



Safety notice/rod-less cylinder /caution for application

CHELIC PNEUMATIC

Please read the safety notice carefully before using and pay attention to the safety caution of this product

- Pay caution to the individual attention for various model series(read the cautions and safety notice in P9~10 for common cautions)

Caution for design, selection



Warning

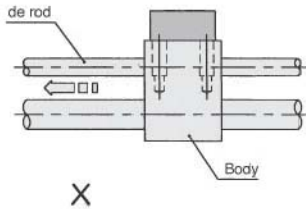
- Make thorough understanding to the characteristic of the compressed air and the application of this product while designing circuit.
- Please use only the fluid stated on the catalog, don't use the fluid other than limited, in order to prevent damage of product and affect the operation safety.
- The air used is compressed air, please note that expandable and unstable pressure will fly out, burst out, or leak.
- The magnetic force of the magnet is very strong, pay attention to the distance of the slide block moving between front and rear base, avoid activated and crashed and injured.
- Please used as per the specification stated on the catalog, exceeding the pressure beyond the specification, temperature and condition will cause poor action and affect the operation safety. Selection of cylinder, load should not exceed allowable value(give allowance)
- For fixing method, don't secure at middle of slide base but both ends.
- For single rod type rod-less cylinder, the fixing of guide rod should be done on both sides, setting of the turning angle of the slide block should be maintained within 1 degree.
- Due to the mechanical design of movement by rod-less cylinder with variation of wobbling, please pay attention to flying objects and possible crash hazard of your limbs, which may result in body injury and mechanical damage and so on; please take precaution upon designing.
- The movable range of rod-less cylinder may contact our body and cause injury, should be protected by safety guard to prevent direct contact of body hazard.
- Maintain minimum activating pressure, keep smooth stroke.
- If the fixing face of cylinder is poor, the parallelism of the affect by pressure, the shaft receive uneven force, cause friction resistance increase and affect the stable stroke, so maintain fixed stable and even force receiving.
- Keep the surface of the cylinder tube clean and scratch free on circumference face; if there is damage in cylinder tube will cause poor action, and cause damage of cylinder if there is recession.
- Take the driving mechanism and circuit control system combination into account upon design, avoid residue pressure in circuit, fail to completely positioning and lateral pressurized and other factor, causing high speed fly out of the object. These situations are very possible to cause body injury, limbs crashed, and damage of mechanism. Countermeasure of protective circuit is necessary.
- Avoid direct load on cylinder slide block; poor fixing method cause deflection of cylinder tube and poor action; therefore, it is preferable to rest the load on guide rod, cylinder moving the slide block and move the load, just do the transmission work, it is best design method.

rod-less
cylinder

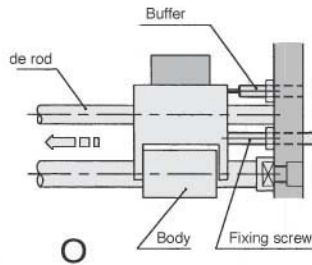


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- Direct load receiving may cause deflection of cylinder tube



- Indirect load receiving method, better design



Caution

- The magnet on the cylinder slide base should keep distance from iron plate and magnetic object to prevent the cause of error induction, and should avoid too close to other magnetic related sensor and the range of slide base stroke and induce error induction.
- Avoid fast impact for the buffer device which cause damage due to collision of magnet, the preferable method is to mount hydraulic buffer device at both ends; start from slow motion in testing the installation and rise the speed slowly.
- The emergency stop device for mechanism is essential, in case of malfunction, in addition the protection device, there should have malfunction stop device to prevent damage of equipment or hurt of human body.
- The restart after the emergency stop should confirm the safe position of all mechanism in order to prevent interference of error position and collision, affect damage of equipment or hurt of human body; there shall have safety precaution countermeasure for restart after the emergency stop upon designing.
- Please don't apply external process to rod-less cylinder to change the profile and structure, causing insufficient strength and structure damage, part damage.
- Please don't enlarge the vent hole of inlet, enlarged bore increase rocking speed and inert torque instant impact, lead to structure damage of product and human injury.

rod-less
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Caution for service and maintenance



Warning

- Shut off the power switch and air source properly before service and maintenance, confirm that there is no residue pressure in the pipeline and start work after confirming the status is safe.
- Please don't disassemble the rod-less cylinder in discretion, there is strong magnet inside, error disassembling will lead to hazard and cause problem on operation of the product.

 **Caution**

- The rod-less cylinder is coated with small amount of oil at initial using state, it will decrease after a period of usage, and should be added up with appropriate amount of oil according to actual application condition. Lubricant is essential in high speed moving, limit to use ISO-VG32 lubricant, feed by oil applicator, may cause poor action if stop oiled when it is required.
- When disassembling the connecting object of the cylinder, it shall be tighten at even force, and push by hand to confirm there is no interference and then start to supply air.
- Service and maintenance should be perform regularly as schedule, and confirm the normal operation of following:
 - (1) Is the compressed air supplied stably ?
 - (2) Is the front filter and strainer normal?
 - (3) Is the connection portion or piping loosen accompany moving of object? Is the pipe connection portion normal?
 - (4) Is the action condition of the cylinder normal? Is there any delay phenomena and exhaust normal? Any strange noise?
 - (5) Whether the piping system connected to solenoid valve (governor)normal? Terminal start and stop movement normal? Is the load system normal?
 - (6) Is the lubricant feeding system normal? Is the oil amount adjusted properly?

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