

Creation of Vacuum

When the vacuum gripper is activated, the vacuum source evacuates air from the space between the gripper's suction cup and the object's surface.

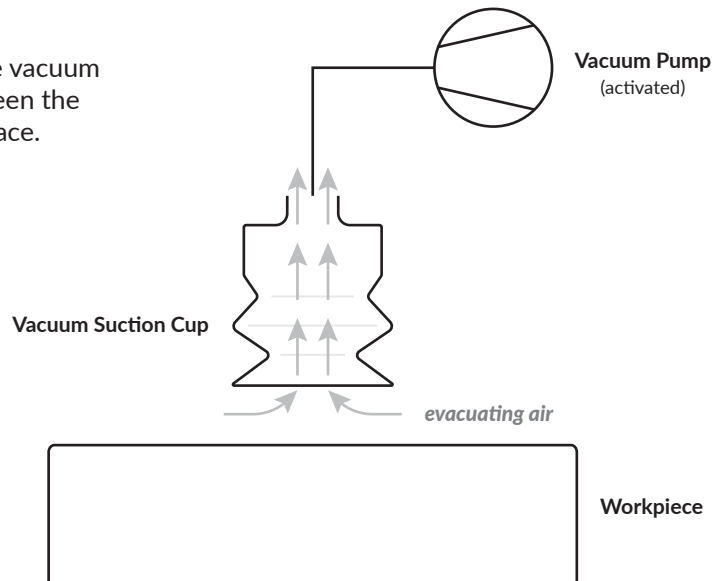


Image 3.1

Pressure Differential

As the air is removed, a vacuum or a region of low pressure is created within the suction cup. The pressure outside the suction cup (atmospheric pressure) is now greater than the pressure inside the cup.

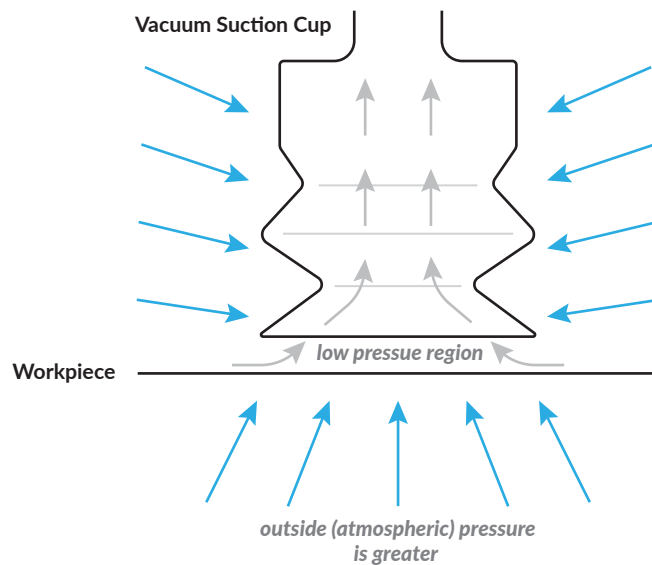


Image 3.2

Resultant Force

This pressure differential generates a force that holds the object to the suction cup. The force is proportional to the pressure difference and the area of the suction cup.

