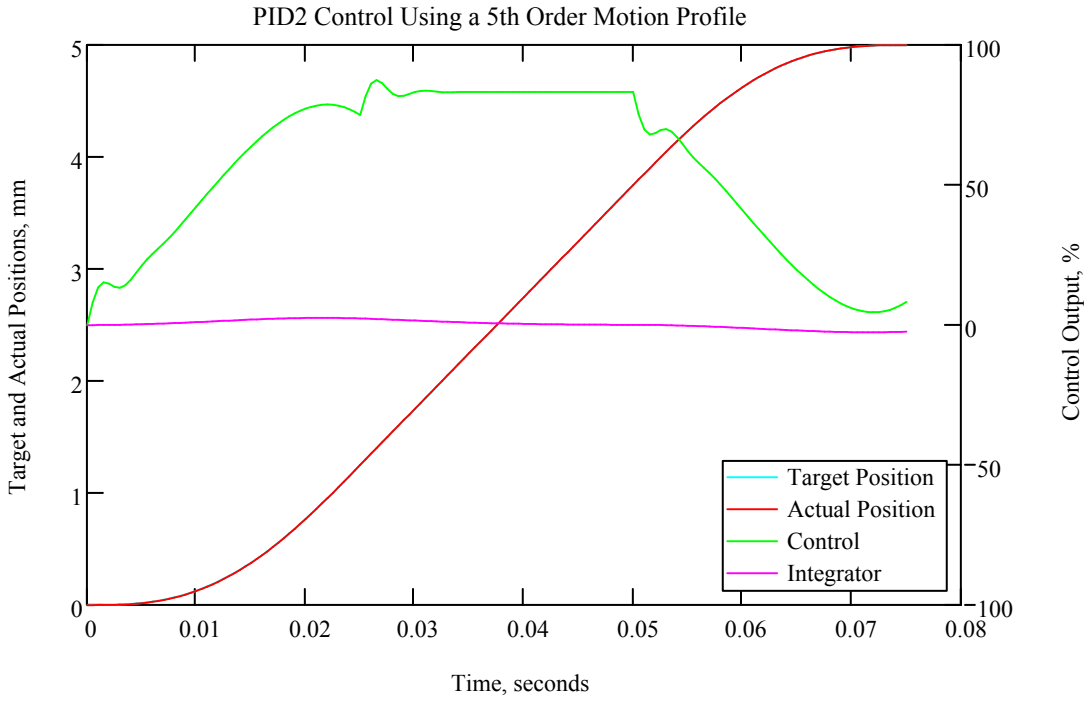
Compare Motion Profiles and Closed Loop Control

PID2 with Velocity, Acceleration and Jerk Feedforward Control



$\sum_n \left[\left(r_n\right)_0 - \left(x_n\right)_0\right]^2 = 0.000321$

The PID with second derivative gain and the fifth order motion profile reduce the sum of squared errors significantly.

K = 1.2	$\zeta = 0.333333$	$\omega_n = 314.159265$	
Ki = 82246.703342	Kp = 1047.197551	Kd = 4.166667	K2 = 0.008842
Kv = 0.833333	Ka = 0.001768	$Kj = 8.443432 \times 10^{-6}$	

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