



To Use This Product Safely

Be sure to read this before use. For general cylinder information, see Intro 41, and for cylinder switches, see P. 1512.

During Use

Individual Precautions: Cylinder with valve CAV2, COV_N 2 Series

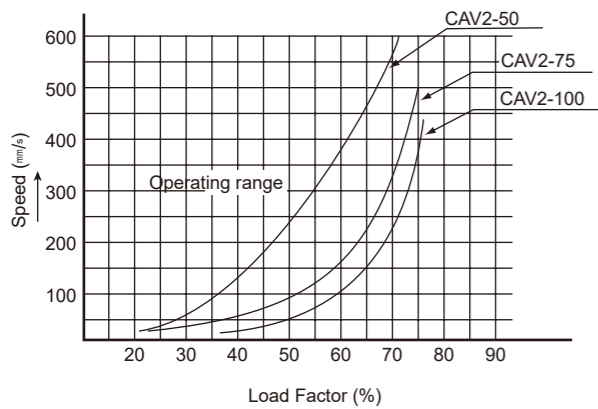
Design / Selection

Warning

■ Air may be taken in at the exhaust port of the valve due to valving element operation, causing the intake of foreign matter near the exhaust port. Foreign matter may also enter when the exhaust port is pointed upwards. Install a silencer or pipe the exhaust port downward.

● The actuator will not operate correctly if the exhaust air is not discharged smoothly.

■ When moving the load with CAV2/COV2 attached vertically, use within the specified range shown as below. Outside this range, cylinder speed adjustment will not be possible.



CAUTION

Instantaneous energization

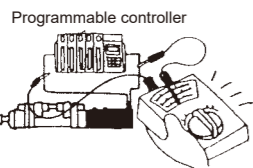
When using the double solenoid type with instantaneous energization, ensure the energization time is 0.1 seconds or more.

■ If the 2-position double solenoid is started and then switched, it will hold that status unless a reverse operation electrical signal is input.

■ Check leakage current to prevent malfunction caused by leakage current from other fluid control components.

● When using a programmable controller, leakage current may affect the valve and cause a malfunction.

● The values affected by leakage current depend on the voltage type. Refer to the table below.



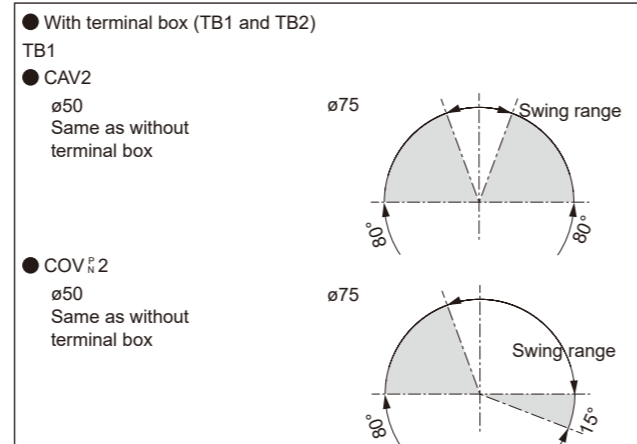
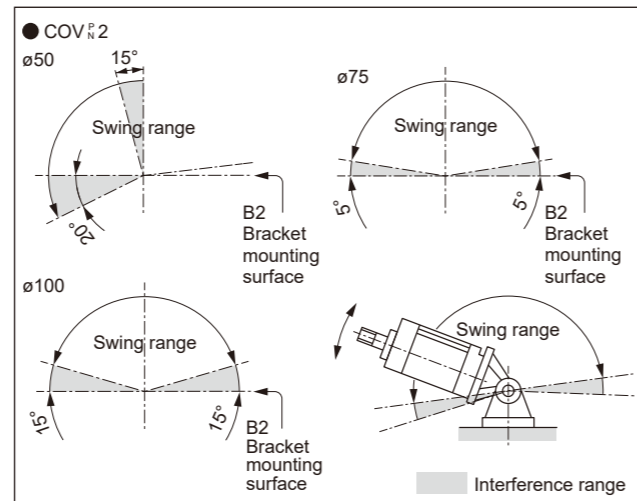
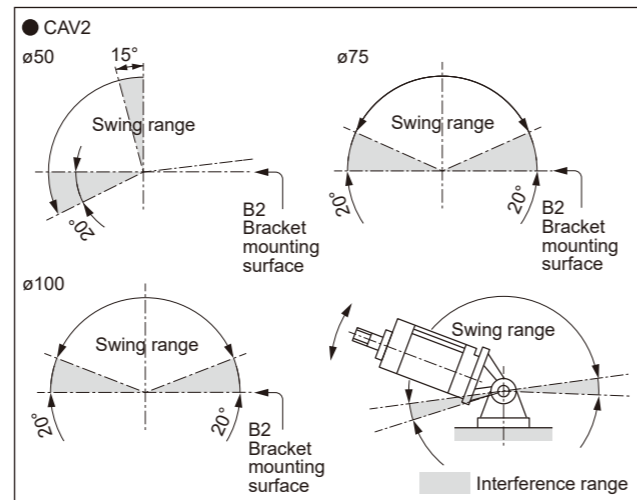
Reference

Cylinder Switch	For 100 VAC	3.0 mA or less
	For 200 VAC	1.5 mA or less

■ Switch the valve at least once every 30 days to prevent malfunction.

