

Door Hardware

Closers and Door Control Devices (08 71 00)

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Part 1 – General

- **All door closers shall be of one manufacturer to provide for proper installation and servicing after installation.**
- Closer being submitted for approval shall have been manufactured for at least 10 years. A list of (10) year old projects using submitted closer shall be available upon request.
- Size of Units: Except as otherwise specifically indicated, comply with the manufacturer's recommendations for size of door control unit, depending upon size of door, exposure to weather and anticipated frequency of use.
- Cylinder: Shall be of high strength cast iron construction.
- All door exterior closers shall be tested to ANSI/BHMA A156.4 test requirements by a BHMA certified independent testing laboratory. A written certification showing successful completion of a minimum of 10,000,000 cycles for all exterior door closers must be provided.
- All closers shall be inspected after installation by a factory representative to ensure proper adjustment and operation.
 - A report shall be filed with the architect after said visit has been made.
- Closer shall carry a manufacturer's TEN YEAR WARRANTY for hydraulic units and 2 year warranty for electrical and/or handicap power assist door closers against manufacturing defects and workmanship.
- All door closers shall be fully hydraulic and have full rack and pinion action with a shaft diameter of a minimum of 11/16" and piston diameter of 1-1/2".
- Closer shall utilize full complement bearings at shaft.
- Pinion and pistons shall be hardened regardless of closer size.
- The closer shall incorporate tamper resistant non-critical screw valves of V-slot design to reduce possible clogging.
- Closer shall have separate and independent screw valve adjustments for latch speed, general speed and hydraulic back check.
- Back check shall be properly located so as to effectively slow the swing of the door at a minimum of 10 degrees in advance of the dead stop location.
- Pressure relief valves are not acceptable.
- All door closers shall pass UL10C positive pressure fire test.
- **Parallel Arm Closers:** Shall incorporate one piece solid forged steel arms with bronze bushings. 1-9/16" x 1/2" steel stud shoulder bolts, shall be incorporated in regular arms, hold open arms, arms with stop built in, arms with hold open and stop built in.
 - All other closers to have forged steel main arms for strength and durability.
- **Built-In Stops:** Where closers with built-in positive stops are used, the stops shall be of one piece cast malleable iron material.
 - Screw-on stops of any kind are not acceptable.
 - Where required, the hold-open assembly handle for these stops shall rotate on ball bearings.
- All closers to have a powder coat finish on closer body, arm, metal cover and adapter plate.
 - Powder coat finish shall exceed a minimum 100 hour salt spray test, as described in ANSI Standard A156.4 and ASTM B117.
- **Hydraulic Fluid:** All closers, with the exception of interior and interior electronic closers, shall utilize temperature stable fluid capable of withstanding temperature ranges of 120 degrees F. to -30F. without requiring seasonal adjustment of closer speed to properly close the door.
- Supply all drop plates, shoe supports, spacers, templates, etc. to properly install closers according to manufacturer's recommendations.
- Provide grey resilient parts for exposed bumpers.
- Closer being submitted for approval shall have been manufactured for at least 10 years. A list of (10) year old projects using submitted closer shall be available upon request.

Part 2 – Product

- Preferred or equal:
 - LCN Closers - 4040XP (High Traffic/High Abuse Openings)
 - LCN Closers - 1461 (Low Traffic/Low Abuse Openings) Select Products
 - Sargent 1431 (Office Areas)
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Part 3 – Execution

- Mount hardware units at heights indicated in "Recommended Locations for Builders Hardware for Standard Steel Doors and Frames" by the Door and Hardware Institute, except as specifically indicated or required to comply with governing regulations, and except as may be otherwise directed by Architect.
- Install each hardware item in compliance with the manufacturer's instructions and recommendations. Wherever cutting and fitting is required to install hardware onto or into surfaces which are later to be painted or finished in another way, coordinate removal, storage and reinstallation or application of surface protections with finishing work specified in the Division-9 sections. Do not install surface-mounted items until finishes have been completed on the substrate.
- Set units level, plumb and true to line and location. Adjust and reinforce the attachment substrate as necessary for proper installation and operation.
- Drill and countersink units which are not factory-prepared for anchorage fasteners. Space fasteners and anchors in accordance with industry standards.