




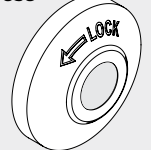




Competitive comparison - ND Series grade 1 cylindrical lock

Grade 1 is just the beginning. The Schlage ND Grade 1 cylindrical lock isn't just the strongest lock in the market, but the most complete as well. Unparalleled strength, incredible durability, advanced electrified options, compatibility across the widest range of door opening sizes, and the most functions mean it isn't just the best lock for an application, it is the best for any application. Grade 1 is the finish line for many, but for Schlage, Grade 1 is just the beginning.

		Schlage® ND Series	Sargent® 11 Line/ Corbin Russwin® CL3100 Series	Sargent 10 Line	Corbin Russwin CL3300 Series	Yale® 5400LN Series	Best® 9K Series	Dorma C800 Series	
Strength/security	BHMA Certification	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Grade 1	Schlage ND doesn't just meet grade 1 requirements, it goes well beyond them. Grade 1 alone isn't enough for high use applications like schools, universities and hospitals or against extreme vandalism or mischievous students standing on levers. The Schlage ND is designed to work in your environment, not just a laboratory one.
	Beyond grade 1 abusive lever torque (torque required to gain entry)	3,100 lb-in ¹ 2.6x BHMA	3,000 lb-in 2.5x BHMA	1,800 lb-in 1.5x BHMA	Not specified	Not specified	Not specified	Not specified	
	Beyond grade 1 offset lever pull (pry bar attacks)	1,600 lbf ¹ 8x BHMA	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	
	Beyond grade 1 vertical impact (impact/abuse)	100 blows ^{1,2} 20x BHMA	Not specified	Not specified	Not specified	Not specified	Not specified	Not specified	
	Free-wheeling vandal resistant trim	Optional	Not available	Optional	Standard	Standard	Optional	Standard	
Durability	BHMA cycle requirement	1M	1M	1M	1M	1M	1M	1M	Exceeding millions of cycles is not the same as working well after millions of cycles. The Schlage ND's design allows the lock to exceed millions of cycles with near zero droop and wobble—without the use of spacers or set screws.
	Beyond grade 1 cycles ¹	16M	15M	5M	Not specified	Not specified	5M	3.5M	
	Droop and wobble	Near zero	Near zero (requires set screws)	Not specified	Not specified	Not specified	Not specified	Not specified	
Electrified	Input voltage	Autodetect 12 or 24V DC	N/A	Model specific 12 or 24V DC	Model specific 12 or 24V DC	Model specific 12 or 24V DC	24V DC only	24V DC only	By using a motor instead of solenoid, the Schlage ND has advantages over every other electrified cylindrical lock. The ability for one lock to be 12 or 24V, EL or EU, and to add RX whenever needed means the right lock is always in stock or at the jobsite. The low 0.230A (230mA) maximum current saves money by allowing more locks on a single power supply, while the energy efficient 0.010A (10mA) holding current eliminates "hot levers" found in other locks.
	Operating mode	Switch selectable EL or EU	N/A	Model specific EL or EU	Model specific EL or EU	Model specific EL or EU	Model specific EL or EU	Model specific EL or EU	
	RX	Modular, can add at any time	N/A	Must be ordered with lock	Must be ordered with lock	Must be ordered with lock	Must be ordered with lock	Must be ordered with lock	
	Max current draw	0.230A @ 12V 0.230A @ 24V	N/A	0.500A @ 12V 0.250A @ 24V	0.250A @ 12V 0.125A @ 24V	0.300A @ 12V 0.150A @ 24V	12V N/A 0.180A @ 24V	12V N/A 0.145mA @ 24V	
	Holding current	0.010A @ 12V 0.010A @ 24V	N/A	0.500A @ 12V 0.250A @ 24V	0.250A @ 12V 0.125A @ 24V	0.300A @ 12V 0.150A @ 24V	12V N/A 0.180A @ 24V	12V N/A 0.145A @ 24V	
	Molex connector	Standard	Standard	Standard	Standard	Standard	Optional	Not specified	
Features	Indicator rose for classroom security	On rose 	On rose (SAR); Cylinder (CR) 	On rose 	Around cylinder 	Not available	On rose 	On rose 	In a lockdown time is critical; as a result, classroom locks often include an "indicator" to alert teachers which direction to rotate the key to secure the door. Rose lock indication is significantly more visible than cylinder lock indication. The Schlage ND has the best combination of functions and lever designs, ensuring the right functionality and look for the project. While the majority of commercial doors are 1 3/4" thick, other sizes are regularly required. Most competitors don't support 1 3/8" doors, or go above 2 1/4". Schlage supports 1 3/8" - 6".
	# lever designs	5	4	6	4	3	3	6	
	# functions	37	19	22	26	24	36	24	
	Door range	1 5/8" - 2 1/8" standard 1 3/8" - 6" optional	1 3/4" - 2" standard	1 3/4" - 2" standard 1 3/8" optional	1 3/4" - 2" standard 2" - 2 1/4" optional	1 3/4" - 2" standard 1 3/8" - 2 1/4" optional	1 3/4" - 2 1/4" standard 1 3/8" optional	1 3/4" - 2 1/4" standard 1 3/8" optional	
	Suiting/compatibility	Lever designs	Schlage ND lever designs suite with Von Duprin exit devices; ND Athens = VD 07; ND Omega = VD 16; ND Sparta = VD 17; ND Rhodes = VD 06; ND Tubular = VD 03						
	Non-Schlage cylinders/cores	Schlage ND supports the following non-Schlage cylinders and cores: Best SFIC; Corbin Russwin FSIC, KIL; Medeco FSIC; Sargent FSIC, KIL; Yale FSIC. Note: Locks must be ordered with appropriate non-Schlage cylinder specified. See pricebook for additional information.							

