

ENTERING
Rising Feedrate Section

TANGENTIAL ACCELERATION CALCULATIONS
Calculate $\min_tang_accn(u)$
Calculate $\min_tang_accn(u)$

FEEDRATE LIMIT CALCULATIONS
Calculate $\text{curr_frate_limit}(u)$ based on
the 4 limit constraints.

CURRENT FEEDRATE CALCULATIONS
Transform parameter (u) to (rsu)
Calculate $\text{curr_frate}(u)$ using rising S-Curve (rsu)
Calculate $\text{next_tang_accn}(u)$

UPDATE VARIABLES
Set $\text{curr_frate}(u) = \text{next_frate}(u)$;
Set $\text{curr_tang_accn}(u) = \text{next_tang_accn}(u)$

COMPARE ACCN FOR MAXIMUM
 $\text{next_tang_accn}(u) > \max_tang_accn(u)$?

No

Yes

$\text{next_tang_accn}(u) = \max_tang_accn(u)$

COMPARE ACCN FOR MINIMUM
 $\text{next_tang_accn}(u) < \min_tang_accn(u)$?

No

Yes

$\text{next_tang_accn}(u) = \min_tang_accn(u)$

UPDATE VALUES FOR NEXT CUCLE
 $\text{curr_frate}(u) = \text{next_frate}(u)$
 $\text{curr_tang_accn}(u) = \text{next_tang_accn}(u)$

EXITING
Rising FeedrateSection