

Luxalon® CCA Acoustic+

The Luxalon® CCA Acoustic+ ceiling system from Hunter Douglas greatly improves acoustic performance and comfort by applying concrete core activation. Based on the Luxalon® 30BD ceiling system, CCA Acoustic+ has been extensively tested and installed in a wide range of project applications.

KEY FEATURES LUXALON® CCA ACOUSTIC+:

- Good thermal exchange
- Excellent acoustics
- complete ceiling coverage
- Ceiling is calming and neat
- Positive effect on comfort value
- 100% recyclable product
- made from recycled aluminium
- 30BXD panels available as project solution

Project : Waterschap Brabantse Delta, Breda, The Neeterlands
Product : Linear 30BD acoustic+
Architect: Claus en Kaan Architecten, Rotterdam

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Luxalon® CCA Acoustic+

Acoustic comfort in harmony with
Concrete core activation

The CCA solution

Concrete core activation (CCA) is enjoying increasing interest among architects, project developers and clients for office and public building application. CCA combines excellent thermal comfort with a considerable saving in energy use.

Project: DSM Ahead, Geleen, the Netherlands - Product: linear 30BD/30BXD + CCA - Architect: Broekbakema, Rotterdam

CCA reaches maximum efficiency when there is no impediment between the concrete structure and the underlying spaces, but results in poor acoustics. Traditional ceilings systems like baffle and ceiling islands offer an acoustic solution, however complete ceiling coverage is not possible. At the location of a ceiling island, the thermal exchange is greatly impeded creating uncomfortable differences in temperature. The Luxalon® CCA Acoustic+ system from Hunter Douglas provides complete ceiling coverage with concrete core activation that delivers optimal acoustic comfort for users. The panel aesthetic creates a smooth, unobtrusive ceiling that can blend with the interior design.

Thermal activation

Independent climate chamber tests have shown that the aluminium used for Luxalon® CCA Acoustic+ panels and carriers is highly suited for thermal cooling and heating as it functions as a thermal conductor. In combination with the relative openness of this ceiling system (40% openness with complete ceiling coverage), very positive results can be obtained.

Acoustics

Our extensive experience in acoustic applications with Luxalon® ceiling systems has enabled Hunter Douglas to design an optimised CCA solution.

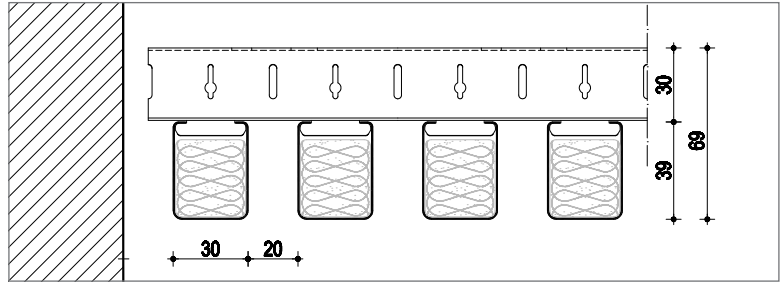
Luxalon® CCA Acoustic+ ceiling panels are finished with special fine perforation in combination with acoustic nonwoven fabric and a high-grade sound absorbing filling. This result is an absorption performance with a: NRC of 0.65 for an acoustically comfortable working environment.

Complete coverage

The excellent thermal exchange and acoustic performance of Luxalon® CCA Acoustic+ enables 100% acoustical ceiling coverage, creating outstanding acoustic comfort and temperature control at levels that cannot be achieved with island or baffle systems.

Construction details

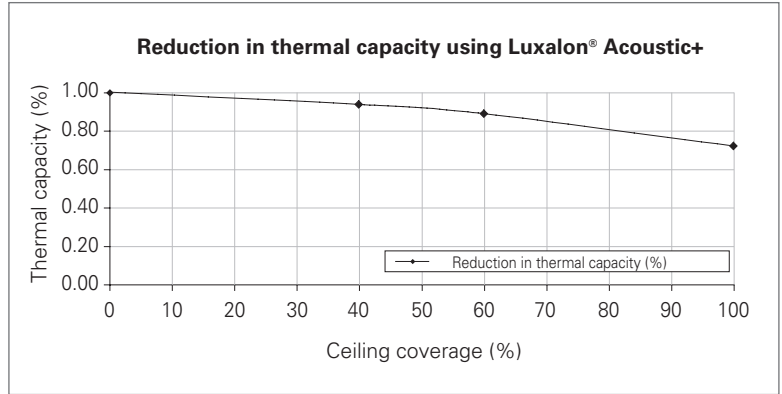
The Luxalon® Acoustic+ panels based on 30BD, are clicked into a universal carrier, which enables easy integration with other Luxalon® panels with different heights and widths. Integrated lighting can be easily applied with this solution.



