

Game Specific Rules:Autonomous:

- Before the match begins, a robot may preload up to *one* Building Block **OR** up to *seven* Nuggets.
- Before the match begins, Human Players may preload up to *five* Nuggets in the Drop Station.

TeleOp:

- Human Players inside the Keystone may only control *five* Building Blocks at a time per Alliance: *three* in the Cache and *two* in their hand.
 - Human Players must make an effort to use/score excess game elements.
 - Human Players **MAY NOT** toss Building Blocks outside of the Keystone walls in an effort to remove excess game elements.
- Human Players at the Drop Station may only control *five* Nuggets at a time per Alliance.
 - Human Players must make an effort to remove/use/score excess game elements.
 - Human players may replace Nuggets back to the Source in order to remove excess game elements.
- Robots **MAY NOT** have greater-than-momentary control of more than *ten* Nuggets and more than *two* Building Blocks at a time
 - Teams must make an effort to remove excess game elements.
- Robots **MAY NOT** score Nuggets or Building Blocks if they are outside of the designated Safety Border around the Keystone and its components.
- Robots **MAY NOT** allow any part of the Capstone to exit the infinite vertical volume created by its designated border
 - Teams must make an effort to return it inside of the designated border.
- Robots **MAY NOT** block an opponent's pathway to
 - a. the Pillar (high port and low port)
 - b. the Keyhole for Building Blocks in the wall of the Keystone
 - c. the Depot
- Robots whose bumpers are intersecting the opponent's Drop Zone or Parking Zone may not contact opponent robots, regardless of who initiates contact. (Modeled after G10; FRC 2020 Game Manual)
- An opponent robot may not contact a robot whose bumpers are intersecting its Drop Zone or Parking Zone, regardless of who initiates contact. (Modeled after G11; FRC 2020 Game Manual)

Endgame:

- Robots may handle an opposing Alliance's Capstone if the following requirements are met:
 - a. The team pushes their Capstone outside of the infinite vertical volume created by its designated border
 - b. Another robot **IS NOT** touching the Capstone
- Robots **MAY NOT** remove an opposing Alliance's Capstone from the Pillar if it's already placed.

Scoring:

Award	Awarded For...	Auto	TeleOp	Qual.
Initiation Line	Drive Forward off of Line (per Robot)	5	-	-
	Drive Behind the Line (per Robot)	5	-	-
Nuggets	Scored in High Port	-	3	-
	Scored in Low Port	-	1	-
	Fill Level Completed (per level, per Alliance)	-	10	-
Building Blocks	Keystone Placement (per Robot)	4	-	-
	Keystone Placement Matched (per Robot, in addition to base score for placement)	+6	-	-
	Grid Placement	-	4	-
Endgame Points	Capstone Matched (per Capstone)	-	30	-
	Capstone Mismatched (per Capstone)	-	20	-
	Park in Parking Zone (per Robot)	-	5	-
	Park in Drop Zone (per Robot)	-	5	-
	Park on Ramp (per Robot)	-	8	-
	Pillar Levels are within <i>one</i> Level of Each Other (per Alliance)	-	28	-
Completed Rune	One Alliance Grid is completed with a Rune (per Alliance)	-	20	-
	Two Alliances' Grids are completed with two Runes (every Team in the Match)	-	-	1 RP
Tie	Completing a Match with the same amount of points as your opponent (each Team on an Alliance)	-	-	1 RP
Win	Completing a Match with more points than your opponent (each Team on an Alliance)	-	-	2 RP

Game Element Dimensions:Pillars

- 18" wide x 18" long x 73" tall
- High port cutout - 1.5' wide x 1.5' long with a 1" tall ledge to seat capstone
 - Funnel: 9" deep; into pillar
- Low port cutout - 8" wide x 4" tall

Ramp

- Total Area: 5' wide x 6' long
- Flat Area: 5' wide x 2' long x 6" tall
- Ramp/slanted part: approximately 14° angled boards

Building Blocks of Knowledge

- 6" wide x 6" long x 6" tall Foam Blocks

Nuggets of Knowledge

- 2" wide x 2" long x 2" tall plastic cubes

Delivery Mechanism in the Drop Station

- 4" wide x 1' 3" long x 3.3 tall"

Drop Zone

- 4.5' wide x 4.5' long taped-off zone
- Located in the corners of the field near the Drop Station

Source of Knowledge

- 2' wide x 2' long x 3' tall

Grid

- 1' wide x 6.5' long x 5' tall
- Human Players drop Building Blocks into one of five 6" x 6" cutouts in top
 - The cutouts on the ends are 10.62" from the edge of the
 - Each subsequent cutout is spaced 5.628" apart

