

BS EN 1303 : 2015

BS EN 1303 : 2015 Cylinders for locks

Products tested to British and European standards provide greater durability, longer warranty periods, peace of mind and evidence of professional specification.

This European standard applies to cylinders for such locks as are normally used in buildings and are designed to be used with cylinders.

Under the standard each product is tested and classified accordingly to show its compliance. The identification of an 8-digit code is visible on the individual product. Each digit represents a category and how it measured against the standard to which it was tested.

Digit 1 - Category of use

One category is identified:

Grade 1: Keys shall resist a torque of 2.5Nm and still be usable. This is for use by people with a high incentive to exercise care and with a small chance of misuse.

Digit 2 - Durability

Three grades of durability classify cylinders as either grade 4, 5, or 6 based on the number of test cycles achieved

Grade 4: 25,000 cycles.

Grade 5: 50,000 cycles.

Grade 6: 100,000 cycles.

Digit 3 - Door mass

Grade 0 - No requirement.

Digit 4 - Fire resistance

Cylinders are classified as either grade 0, A or B

Grade 0: Not approved for use on fire/smoke door assemblies

Grade A: Cylinders shall be subjected to a smoke test in accordance with EN 1634-3 or materials for the parts of the cylinder responsible for preventing any leakage of smoke shall have a melting point not less than 840 °C

Grade B: Cylinders shall be fire tested in accordance with current fire test requirements of EN 1634-1 or EN 1634-2 or materials for the parts of the cylinder responsible for preventing the spread of fire shall have a melting point not less than 300 °C

Digit 5 - Safety

Grade 0 - No requirement.

Digit 6 - Corrosion and temperature resistance

Cylinders are classified as either grade 0, A, B or C:

Grade 0: No corrosion or temperature requirement.

Grade A: high corrosion resistance, no temperature requirement.

Grade B: No corrosion requirement, temperature requirement from to - 25 °C and + 65 °C

Grade C: high corrosion resistance, temperature requirement from to - 25 °C and + 65 °C

Note: No distinction is made between the inside and the outside of either the cylinder and/or the door. On completion of the test, the cylinder must operate using a maximum 1.5 Nm torque on the key at both - 25 °C and + 65 °C.

Digit 7 - Key Security

Cylinders are classified in grades 1 to 6, where 6 is the highest. The grade of security can differ from one side of a double cylinder to the other. The table below provides a summary of the main security requirements.

Requirement	Unit	Grades					
		1	2	3	4	5	6
Min number of effective differs	Number	100	300	15,000	30,000	30,000	100,000
Min number of movable detainers	Number	2	3	5	5	6	6
Max number of identical steps	%	100	70	60	60	60	50
Max number of identical adjacent steps	Number	-	2	2	2	2	2
Direct coding on key	-	-	-	No	No	No	No
Operation of security mechanism (interpassing) torque	Nm	1.5	1.5	1.5	1.5	1.5	1.5
Torque resistance of plug/cylinder	Nm	2.5	5	15	15	15	15

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Digit 8 – Attack resistance

Cylinders are classified grades 0 to 5 where 5 is the highest. The table below provides a summary of the main requirements.

Requirement	Unit	Grades				
		0	A	B	C	D
Resistance to drilling (nett drilling time)	Minutes	-	3 to 5	5 to 10	3 to 5	5 to 10
Resistance to chisel attack (number of defined blows)	Number	-	40	40	30	40
Resistance to twisting attack (no. of defined twists)	Number	-	20	30	20	30
Resistance to plug/cylinder extraction (force)	kN	-	-	-	10	15
	minutes	-	-	-	5 to 15	5 to 15
Torque resistance of plug/cylinder (torque)	Nm	-	20	No	No	No

Example

1 6 0 A 0 C 4 B

The above code denotes a cylinder meeting the required category of use, durability grade 6 (100 000 cycles) and is suitable for use on smoke control door assemblies, grade C corrosion and temperature resistance, grade 4 key security and grade B attack resistance.

Product Marking

This standard requires that the classification relevant to the cylinder shall be quoted in the accompanying documentation, on its labelling or packaging and/or by marking the product itself or by more than one of these methods. The marking/labelling shall include the following:

- a: manufacturer's name or trademark, or other means of identification
- b: product model identification
- c: the seven digit classification listed above
- d: the number of the European standard (BS EN 1303:2015)

CE Marking

BS EN 1303 has not been designated as a harmonised product standard under the Construction Product Directive and therefore CE Marking of cylinders to this standard is NOT permitted.