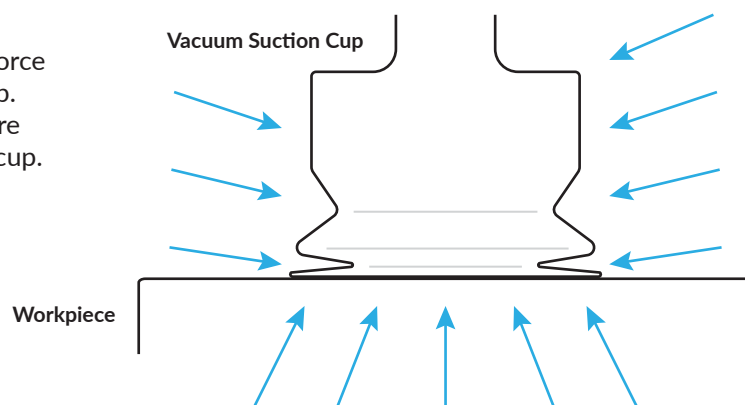


Image 3.3

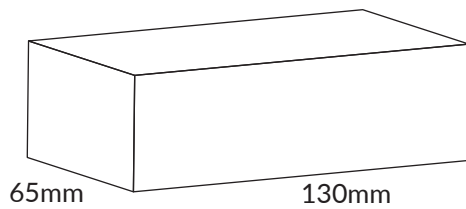
Practical Scenario - Phase 2

Image 3.4

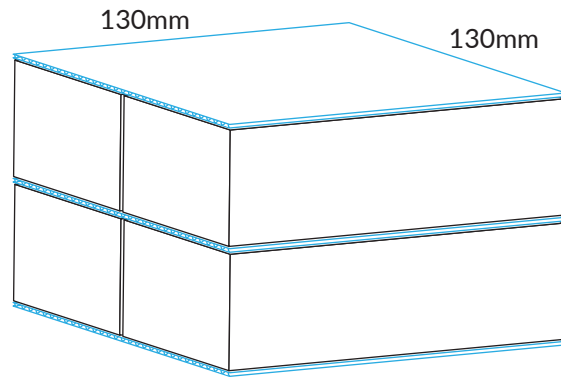
Practical Scenario - Phase 4

Image 3.5

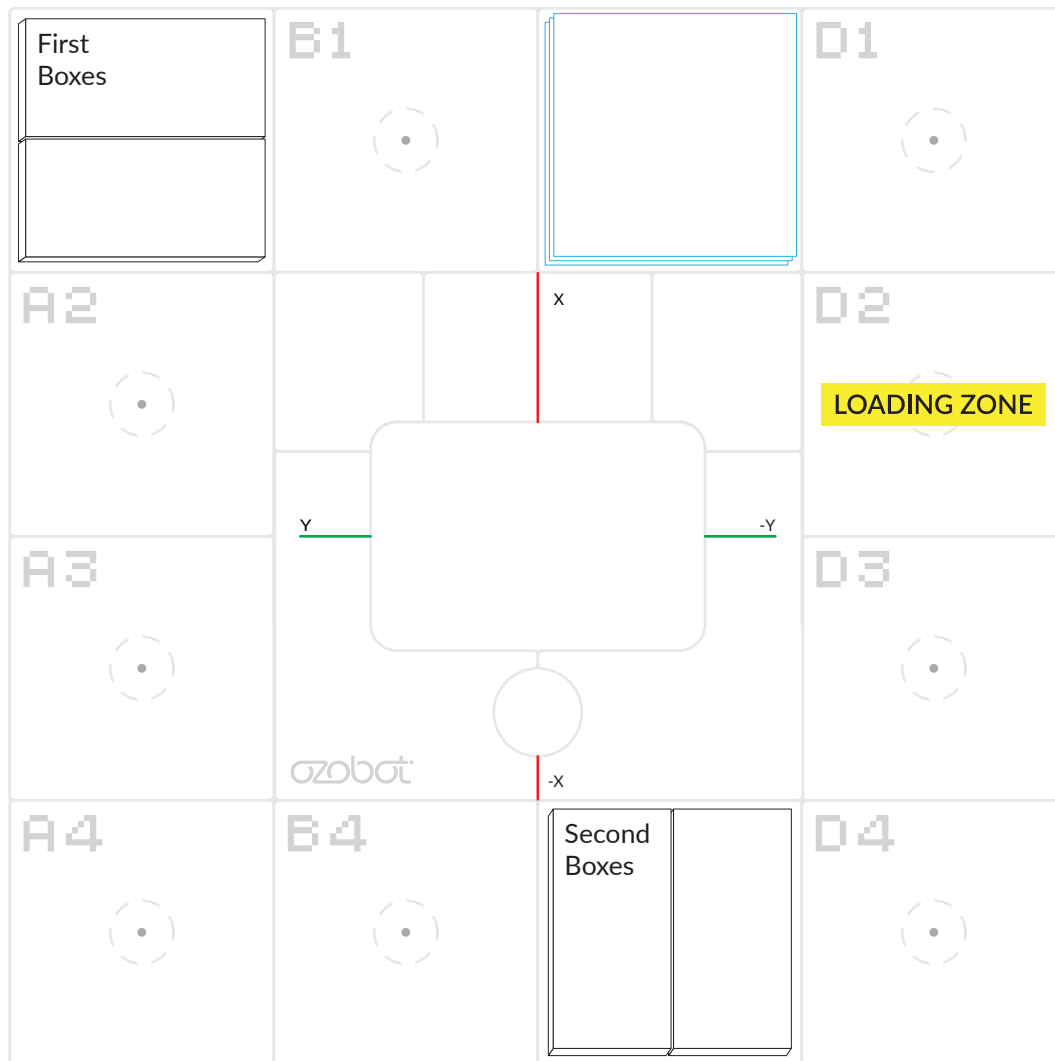
