

# Planning

## Clamp Time Calculation

A-4

### To Calculate the Approximate Clamping Time of a Fixture

1. Fluid capacity per cylinder = \_\_\_\_\_ (cu in)
2. Total number of cylinders = \_\_\_\_\_
3. Multiply line 1 by line 2 = \_\_\_\_\_ (cu in)
4. Repeat steps 1-3 for each different \_\_\_\_\_  
\_\_\_\_\_ cylinder size and/or stroke
5. Interpret volume required for flex hose expansion from chart on page I-11 of this catalog \_\_\_\_\_ (cu in)
6. System capacity = line 3 + line 4 + line 5 = \_\_\_\_\_ (cu in)
7. System position time = [ \_\_\_\_\_ (line 6 in.<sup>3</sup>) ÷ \_\_\_\_\_  
(low pressure pump flow)] X 60 = \_\_\_\_\_ Seconds (See note 1 below)
8. Time for system to build high pressure = [ \_\_\_\_\_ (line 6 in.<sup>3</sup>) ÷ \_\_\_\_\_  
(High pressure pump flow)] X .01 X [ \_\_\_\_\_ (system operating pressure plus note 2 below)  
÷ 1000] X 60 = \_\_\_\_\_ Seconds
9. Total position and clamp time = \_\_\_\_\_ (line 7) + \_\_\_\_\_  
(line 8) + 1.5 Seconds (correction factor for motor start and stop) = \_\_\_\_\_ Seconds

#### NOTES:

1. If sequenced circuits are involved, calculate the position time of these circuits at the high pressure pump flow rate.
2. If using a pallet decoupler, you must add the following correction factor to the total system volume in line 8 above

.0007 X \_\_\_\_\_ (system operating pressure) = \_\_\_\_\_ (cu in)

