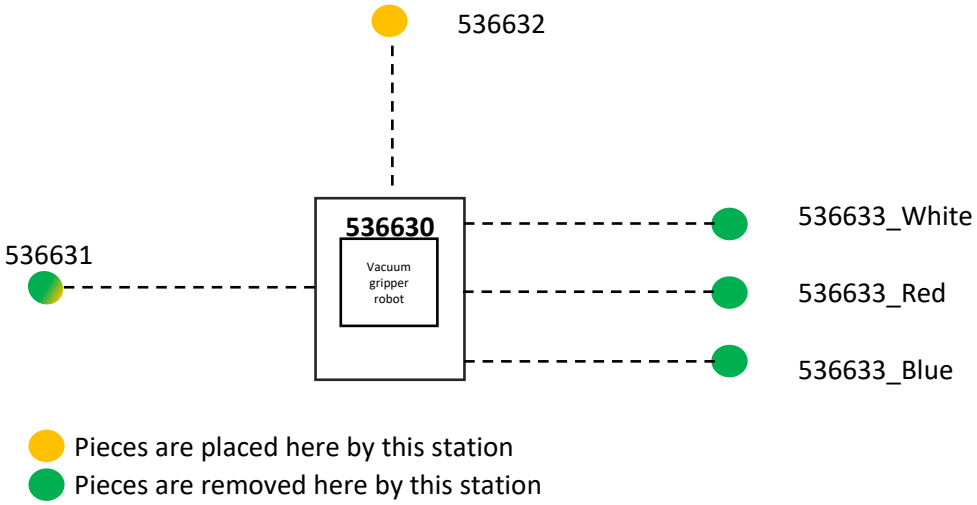
fischertechnik: Vacuum Gripper Robot

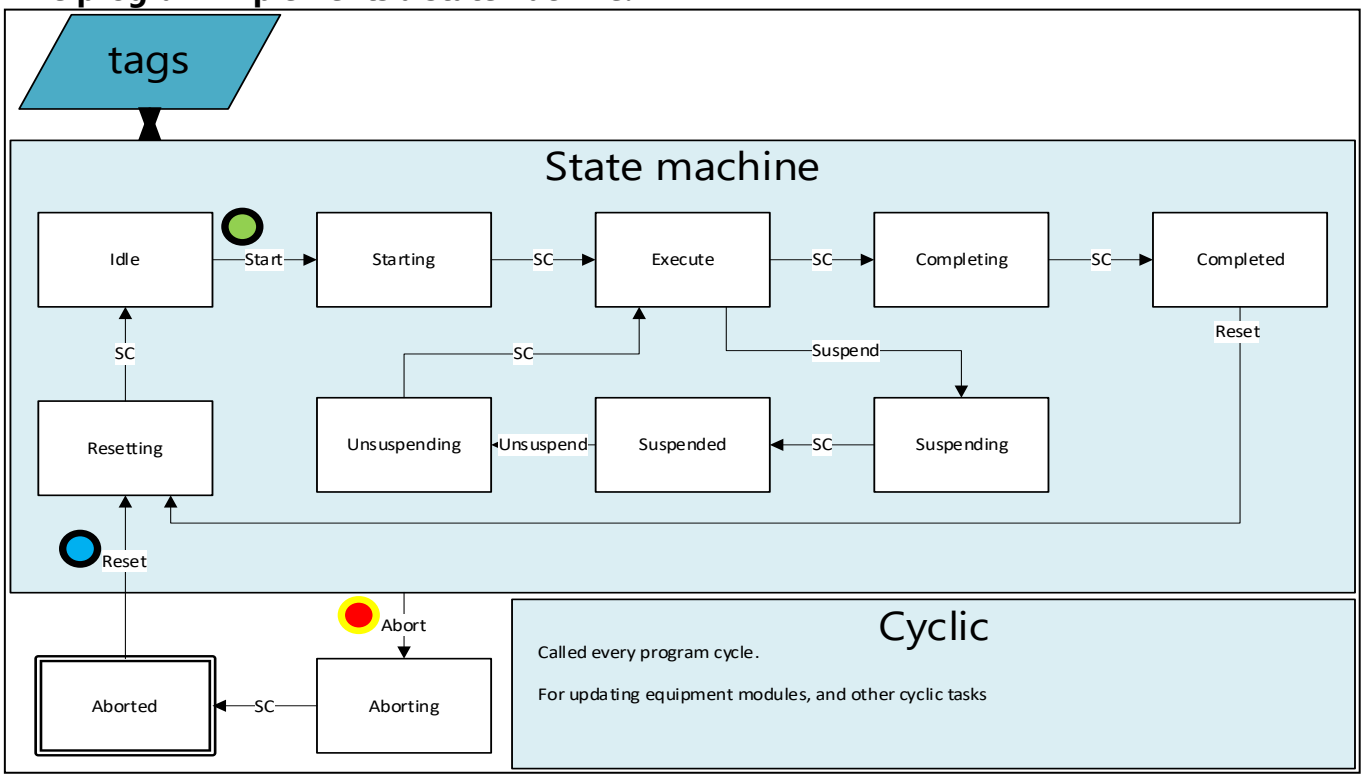
Station no. 536630

- Program design



Program design

The program implements a statemachine.



Aborting	The init/startup state of the SFC program. No parts should be moving when the machine/unit is in this state.
Aborted	The resetting state should reset all the equipment modules. Any active errors are also reset in this state. All equipments are (if applicable) also initialized, when the initialization is done, the machine moves to next state.
Idle	The idle state indicates to the process cell that this unit can be started. The next state is only activated by a **start** command is given.
Starting	In the starting state things can be setup before moving to the execute state. For example starting a conveyer e.g.
Execute	The main exution takes place in this SFC state. In this state the operation on the piece(s) is performed. When the operation is done the next state is activated
Completing	The last things are wrapped up before moving to the execute state, for example stopping the belt e.g.
Completed	The last state of the SFC program, this state indicates to the process cell that the operations on the piece(s) are done. The next state (resetting) is activated by a **Reset** command.
Suspending	The suspend state can only be activated when the current state is Execute and a **Suspend** command is made. The suspend state prepares the program for the suspended state. E.g. slowing/stopping equipments
Suspended	In the suspended state the unit processes no pieces until the unsuspend command is given. Unlike the aborting/stopped state, the program can easily start again.
Unsuspending	In the unsuspending state preparations are made to move to execute state. E.g. starting/ramping up equipments. The unsuspeding state is activated by a **Unsuspend** command.

Program design

Tags.

The program implements tags in order to communicate with the ProcesCell (coordinates the different stations when ik factory config). These tags can also be changed during runtime by the user in order to control the station in a stand-alone configuration.

Status tags *used to get information from this station*

Name	***Comment***	***Datatype***
StateCurrent	The name of the current active state	STRING
ProdProcessedCount	No. Of products that have passed	INT
ErrorActive	TRUE when error is active in Unit	BOOL

Command tags *used to set information in this station (to control the station)*

CntrlCmd	Control of the machine (start, reset, suspend e.g.)	ENUM ControlCommand
RemovePos	When started the piece will be grabbed from this position	
PlacePos	When started the piece will be placed on this position	

The station cannot be moved to execute when:

RemovePos is the same as PlacePos
RemovePost is set to 536632Station
PlacePos is set to 536633_WhiteStation
PlacePos is set to 536633_RedStation
PlacePos is set to 536633_BlueStation

Program design | SFC program