¹ Beyond grade 1 performance for ND locks with Schlage cylinders only (standard, FSIC & SFIC). Performance with non-Schlage cylinders will exceed BHMA grade 1 requirements but may be less than the performance of products with Schlage cylinders.

² For vertical impact test, testing stopped after 100 blows - no indication of stress or failure.

Competitive information obtained from websites and brochures, August 2016.

ND mechanical and ND wired electrified specification overview

Specifications - ND mechanical and ND wired electrified	Significance
1. Provide Schlage ND Series cylindrical locks conforming to the following standards and requirements:	These are the general standard requirements for locks
a. ANSI/BHMA A156.2 Series 4000, Grade 1	A156.2 Series 4000 is the ANSI/BHMA standard for cylindrical locks
b. UL10C for 4'0" x 10'0" 3-hour fire door	Fire rating certification: Not all manufacturers are rated above 8'0" doors, e.g. Dorma C800 rated 8'0" max, Best 9k doesn't specify.
c. Florida Building Code (ASTM E330,E1886, E1996) and Miami Dade (TAS 201,202, 203) requirements for hurricanes	Hurricane rating: Not all manufacturers perform this testing, e.g. Dorma C800 doesn't specify.
2. Provide cylindrical locks exceeding the ANSI/BHMA A156.2 Grade 1 performance standards for strength, security & durability in the categories below ¹ :	These are "beyond grade 1" attributes of the Schlage ND, which provide confidence in high-abuse applications as well as longevity in general use applications.
a. Abusive locked lever torque - minimum 3,100 inch-pounds without gaining access	Simulates excessive weight at end of levers, such as students standing on locks. 3,300in-lbs torque = 730lbs at end of lever.
b. Offset lever pull - minimum 1,600 foot pounds without gaining access	Simulates pry-bar attacks
c. Vertical lever impact - minimum 100 impacts without gaining access	Simulates sledgehammer-blows to trim, very aggressive abuse
d. Cycle life - minimum 16 million cycles	Cycle life speaks to robustness of lock, ensuring operation after 10M cycles (BHMA requirement is 1M).
1) With no visible lever sag	Working after 15M cycles is not the same as working well. No droop and wobble means the lock still works like new after the test.
2) Without the use of performance aids (i.e. set screws, spacers, etc.)	Set screws and spacers are a poor fix for droop and wobble. Both add to installation complexity, and set screws can be tamper targets.
3. Provide locksets with solid cast levers and wrought roses on both sides.	General specification regarding materials that we use for our locks. This is consistent with most manufacturers.
a. Lever design: Rhodes, Athens, Sparta, Tubular or Omega	
b. Rose design: Rhodes (used with Rhodes, Athens, Sparta, and Tubular levers) or Omega (used with Omega lever)	
c. OPTION (where required by Authority Having Jurisdiction)- Provide tactile warning (knurling) on levers on exterior (secure side) of doors serving rooms or areas considered to be hazardous.	
d. OPTION - Provide break away Rhodes levers for an additional level of security	Intended for applications where high value property/material are contained within a location.