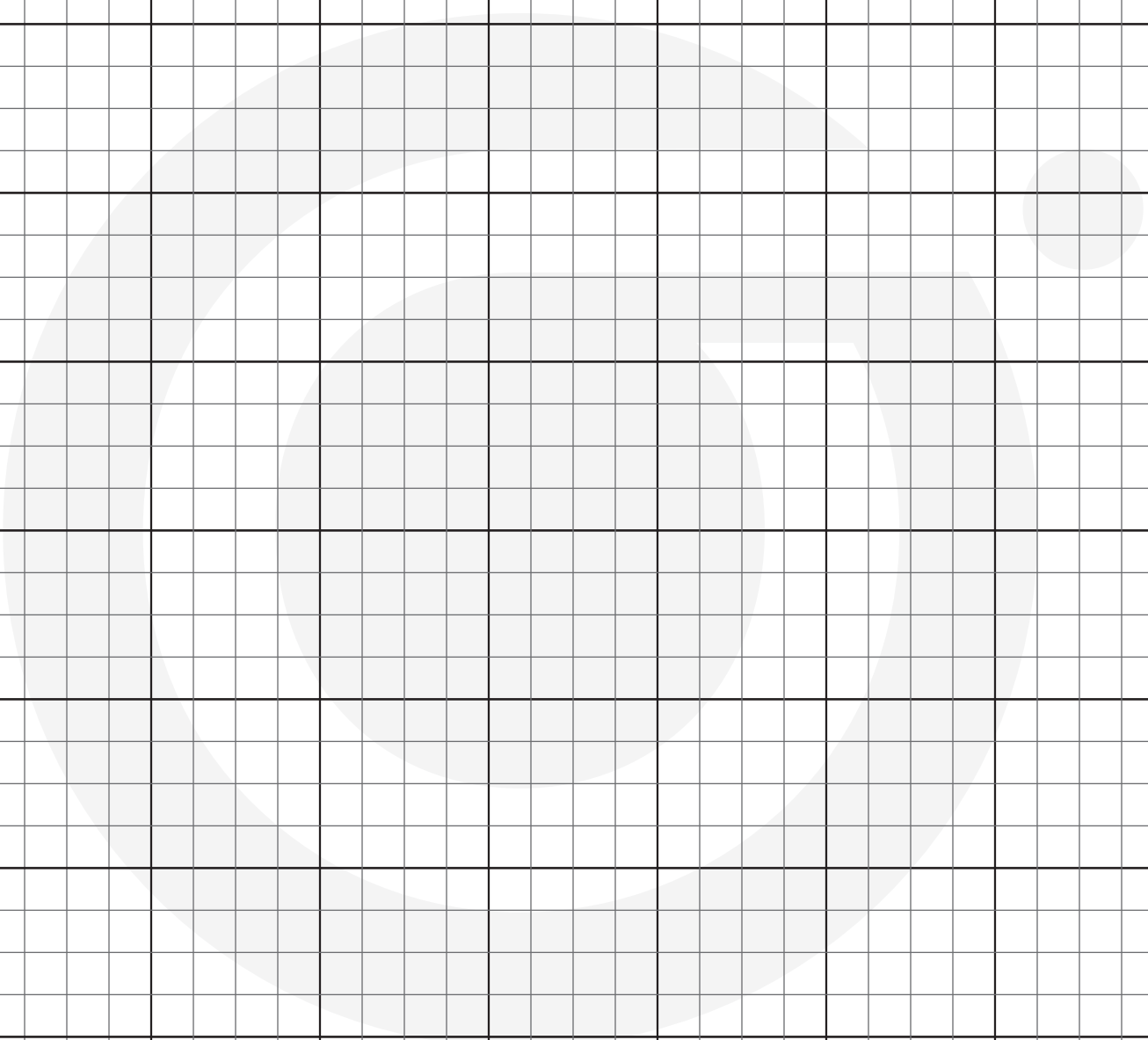
Practical Scenario - Phase 4

Image 3.6

Members Present:										Members Absent:									
																			
Witnessed & Understood by:					Date:		Recorded by:					Date:							

