



To Use This Product Safely

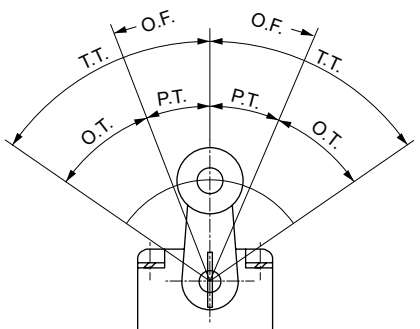
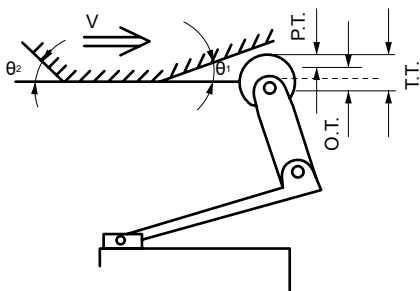
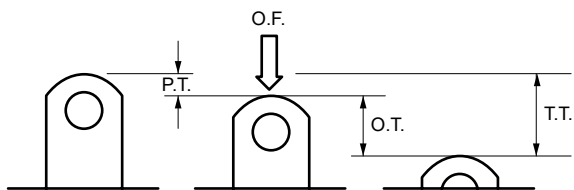
Be sure to read this before use. Check the beginning of Intro 27 for general precautions for pneumatic components.

Design / Selection

CAUTION

- Do not move the component more than the total movement (T.T.).
- Actuator operation codes used in the catalog are shown below.

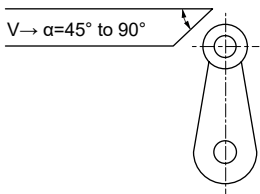
Code	Description
O.F	Necessary force for operation
P.T	Action before valve open
O.T	Action after valve open
T.T	Total movement



Dog

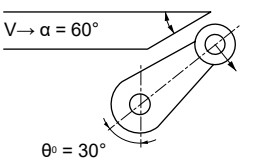
- Set the dog angle θ to 45° or less.
- If the dog speed is high, set θ to a small value.
- The dog operation position and depth should be designed to "P.T+O.T/2".
- Design the cam and dog so that the lever returns gradually.

① $V \leq 0.2$ m/s



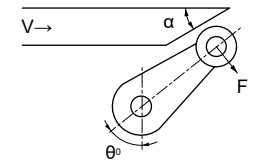
α	Vmax (m/s)
90°	0.05°
75°	0.07°
60°	0.1°
45°	0.2°

② $V \leq 0.1$ m/s



Set the arm parallel to the dog's cut face so that the force is applied at a right angle to the arm. Generally easiest to design the dog and set up the arm
 $\alpha = 60^\circ$ and $\theta = 30^\circ$ are good.

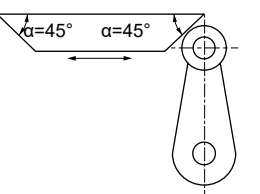
③ $V \leq 2$ m/s



The Vmax (max. speed) increases at a smaller angle. The arm always should be set parallel to the dog's cut face.

$\alpha = 90 - \theta$	Vmax (m/s)
40°	0.7°
35°	0.9°
30°	1.3°
25°	2.0°

④ When the dog is exceeded ($V \leq 0.2$ m/s)



Set the arm perpendicularly to $\alpha = 45^\circ$.
 $V \leq 0.2$ m/s is preferred.

- Do not use the mechanical valve body as a mechanical stopper.

- Do not apply excessive force when operating the toggle switch (MS-□-TG).

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Component Products Site (<https://www.ckd.co.jp/kiki/en/>) → 'model No.' → Instruction Manual.