4. Provide locksets with solid steel anti-rotation through bolts and posts to control excessive lever rotation	Anti-rotation through bolts are the bolts at the 12 and 6 position of the lock, the absorb and force applied after the lever has reached full rotation. T-zone locks such as Sargent 11 and Corbin Russwin CL3100 do not have anti-rotation through bolts and thus allow that force to be transferred directly to the chassis, thus increasing the likelihood of costly repairs.
5. Provide independently operating levers with two external return spring cassettes mounted under roses to prevent lever sag.	Typical for cylindrical locks
6. OPTION - Provide Vandlgard/free-wheeling levers with vandal resistant technology for use at heavy traffic or abusive applications.	Vandal resistant trim is ideally suited for high abuse areas—it is much more difficult to exert force at an angle on a freewheeling lever than on a fixed stationary lever. That said, vandal resistant trim should be an option as not everyone prefers freewheeling trim.
7. Provide locksets with no exposed screws .	
8. OPTION - Provide cylindrical locks with an inside indicator feature on a 626 finish for the Rhodes and Omega roses that provides clear direction for users to safely and quickly secure the room	Inside indicator trim is essential in classroom applications, where being able to secure the door quickly is critical in a lockdown situation. The Schlage ND uses high-contrast black lettering on the rose for easy visibility as opposed to Corbin Russwin which uses small text around the cylinder opening.
a. ND75 and ND95 - Standard	
b. ND60 and ND93 - OPTION	
9. Provide locks with standard latches featuring a 2 3/4" (70 mm) backset and a 1/2" inch latch throw capable of UL listing of 3 hours on a 4.0 x 10.0 opening. Provide proper latch throw for UL listing at pairs.	Typical for cylindrical locks. See note above about Schlage ND operating in 4'0"x10'0" doors whereas some competitors limited to 4'0"x8'0" doors.
10. Provide standard ASA strikes unless extended lip strikes are required to protect trim.	
11. OPTION – Provide reconfigurable lockset chassis that allows lock function to be changed to over twenty other common functions by swapping easily accessible parts.	Schlage ND exclusive. The use of key cams allows rapid repair and configuration of locks, useful in schools as less inventory is required to support multiple applications.
Add for ND wired electrified	
12. Provide wired electrified options as scheduled in the hardware sets.	
a. 12 through 24V DC operating capability, autodetecting	Ensures product compatibility with other electrified systems on job site
b. Selectable EL (Fail Safe)/EU (Fail Secure) operating mode via switch on chassis	Enables on-site product configuration to specific application requirements
c. 0.230A (230mA) maximum current draw	Enables multiple locks on a single power supply
d. 0.010A (10mA) holding current	Substantially lower energy consumption. Eliminates "hot levers" found in EL applications or EU applications where door is left unlocked for extended periods of time.
e. Modular / "plug in" Request to Exit switch	Enables on-site product configuration to specific application requirements

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