

related test method	<b>EN 1365-4: 1999 Fire resistance tests – Columns and EN 1365-6: 2004 Fire resistance tests –Stairs</b>
subject	pressure conditions inside the furnace
reference of original query	TC2 N532, Helpdesk 2009-07

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### Problem

Which pressure to apply when testing a column?

§ 5 of EN 1365 – 4 and EN 1365-6 say: Pressure conditions are established at 100 mm under the top closing of furnace

Pressure conditions are given in § 5.2 of EN 1363 – 1

§ 5.2.2.4 say : *Non separating elements shall be subjected to similar pressure conditions as appropriate to separating elements with the same orientation i.e. beams per floors, columns par walls*

§ 5.2.2.1 say: *The furnace shall be operated so that the neutral pressure plane (a pressure of zero) is established 500 mm above floor level. Irrespective of this, the pressure at the top of the test specimen shall at no time exceed 20 Pa and this requirement may result in adjustment of the height of the neutral pressure plane*

Reading theses 3 requirements does not tell you which pressure to apply during the test.

### Recommendation

During a test according to EN 1365-4 or EN 1365-6 the pressure should be as according to EN 1363-1 §5.2.2.1, where the top of the test specimen is defined as the top of the exposed part of the column or stair.

