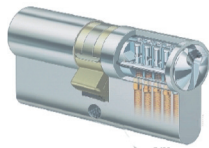


Technical Information Security Technology

Locking Cylinders



Basis of testing and certification:

VdS-Guidelines for Physical Security Devices
Locking Cylinder with Individual Locking Function
Requirements and Test Methods, VdS 2156 (07)

Classifications			
Class	A, AZ Basic burglary protection	B, BZ Medium burglary protection	B+, BZ+ Medium burglary protection, suitable to use in ACE of IAS ¹⁾
General requirements			
For VdS-approved locking cylinders a mounting instruction is made available, which contains a sufficient description of mounting and conditions of use.			
Keys	Class A, AZ	Class B, BZ	Class B+, BZ+
	<ul style="list-style-type: none"> - Basic requirements - AZ: Locking cylinder with integrated pulling protection 	<ul style="list-style-type: none"> - Protected profile - Ordering copy of the keys with security card by the key dealer - BZ: Locking cylinder with integrated pulling protection 	<ul style="list-style-type: none"> - Protected profile - Ordering copy of the keys with security card by the key dealer - BZ: Locking cylinder with integrated pulling protection
Marking	<ul style="list-style-type: none"> - VdS-company's logo - Type description - VdS-class 		
Dimensions	The dimensions of VdS-approved locking cylinders meet the requirements of DIN 18 252. Alternative designs are permitted.		
Effective varieties ²⁾	≥ 30,000	≥ 100,000	≥ 100,000
Test requirements			
Picking security	- Basic security	- Medium security	- High security
Thermal resistance	- 20 °C to + 80 °C	- 20 °C to + 80 °C	- 20 °C to + 80 °C
Security against corrosion	- according to EN 1670 (class 3)	- according to EN 1670 (class 3)	- according to EN 1670 (class 3) - according to VdS 2110 ³⁾ (15 cycles 0.2 l SO ₂)
Durability ⁴⁾	25,000 to 100,000 cycles	25,000 to 100,000 cycles	25,000 to 100,000 cycles
Stability of keys	≥ 2.5 Nm	≥ 2.5 Nm	≥ 2.5 Nm
Stability against drilling	≥ 3 min	≥ 6 min	≥ 6 min
Stability against pulling ⁵⁾	≥ 15 kN / ≥ 3 min	≥ 15 kN / ≥ 6 min	≥ 15 kN / ≥ 6 min
Opening by force (with the next closest key)	≥ 1.5 Nm	≥ 1.5 Nm	≥ 1.5 Nm

The complete guidelines may be ordered by mail at verlag@vds.de.

Remark: Indications on times for manual attacks are to be understood as so-called laboratory times – real attack times are (due to less experience and/or tool equipment of burglar) in multiple longer. The forces during the tests are raised by machines.

¹⁾ Ancillary control equipment (ACE) of intruder alarm systems (IAS)

²⁾ Only the effective varieties are mentioned here. These are those of the technical possible codes which are not likely to get overcome with simple tools (e.g. no key cuts with same depths or evenly raising depths).

³⁾ VdS guidelines, protection against environmental influences

⁴⁾ The durability requirements are tested and approved in three levels of 25,000 (minimal requirements), 50,000 or 100,000 locking cycles according to the manufacturers request.

⁵⁾ Option for cylinders with integrated pulling protection.