Team: _____

Page: _____

Members Present:

Members Absent:

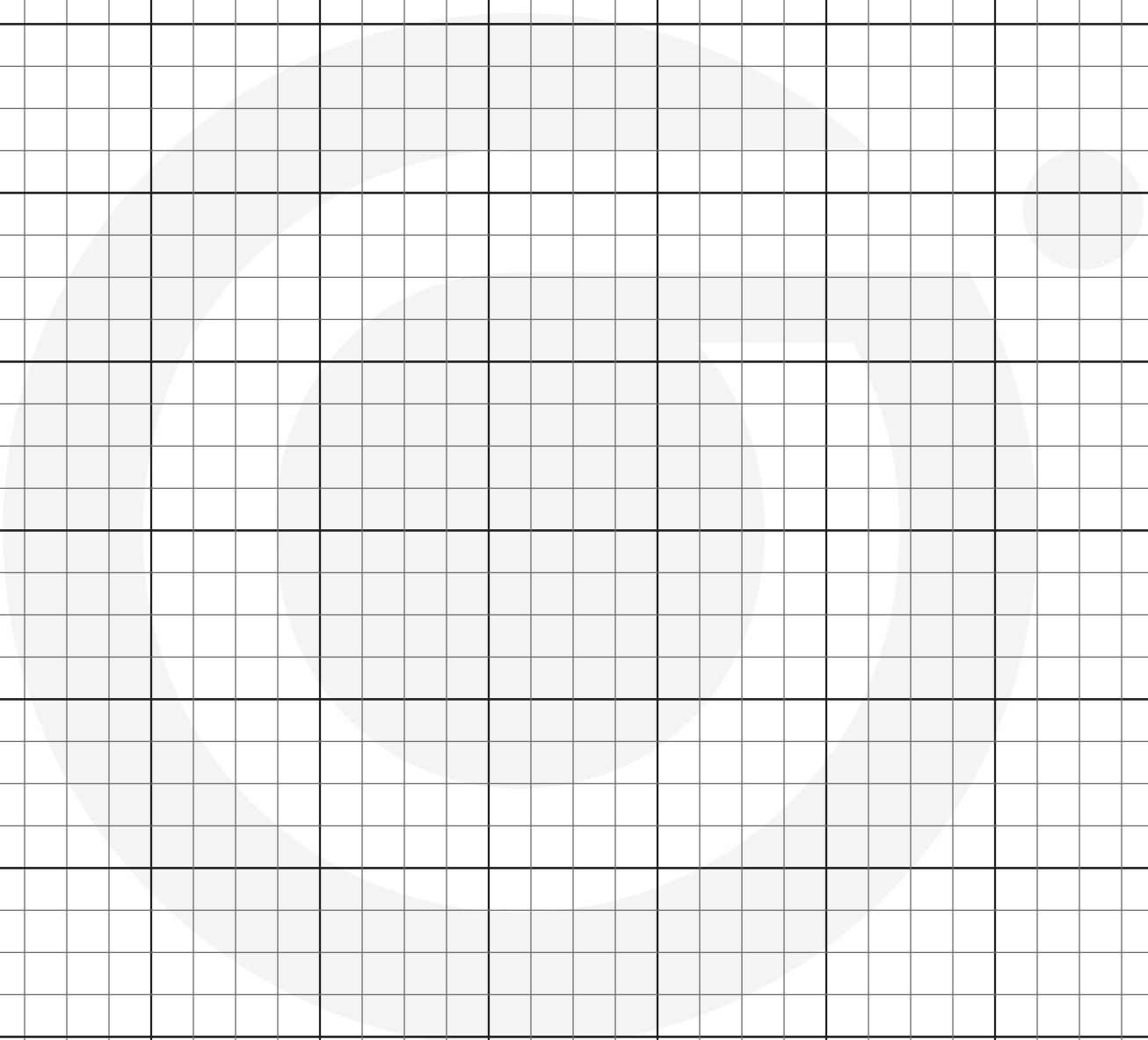
A 20x20 grid with a large light gray circle centered at (10, 10) and a smaller light gray circle at (18, 10). The large circle has a radius of 10 units, and the small circle has a radius of 2 units.

Witnessed & Understood by:

Date:

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Members Present:										Members Absent:									
																			
Witnessed & Understood by:					Date:					Recorded by:					Date:				

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Members Present:

Members Absent:

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