Thermal capacity

With a ceiling coverage of 60%, the reduction in thermal capacity is only 11%. Complete ceiling coverage (effective coverage of 60% because of the openness of the ceiling) results in a thermal capacity reduction of 28% when compared to a bare CCA ceiling.

During winter (heating season) the reduction in the thermal capacity compared to a bare CCA ceiling is 6%, based on complete ceiling coverage.

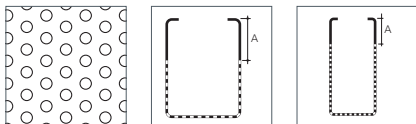


Tested by Peutz; test report no.: B 1164-4E-RA

Acoustics

In order to create increased acoustic performance and comfort, Luxalon® Acoustic+ panels are designed with special acoustical properties

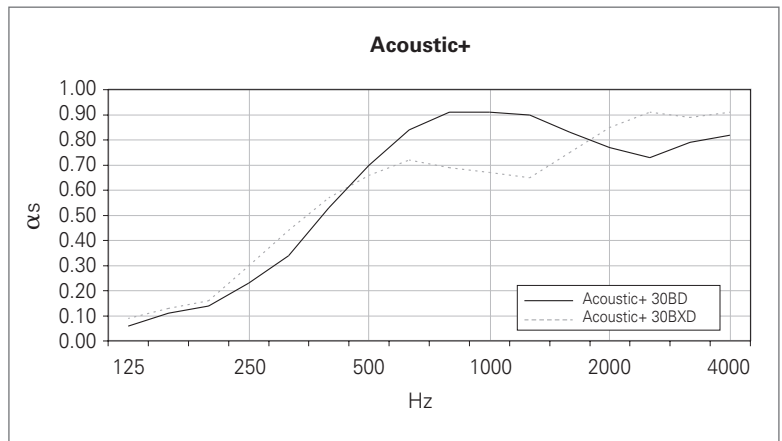
- 1.5 mm perforation (openness 23%)
- Sound absorbing nonwoven fabric over the entire perforated surface
- Sealed sound absorbing filling across the entire length of the panels.



D1523
Ø 1.5 mm
ϕ 3 ⇔ 5.2
Openness 23%

Ø 1.5 mm:
A = 17 mm
30BD standard

Ø 1.5 mm:
A = 17 mm
30BXD



Acoustic+	125	250	500	1000	2000	4000	α _w	NRC
30BD	0.06	0.23	0.70	0.91	0.77	0.82	0.55	0.65

The values are based on a plenum height of 70 mm
Tested by Peutz, test report: A 1846-1E-RA

30BXD - Project solution

For CCA projects where the effective openness needs to be enlarged and the acoustic comfort must be maintained, 30BXD panels provide the ideal ceiling solution. Through the extra height (64 mm) and the 1.5 mm perforation, the panels create a larger sound absorbing surface, so that the open joint between the panels can be enlarged. This results in even better thermal exchange and acoustic comfort.

THERMAL EXCHANGE

Summer situation	
Reduction in capacity of CCA with 30BXD	Unit
2.0	W/m ² .K
23	%

Tested by Peutz, test report: BA 1164-2E-RA

ACOUSTICS

Acoustic+	125	250	500	1000	2000	4000	α _w	NRC
30BXD	0.09	0.30	0.66	0.67	0.85	0.91	0.60	0.65

The values are based on a plenum height of 70 mm. For the graphic reproduction of acoustic values, see curve '30BXD' in the above graph. Tested by Peutz, test report no.: A 2025-2E-RA

Ceilings



Sun Louvres



Façades



- Belgium
- Bulgaria
- Croatia / Slovenia
- Czech Republic
- Denmark
- France
- Germany
- Greece
- Hungary
- Italy
- The Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia
- Slovakia
- Spain
- Sweden
- Switzerland
- Turkey
- United Kingdom
- Africa
- Middle East

- Asia
- Australia
- Latin America
- North America

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