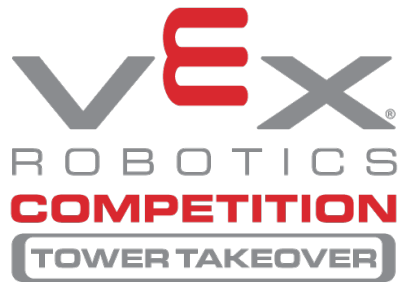


Q&A

VEXU 2019-2020: Tower Takeover

Tagged: R17



Welcome to the official VEX Robotics Competition Question & Answer system, where all registered teams have the opportunity to ask for official rules interpretations and clarifications. This Q&A system is the only source for official VRC Tower Takeover rules clarifications, and the clarifications made here from the Game Design Committee (GDC) are considered as official and binding as the written [Game Manual](#) itself.

Please review the [Q&A Usage Guidelines](#) before posting. This system is only intended for specific VRC Tower Takeover rules questions.

- For event, registration, or other competition support questions, please contact your [REC Foundation Regional Support Manager](#).
- For VEX technical support, contact support@vex.com or sales@vex.com.
- For game questions, suggestions, or concerns outside of specific and official rules questions, contact GDC@vex.com.

Cortex Non-Functional Decorations

R12 R16 R17

Under rules <R12>, <R16>, <R17>, may teams using the V5 Control System use a Cortex VEXNET 2.0 Key as a non-functional decoration?

Answered by Game Design Committee

No, this is not legal.

Pneumatics and Motor Counts

R17

If, using a v5 system, if a team were to directly attach the pneumatic tank to the actuator, without using the solenoids (or any electrical device) to control them, would it still count against their motor count, reducing it to 6 instead of 8? The reason for asking is that a team wanted to use a constant pressure output which never needed to change throughout the round.

Answered by Game Design Committee

The full text of rule R17 reads as follows, with a portion bolded for emphasis:

<R17> Robots use one control system. Robots may use either:

Option 1: A VEX ARM® Cortex®-based Microcontroller, up to ten (10) 2-Wire Motors or VEX Servos (in any combination up to ten) and a legal VRC pneumatic system per <R19>.

Option 2: A VEX ARM® Cortex®-based Microcontroller, up to twelve (12) 2-Wire Motors or VEX Servos (in any combination up to 12) and no pneumatic components, excluding pneumatic tubing.

Option 3: A V5 Robot Brain, up to six (6) V5 Smart Motors, and a legal VRC pneumatic system per <R19>.

Option 4: A V5 Robot Brain, up to eight (8) V5 Smart Motors, **and no pneumatic components**, excluding pneumatic tubing.

It sounds like you are attempting to utilize Option 4 (eight motors). In this case, no pneumatic components are permitted, whether connected to a solenoid or not. Therefore, any time a pneumatic tank or actuator is present on a VRC Robot, they are exercising Option 3 (or Option 1).