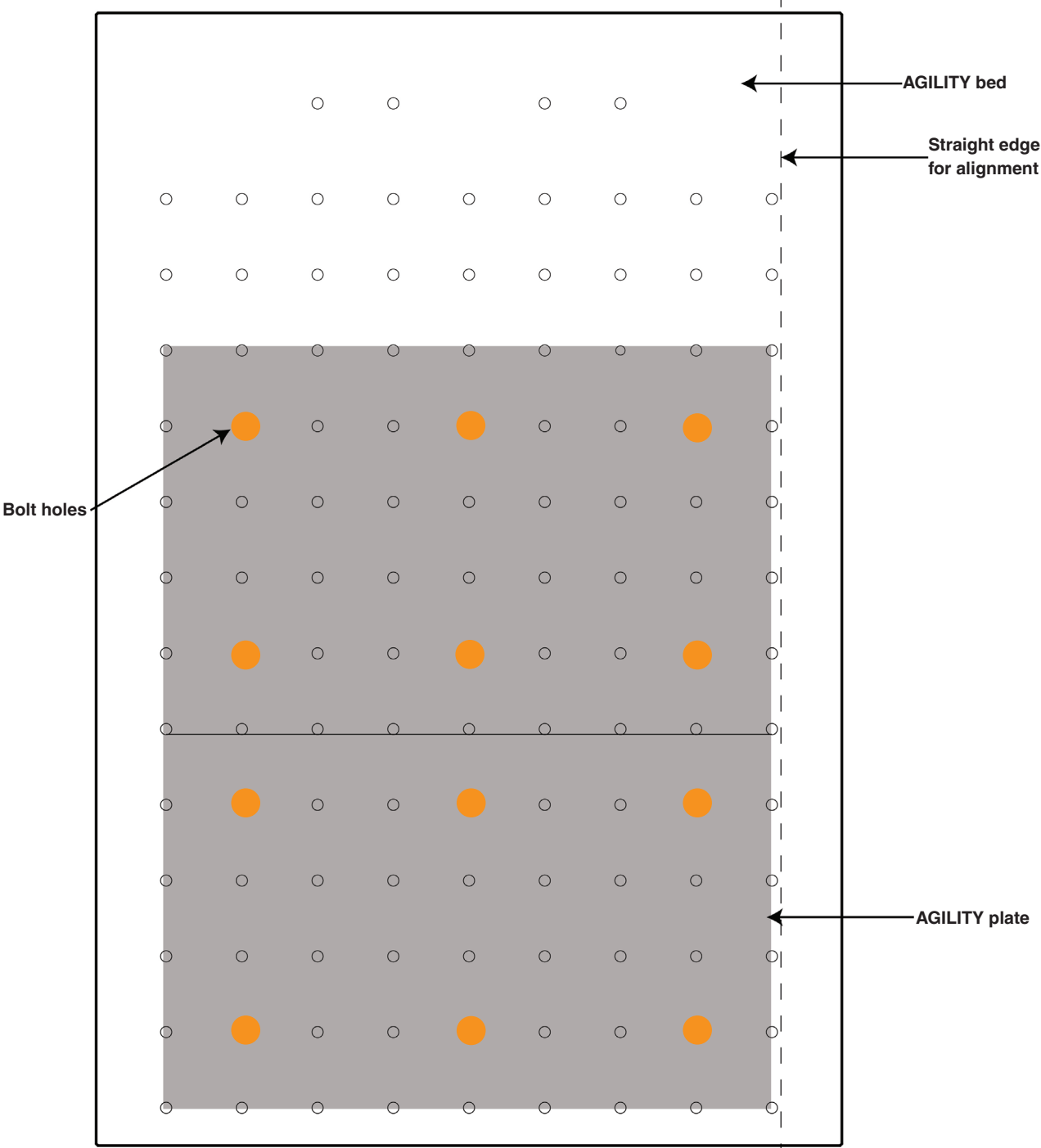
S 9158



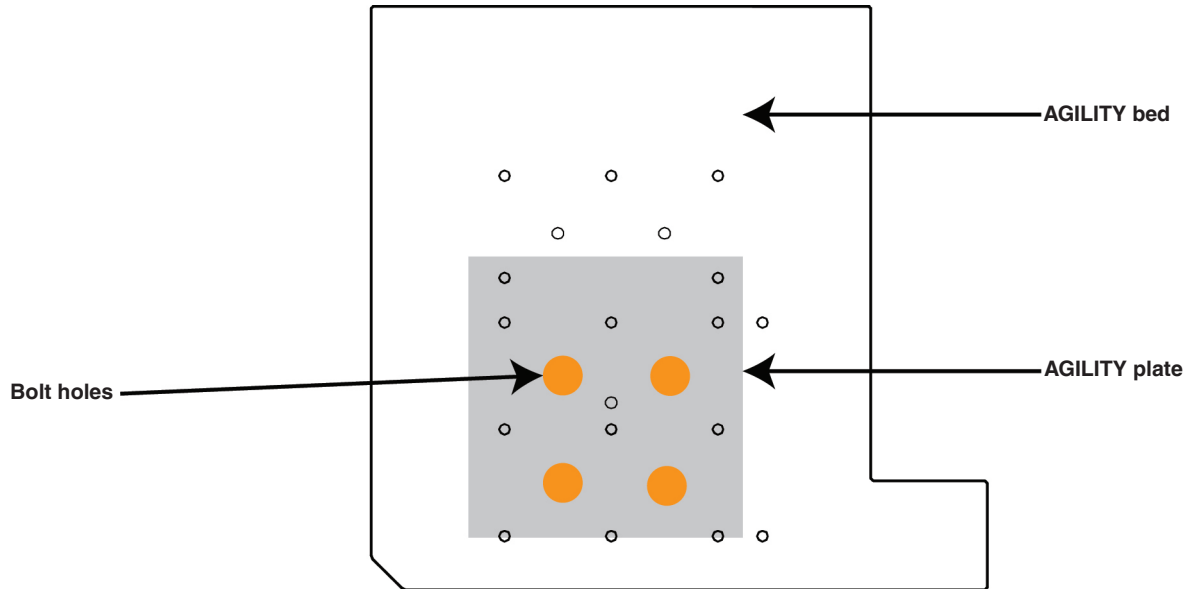
S 12209



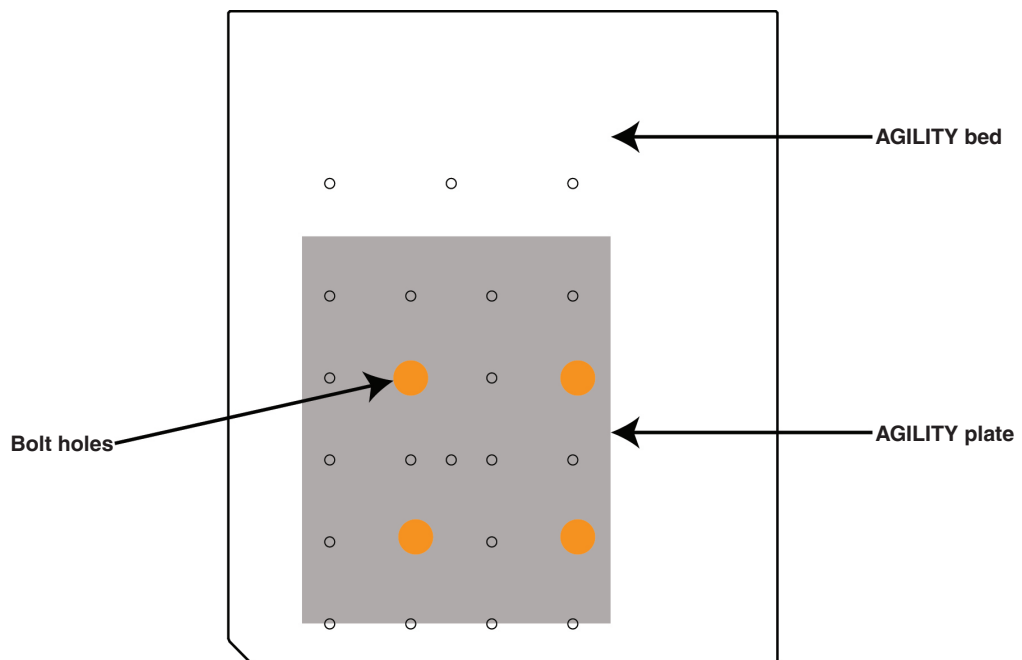
S 162412



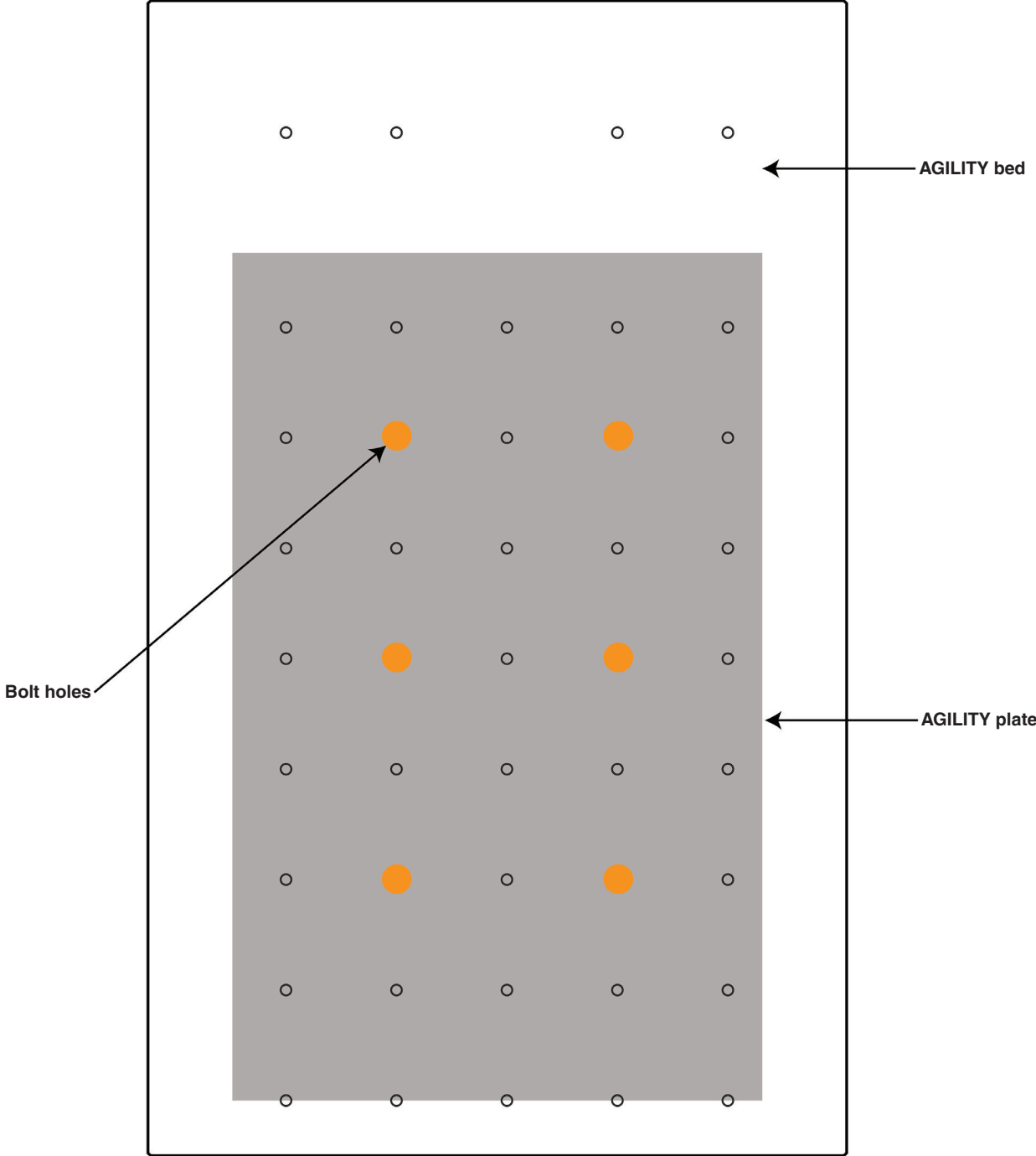
L 555



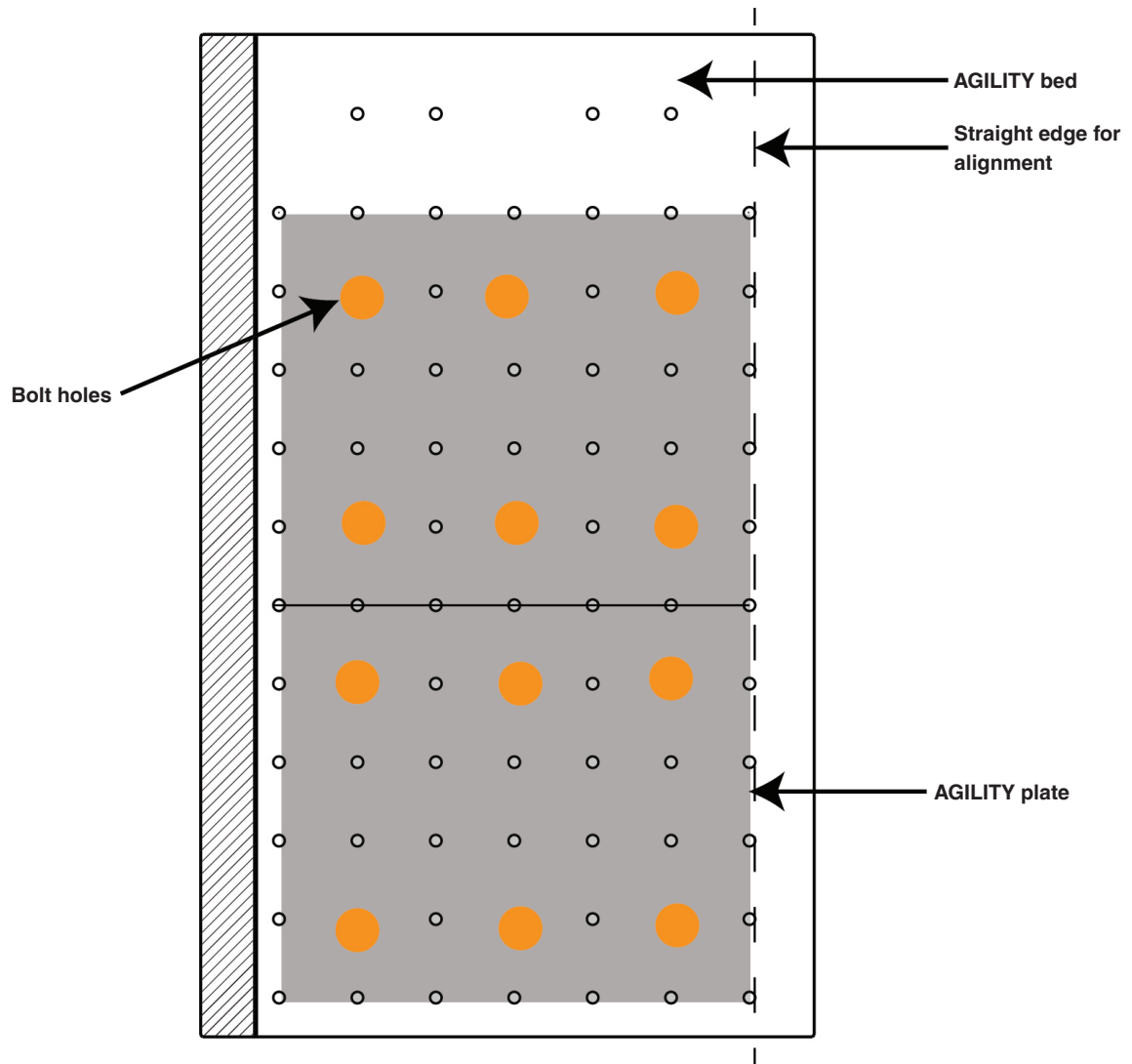
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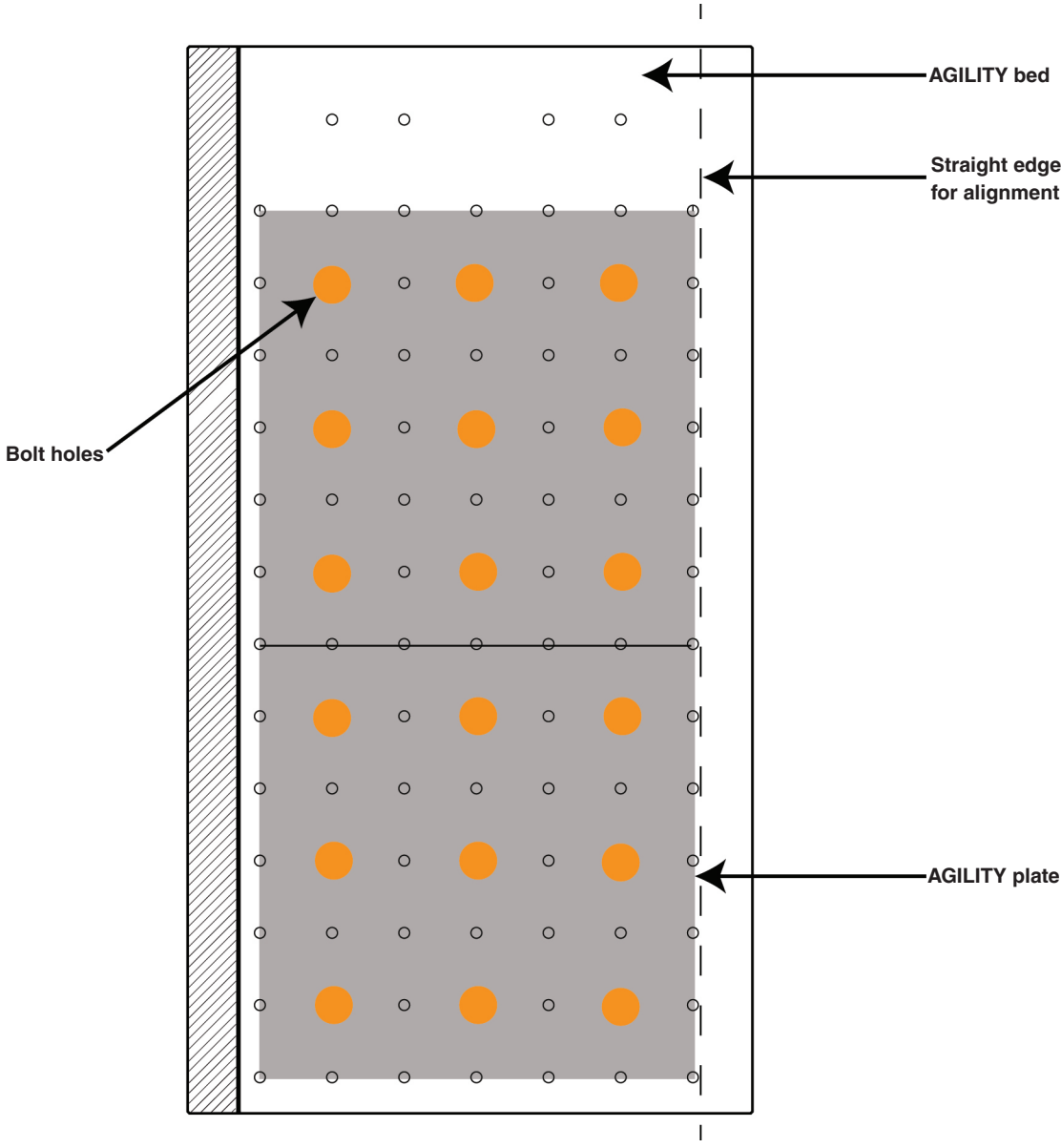
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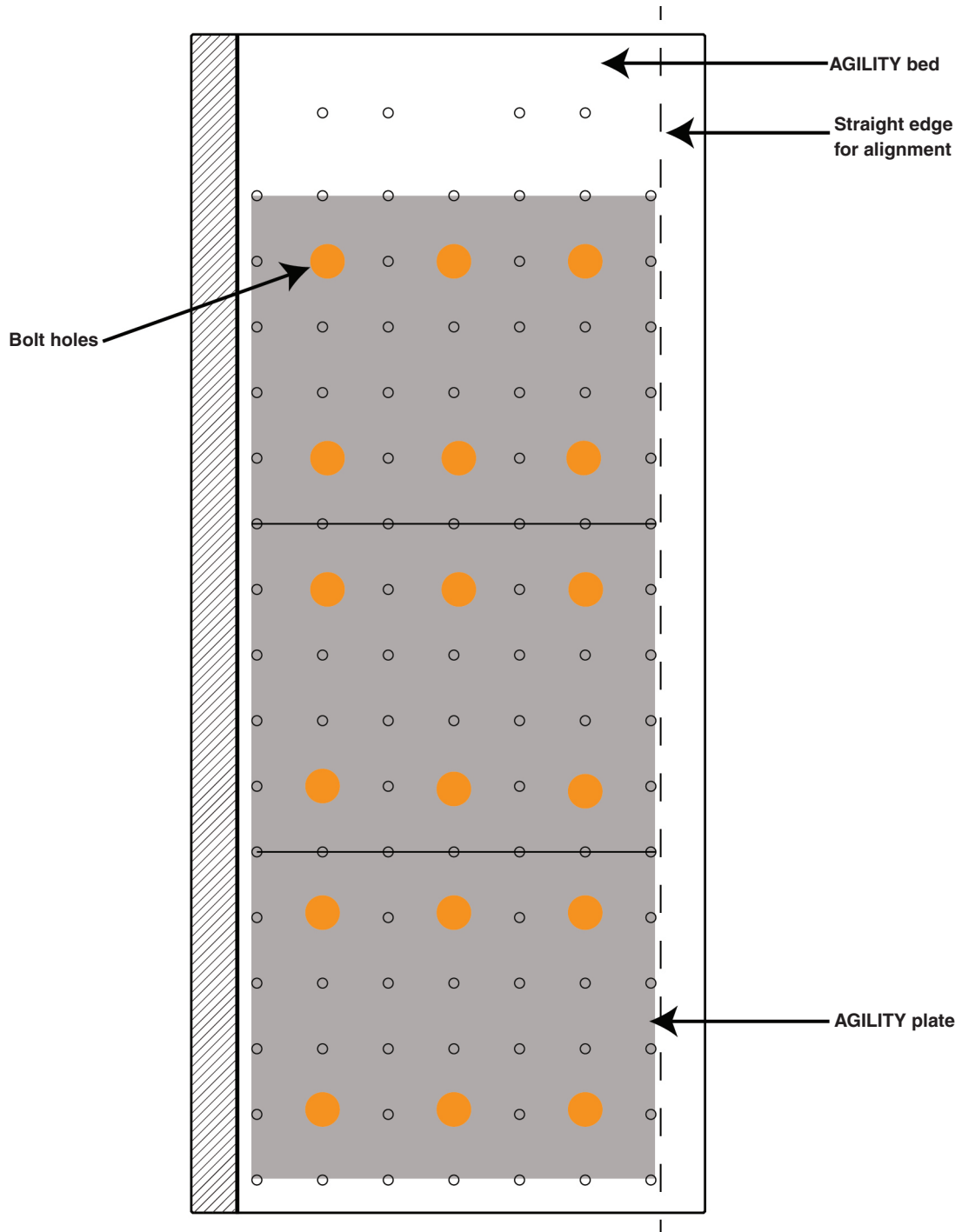
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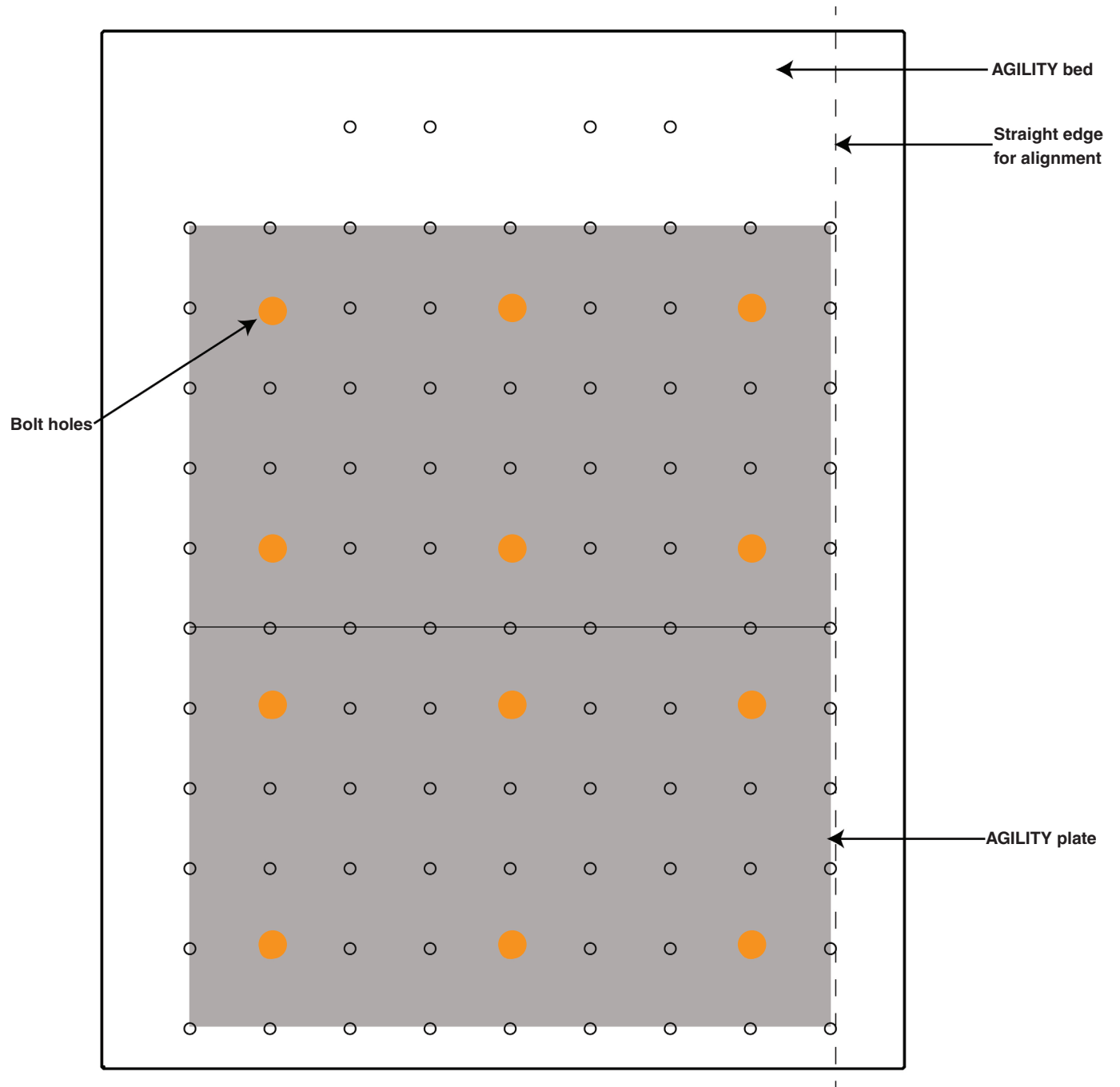
