Sommario

DC30FlyCut

D = *Device(cam01,camming,camming2, camming3, camming4)*

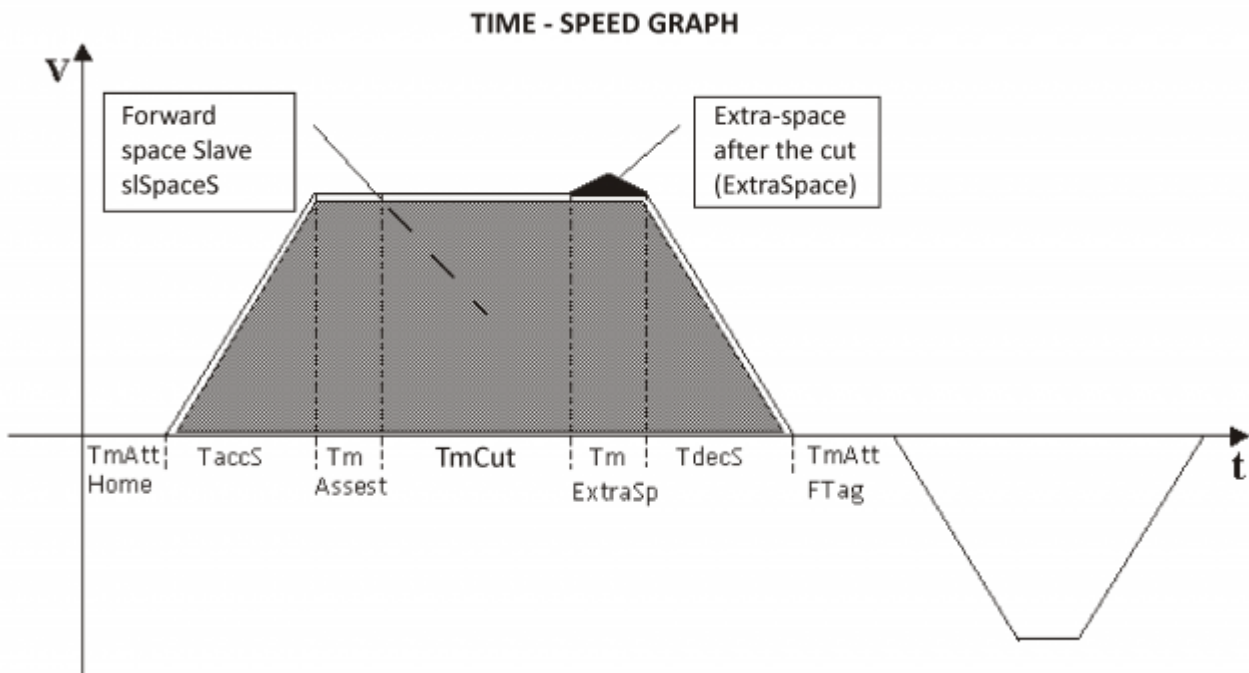**C =** *Calculation functions*

The DC30FlyCut function perform the calculations necessary to be able to perform a *linear fly cut* keeping constant the space covered by the Slave. Passing parameters of length piece, fixed Slave space, max speed Slave, acceleration/deceleration Slave and the time it takes to cut, the function calculates the areas of the cam program and writes about special arrays. Next is another function (WrCam) to write data to the device that you want. If there are problems in calculations, why physically not be run, the type of error that occurred is showed in the "Error" variable.

IMPLEMENTATION

DC30FlyCut (LunPez, slSpazioS, VmaxS, TaccS, TdecS, TmAttHome, TmAttFTag, TmTaglio, TmAssest, TmExtraSp, ExtraSpaz, CodeG, CodeM, CodeQm, CodeQs, VmaxCalM, Error, NumSett, LunMin, SpazioRitM, SpazioRitS)

Parameters:

IN/OUT	VARIBLE TYPE	EXAMPLE NAME	DIM	
IN	SYSTEM	LunPez	L	length of workpiece to cut (UM)
IN	SYSTEM	slSpazioS	L	Slave space in which to execute the cut (UM)
IN	SYSTEM	VmaxS	L	max speed Slave (UM/s)
IN	SYSTEM	TaccS	L	Slave acceleration time (s/100)
IN	SYSTEM	TdecS	L	Slave deceleration time (s/100)
IN	SYSTEM	TmAttHome	L	waiting time carriage in Home before departure (opzional) (s/100)
IN	SYSTEM	TmAttFTag	L	waiting time carriage at the end of the cut (opzional) (s/100)
IN	SYSTEM	TmTaglio	L	cutting time (s/100)
IN	SYSTEM	TmAssest	L	settling time before to cutting (opzional) (s/100)
IN	SYSTEM	TmExtraSp	L	time in which to perform an extra space after the cut to remove the piece (s/100)
IN	SYSTEM	ExtraSpaz	L	space of detachment of the slave from the cutoff point after cutting (to execute in TmExtraSp time)
OUT	ARRSYS	CodeG	W	Array containing calculated G Code
OUT	ARRSYS	CodeM	W	Array containing calculated M Code
OUT	ARRSYS	CodeQm	L	Array containing calculated Master Space
OUT	ARRSYS	CodeQs	L	Array containing calculated Slave Space
OUT	SYSTEM	VmaxCalM	L	Maximum Speed o0f the Master calculated as a function of the parameters introduced
OUT	SYSTEM	Errore	B	Var of cam error
OUT	SYSTEM	NumSett	L	Sector number of the calculated cam (output variable)
OUT	SYSTEM	LunMin	L	minimum length of the cam (output variable)
OUT	SYSTEM	SpazioRitM	L	Master Space in return (output variable)
OUT	SYSTEM	SpazioRitS	L	Slave Space in return (output variable)

TIME - SPEED GRAPH

Error

After calling the function, the error variable can take on certain values, the meaning of these values is summarized below:
0: calculation executed without errors
1: Maximum Slave speed or Slave Space for execute the cut, equal to 0
2: Calculated slave speed greater than the maximum extra space-cutting
3: insufficient piece length
4: negative return space (insufficient piece length)
5: slave return speed greater than the maximum
6: insufficient time for the return

Note

- This function always calculates the cam dividing it into 12 sectors
- The cutting sector is the sector 3 (rowex = 3). In this sector the codeM = 1000to enable management of cutting output from the device ('funout' parameter of the Camming device)
- The set times in the input parameters to the function, are required to maintain the proportion between sectors but they cannot be met (the duration of the sector depends on the speed of the Master)