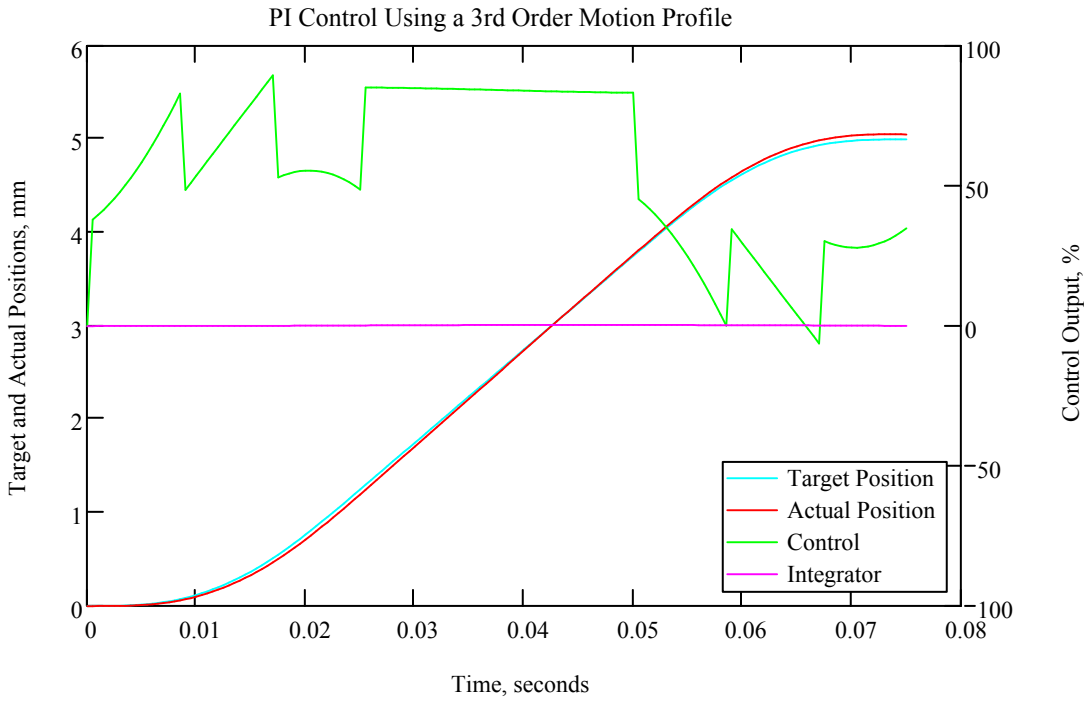
Compare Motion Profiles and Closed Loop Control

PI with Velocity, Acceleration and Jerk Feed Forward



$$\sum_n \left[\left(r_n \right)_0 - \left(x_n \right)_0 \right]^2 = 0.185571$$

The sum of squared errors is much less with a 3rd order than a 2nd order motion profile. The only difference is the 3rd order motion profile and using jerk feedforwards.

K = 1.2	ζ = 0.333333	ω_n = 125.663706
Ki = 314.771334	Kp = 31.028076	
Kv = 0.833333	Ka = 0.004421	Kj = 0.000053

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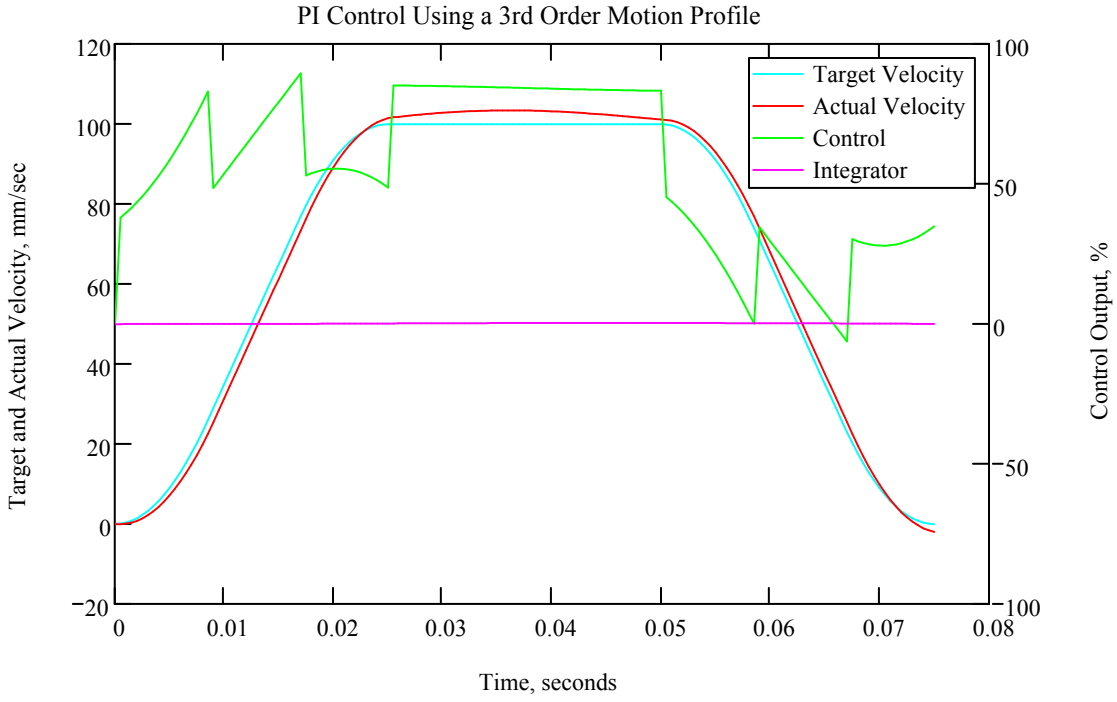

The velocity error isn't quite as bad as the 2nd order motion profile