Oscillating range

○ Note that the oscillating range of the combination of eye bracket (CA) and clevis bracket (B2) is limited as in the figure below.



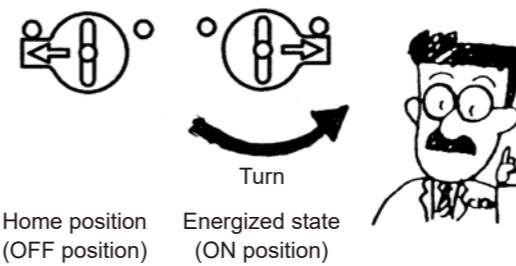
TB2 (CAV2 ø50) is the same as without terminal box. COV_N 2 ø50, ø75, CAV2 ø75 cannot be selected.

Warning

■ Manual operation causes the connected device to function. Make sure that there is no danger before performing manual operation.

If the manual operating device of the valve has been activated, be sure to return it to the home position (OFF state) before operating the equipment. Non-locking type (CAV2, COV_N 2) automatically returns; for locking type (COV_N 2), always confirm the home position (OFF state).

[Example]



● If compressed air is supplied when not at origin, the cylinder will become operational, creating hazardous conditions.

CAUTION

■ Be careful not to hit the solenoid valve with a tool or the equipment during mounting.

■ Do not support the cylinder with pipes during mounting.

■ Do not pick up the product by the coil lead wire.

● This may lead to disconnection.

■ Infrequent use

● Switch the valve at least once every 30 days to prevent malfunction.

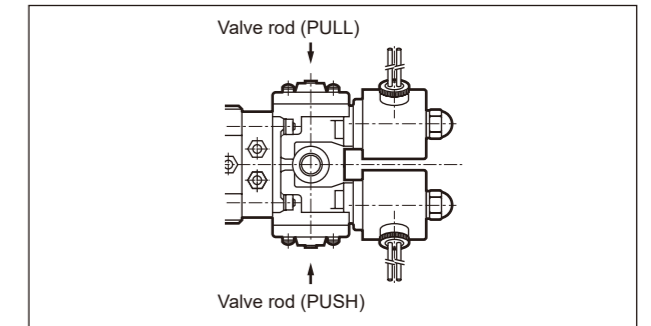
■ When disassembling and assembling the valve, be sure to confirm that it operates normally according to the following work procedure.

Work procedure

1. Check that the locking manual override is at the origin (OFF state).
2. Set to low pressure. (0.15 MPa)
3. Set the manual override to the operation side (push the non-locking type, turn the manual dial for the locking type) to check that the cylinder is operational.
4. Return the locking manual override to the origin (OFF state) and check that the cylinder returns. (Operation confirmation by manual operation is complete.)
5. Perform operation check by electricity.
 - After manual operation check, energize/de-energize to confirm operation.

Manual operation

● For CAV2

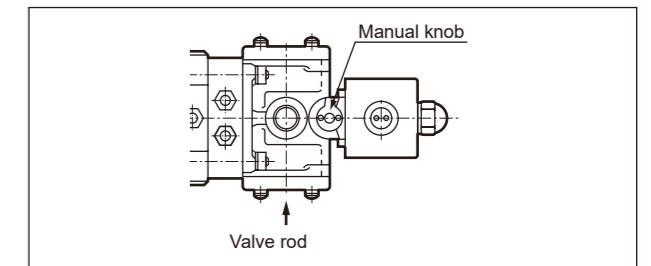


● Pushing the valve rod (PUSH) with a Drivers extrudes the Piston Rod.

● Pushing the valve rod (PULL) with a Drivers retracts the Piston Rod.

● Although this product is non-locking, the Piston Rod is held as it is when PUSH or PULL is pressed.

● For COV2

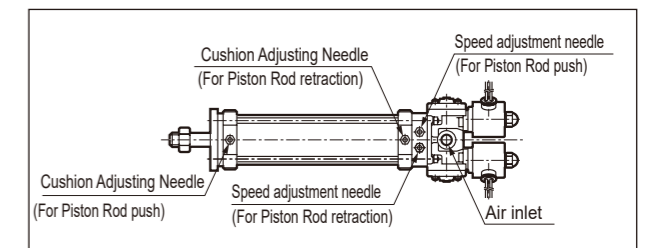


● Turning the manual dial energizes the solenoid. (Locking type)

● Pressing the valve rod with a Drivers, etc., energizes the solenoid. (Non-locking type)

▲ For COV2-75 and 100 with CA or B2 mounting bracket, manual operation is possible with non-locking but not with locking.

How to adjust the speed and cushion of CAV2/COV2



1. The speed decreases when the speed adjustment needle is turned clockwise with a Drivers, and increases when it is turned counterclockwise.
2. The cushioning effect increases when the cushion needle is turned clockwise with a Drivers, and decreases when it is turned counterclockwise.

For precautions during mounting, installation, adjustment, use, and maintenance, refer to "During Use" in this catalog and the CKD Components Product website (<https://www.ckd.co.jp/kiki/en/>) -> "Model No." -> "Instruction Manual."