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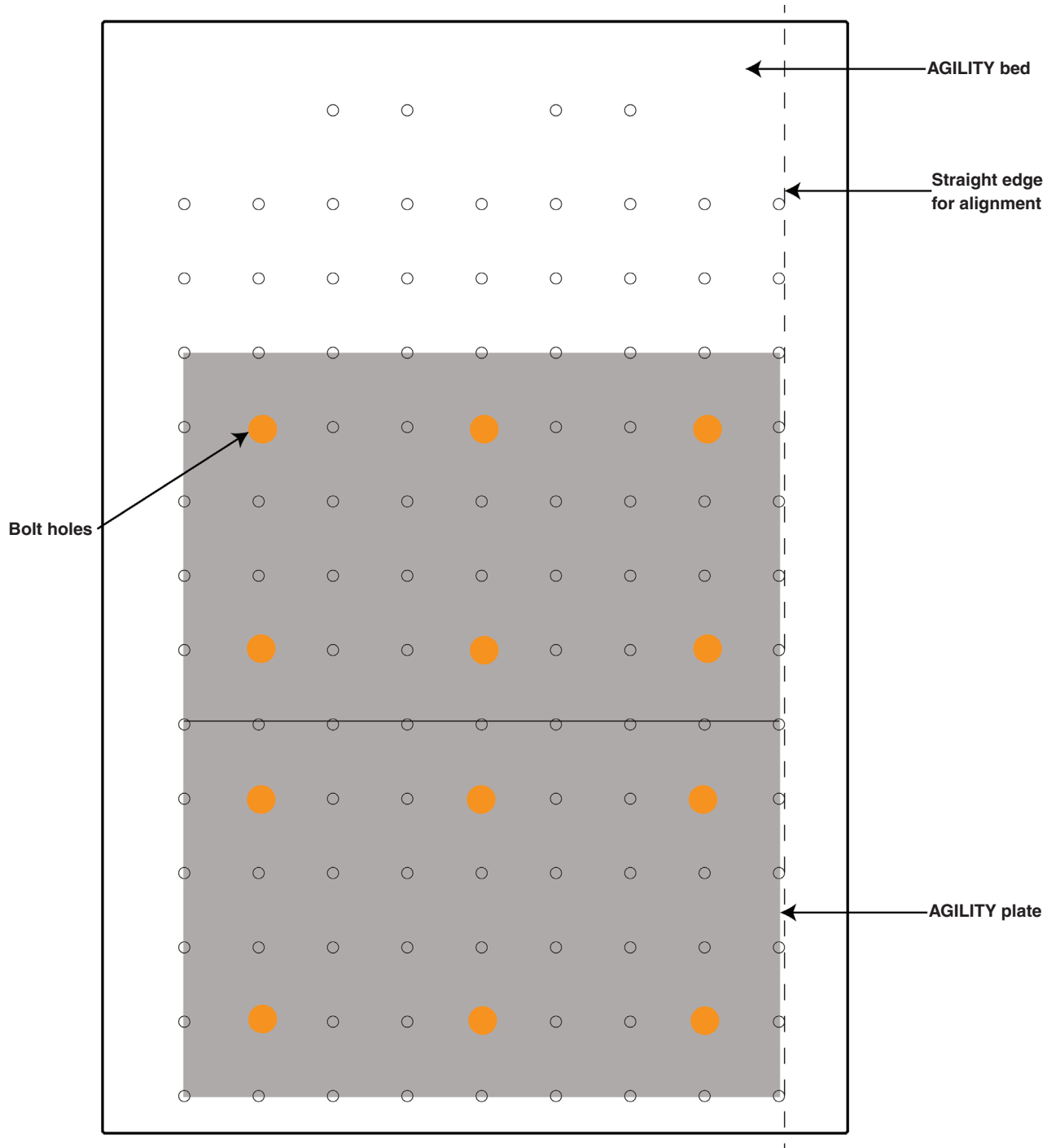
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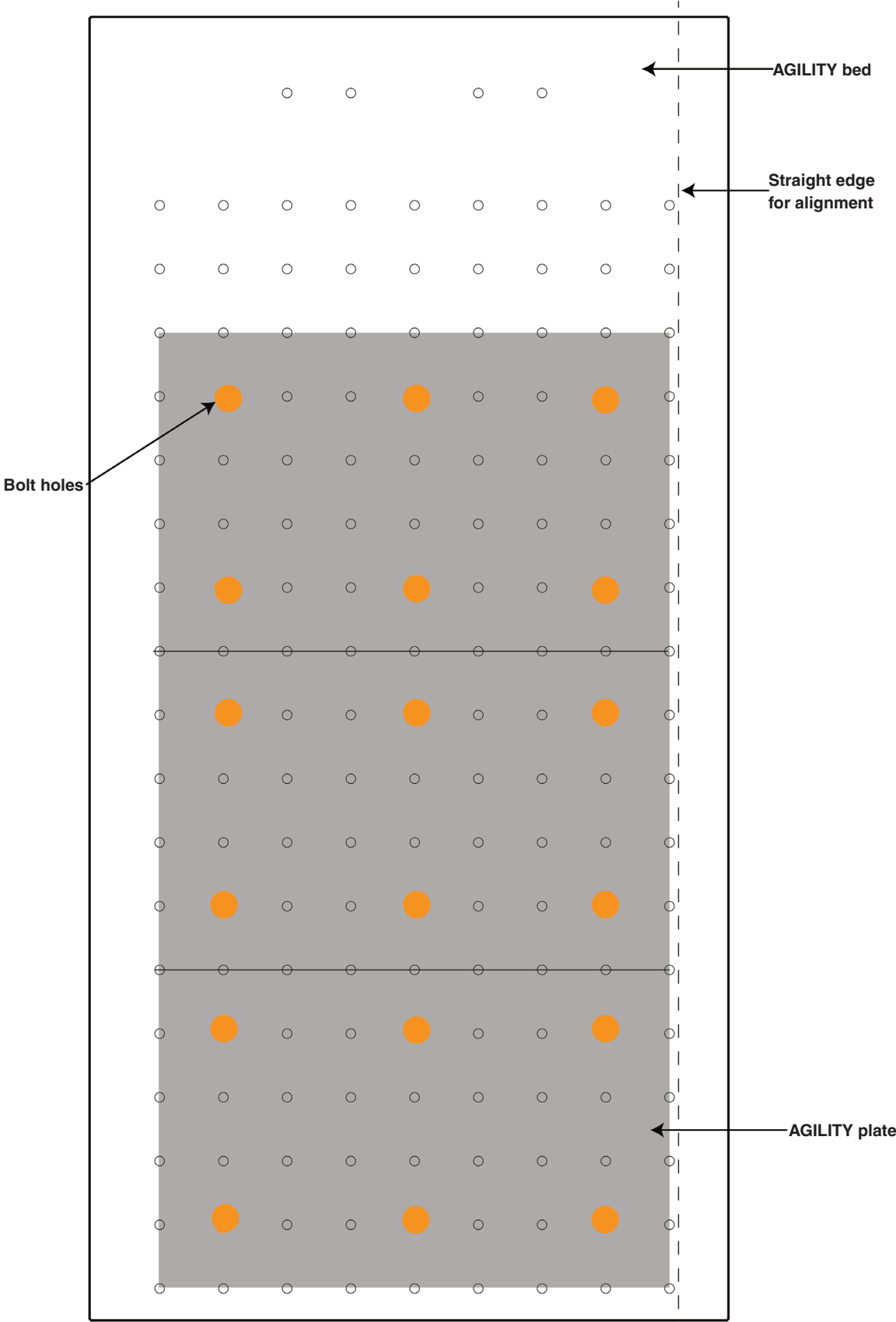
L 162012



L 162412



L 163512



AGILITY model user guides


Refer to the relevant AGILITY model user guide where necessary. These can be obtained by contacting your local sales representative.


Agility model	User guide document number
S 796	H-1000-5614
S 9158	H-1000-5629
S 12129	H-1000-5601
S 12209	H-1000-5612
S 162412	H-1000-5627
L 555	H-1000-5613
L 796	H-1000-5614
L 9158	H-1000-5626
L 122010	H-1000-5602
L 122410	H-1000-5611
L 123010	H-1000-5621
L 162012	H-1000-5624
L 162412	H-1000-5622
L 163512	H-1000-5623

www.renishaw.com/cmm

 #renishaw

 +44 (0) 1453 524524

 uk@renishaw.com

USA  +1 847 286 9953

 usa@renishaw.com

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