Human Player's Step Stool

- Located inside of the Keystone
- 1' wide x 1' tall x 3.5' long

Capstone

- 1' wide x 1' long x 2' tall
- Contained in a 2.5' x 2.5' taped-off border

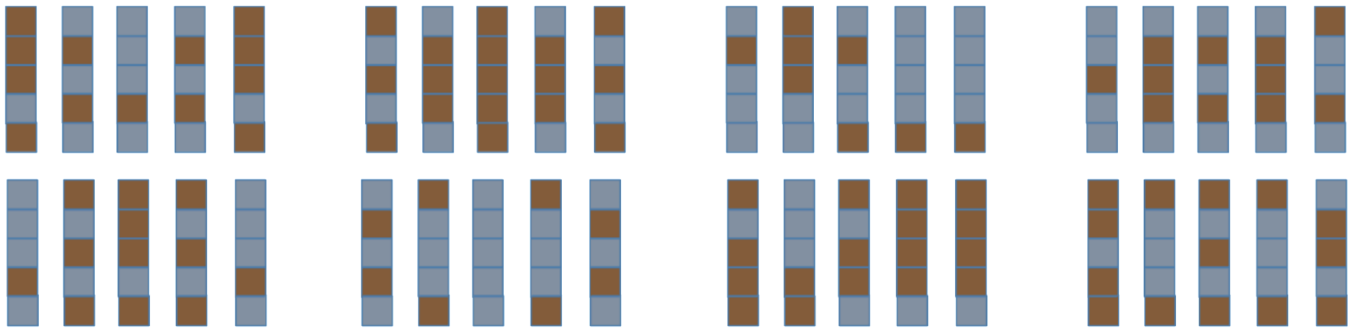
Keystone

- Raised 9.6" off the field floor
- On each Driver's station side of the Keystone, there is a 5' long x 7.2" deep/wide cutout x 7.2" tall to place 3 foam blocks in during Autonomous
- 10' x 10' platform with corners cut out 1'9.6" wide x 1'9.6" long x 7' 9.2" tall to accommodate for Pillars

Cache

- 1' wide x 8" long x 2' tall
- The cutout for the Building Blocks is 1' wide x 9" long x 1'8" tall

The Runes and their Inverses:



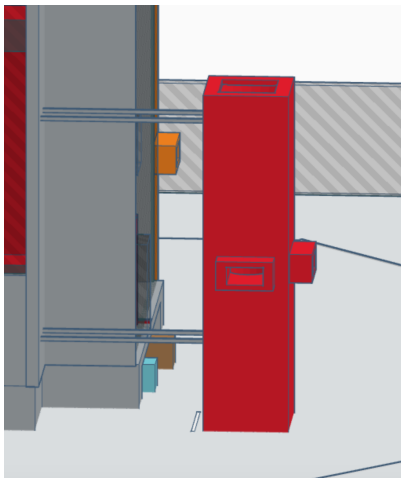
Science

Engineering

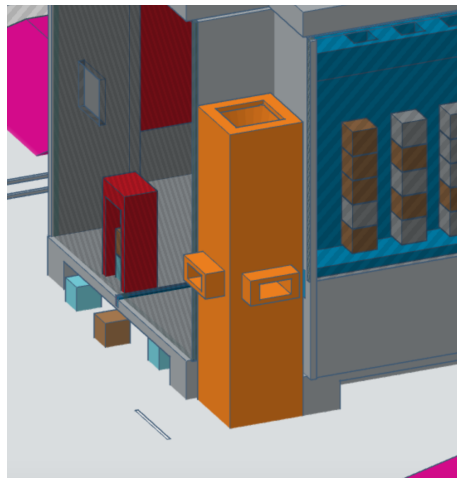
Math

Technology

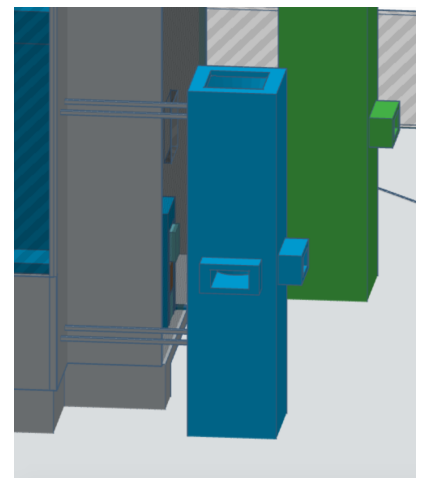
Autonomous Tower Positions:



Starting Position



Fully Pushed In



Disrupted

A Pillar is considered Disrupted if: (Lights will indicate the condition of each Pillar)

- a. The Pillar is pushed over the tape 3" behind the Pillar
- b. The Pillar is **NOT** fully pushed in

The Human Players:

