

INSTALLATION GUIDE Rockfon[®] System Bandraster Dznl/AEX[™]



Semi concealed ceiling system Aesthetic

- A linear, wide exposed grid for use with various sized planks
- The concealed grid is on the long side of the planks
- Provides great flexibility for large span distances
- Combines a Bandraster main runner (available in five widths) and concealed Z profiles

Sounds Beautiful

Description

Rockfon System Bandraster Dznl/AEX is a ceiling system suitable for large span distances and the location of partition walls.

It combines painted galvanised steell Chicago Metallic Bandraster main runner profiles (available in five widths: BR 50mm to BR 150mm) and a series of Z profiles in two formats installed perpendicular to the Bandrasters. The system is compatible with Blanka, Blanka dB41, Blanka dB43 and Blanka dB46 planks with Dznl/AEX edges. The planks with the Bandrasters provide a stylish finish where the grid is concealed on the long side of the planks.





Z profiles perpendicular to the bandraster profiles are inserted in the Dznl edge of the plank.



AEX-edge sitting on the Bandraster profile.



Dznl concealed edge on the long side and square edge, lay-in on the short side of the planks.

System components

The components required, including options, for the Bandraster system are shown below and are common, albeit some of them in different lengths and widths, for all five widths of Bandraster – 50, 75, 100, 125 and 150 mm.

ATTENTION

The **Z-profiles** required will depend on the length of the plank that has been chosen and the module dimensions – please use Table 2 as your guide. In addition, the **accessories** required must be compatible with the chosen Bandraster width, so use Tables 3-7 for this.



System components and consumption guide

Table 1

See page 3 for component images.

Pla	ank	Chicago	Metallic Bandraster + Sta	Wall angles		
		1	2*	3*	4	5
-		Bandraster main runner 3600 mm	Bandraster Z profile Z profile Hook main runner 3600 mm		Perimeter wall angle trim 32 x 19 x 3050 mm	Perimeter shadow wall angle trim 15 x 12 x 3050 mm
Dimension (mm)			Con			
1200 x 300	2.98 pcs/m ²	0.83 lm/m ²	2.22 lm/m ²	1.11 lm/m ²	1)	1)
1500 x 300	2.35 pcs/m ²	0.67 lm/m ²	2.22 lm/m ²	1.11 lm/m ²	1)	1)
1800 x 300	1.94 pcs/m ²	0.55 lm/m ²	2.22 lm/m ²	1.11 lm/m ²	1)	1)
2100 x 300	1.65 pcs/m ²	0.48 lm/m ²	3.33 lm/m ²	1.11 lm/m ²	1)	1)
2400 x 300	1.44 pcs/m ²	0.42 lm/m ²	2.22 lm/m ²	1.11 lm/m ²	1)	1)
1200 x 600	1.49pcs/m ²	0.83 lm/m ²	1.11 lm/m ²	0.56 lm/m ²	1)	1)
1500 x 600	1.17 pcs/m ²	0.67 lm/m ²	1.11 lm/m ²	0.56 lm/m ²	1)	1)
1800 x 600	0.97 pcs/m ²	0.56 lm/m ²	1.11 lm/m ²	0.56 lm/m ²	1)	1)
2100 x 600	0.83 pcs/m ²	0.48 lm/m ²	1.11 lm/m ²	0.56 lm/m ²	1)	1)
2400 x 600	0.72 pcs/m ²	0.42 lm/m ²	1.11 lm/m ²	0.56 lm/m ²	1)	1)

Consumption depends on room size.
To determine which depth of Z-profile and Z-profiles with hook are required will depend on the intended plank length/ span distance. See Table 2.

Table 1 – continued

Plank		Additional components							
		6	7	8	9	10	11		
-		Length coupling for Bandraster	Wall connector for Bandraster	Nonius hanger Wall spring fixt		Flat hanger for Bandraster	Bent hanger for Bandraster		
Dimension (mm) Consumption/m ²									
1200 x 300	2.98 pcs/m ²	0.23 pcs/m ²	1)	1)	1)	1)	1)		
1500 x 300	2.35 pcs/m ²	0.19 pcs/m ²	1)	1)	1)	1)	1)		
1800 x 300	1.94 pcs/m ²	0.15 pcs/m ²	1)	1)	1)	1)	1)		
2100 x 300	1.65 pcs/m ²	0.13 pcs/m ²	1)	1)	1)	1)	1)		
2400 x 300	1.44 pcs/m ²	0.12 pcs/m ²	1)	1)	1)	1)	1)		
1200 x 600	1.49pcs/m ²	0.23 pcs/m ²	1)	1)	1)	1)	1)		
1500 x 600	1.17 pcs/m ²	0.19 pcs/m ²	1)	1)	1)	1)	1)		
1800 x 600	0.97 pcs/m ²	0.15 pcs/m ²	1)	1)	1)	1)	1)		
2100 x 600	0.83 pcs/m ²	0.13 pcs/m ²	1)	1)	1)	1)	1)		
2400 x 600	0.72 pcs/m ²	0.12 pcs/m ²	1)	1)	1)	1)	1)		

1) Consumption depends on room size.

Z profiles

This ceiling solution must include two types of Z-profiles (ie. Z-sections and Z-sections with hook). To determine which depth of Z-section is appropriate for the intended plank length/ span distance, please see Table 2 below.

Table 2

See page 3 for component images.

Bandraster main runner	Module length (mm)*	Length of plank** (mm)	Z-section	Z-section length (mm)	Z-section with hook	Z-section with hook length (mm)
BR50	1200	1170	Z40	1170	Z40H	1156.9
BR50	1500	1470	Z40	1470	Z40H	1456.9
BR50	1800	1770	Z40	1770	Z40H	1756.9
BR50	2100	2070	Z50	2070	Z50H	2056.9
BR50	2400	2370	Z70	2370	Z70H	2356.9
BR75	1200	1145	Z40	1145	Z40H	1131.9
BR75	1500	1445	Z40	1445	Z40H	1431.9
BR75	1800	1745	Z40	1745	Z40H	1731.9
BR75	2100	2045	Z50	2045	Z50H	2031.9
BR75	2400	2345	Z70	2345	Z70H	2331.9
BR100	1200	1120	Z40	1120	Z40H	1106.9
BR100	1500	1420	Z40	1420	Z40H	1406.9
BR100	1800	1720	Z40	1720	Z40H	1706.9
BR100	2100	2020	Z50	2020	Z50H	2006.9
BR100	2400	2023	Z70	2023	Z70H	2306.9
BR125	1200	1095	Z40	1095	Z40H	1081.9
BR125	1500	1395	Z40	1395	Z40H	1381.9
BR125	1800	1695	Z40	1695	Z40H	1681.9
BR125	2100	1995	Z50	1995	Z50H	1981.9
BR125	2400	2295	Z70	2295	Z70H	2281.9
BR150	1200	1070	Z40	1070	Z40H	1056.9
BR150	1500	1370	Z40	1370	Z40H	1356.9
BR150	1800	1670	Z40	1670	Z40H	1656.9
BR150	2100	1970	Z50	1970	Z50H	1956.9
BR150	2400	2070	Z70	2070	Z70H	2256.9

* This is the centre to centre distance of the bandrasters. ** Planks are available in Blanka, Blanka dB41, Blanka dB44 and Blanka dB46 in Dznl/AEX-edge format.

Components for 50 mm Bandraster 3050

Table 3

See page 3 for component images.

Chicago Metallic 50 mm Bandraster 3050	SAP n°	Component	Description (H x W x L)
Bandraster main runner			
BR50	170075	Bandraster main runner 50 mm – without slots	35 x 50 x 3600 mm
Z-sections			
Depends on length of plank and module dimensions. See Table 2.			
Wall angles			
L32x19	319743	L Profile: Perimeter wall angle trim	32 x 19 x 3050 mm
W10x15	190369	Shadow Angle 15 x 12 x 8 x 15 x 3050 mm	15 x 12 x 8 x 15 x 3050 mm
Additional components			
BR50 LC	165427	Length coupling for Bandraster 50 mm	
BR50 WC	165426	Wall connector for Bandraster 50 mm	
BR50 H	187738	Flat hanger for Bandraster 50 mm	(H) 100
BR50 HB	187740	Bent hanger for Bandraster 50 mm	(H) 84.5
	165428	Lower part nonius hanger 50 mm	(H) 50
	237264	Wall spring FIXT	

Upper part nonius suspension hangers are also required for this system. See Table 8 for more details.

Components for 75 mm Bandraster 3075

Table 4

See page 3 for component images.

Chicago Metallic 75 mm Bandraster 3075	SAP n°	Component	Description (H x W x L)
Bandraster main runner			
BR75	188187	Bandraster main runner 75 mm – without slots	35 x 75 x 3600 mm
Z-sections			
Depends on length of plank and module dimensions. See Table 2.			
Wall angles			
L32x19	319743	L Profile: Perimeter wall angle trim	32 x 19 x 3050 mm
W10x15	190369	Shadow Angle 15 x 12 x 8 x 15 x 3050 mm	15 x 12 x 8 x 15 x 3050 mm
Additional components			
BR75 LC	187743	Length coupling for Bandraster 75 mm	
BR75 WC	187746	Wall connector for Bandraster 75 mm	
BR75 H	187739	Flat hanger for Bandraster 75 mm	(H) 100
BR75 HB	187747	Bent hanger for Bandraster 75 mm	(H) 84.5
	187749	Lower part nonius hanger 75 mm	
	237264	Wall spring FIXT	

Upper part nonius suspension hangers are also required for this system. See Table 8 for more details.

Components for 100 mm Bandraster 3100

Table 5

See page 3 for component images.

Chicago Metallic 100 mm Bandraster 3100	SAP n°	Component	Description (H x W x L)
Bandraster main runner			
BR100	180645	Bandraster main runner 100 mm – without slots	35 x 100 x 3600mm
Z-sections			
Depends on length of plank and module dimensions. See Table 2.			
Wall angles			
L32x19	319743	L Profile: Perimeter wall angle trim	32 x 19 x 3050 mm
W10x15	190369	Shadow Angle 15 x 12 x 8 x 15 x 3050 mm	15 x 12 x 8 x 15 x 3050 mm
Additional components			
BR100 LC	165476	Length coupling for Bandraster 100 mm	
BR100 WC	165497	Wall connector for Bandraster 100 mm	
BR100 H	180675	Flat hanger for Bandraster 100 mm	(H) 100
BR100 HB	180678	Bent hanger for Bandraster 100 mm	(H) 84.5
	211174	Lower part nonius hanger 100 mm	
	237264	Wall spring FIXT	

Upper part nonius suspension hangers are also required for this system. See Table 8 for more details.

Components for 125 mm Bandraster 3125

Table 6

See page 3 for component images.

Chicago Metallic 125 mm Bandraster 3125	SAP n°	Component	Description (H x W x L)
Bandraster main runner			
BR125	188213	Bandraster main runner 125 mm – without slots	35 x 125 x 3600 mm
Z-sections			
Depends on length of plank and module dimensions. See Table 2.			
Wall angles			
L32x19	319743	L Profile: Perimeter wall angle trim	32 x 19 x 3050 mm
W10x15	190369	Shadow Angle 15 x 12 x 8 x 15 x 3050 mm	15 x 12 x 8 x 15 x 3050 mm
Additional components			
BR125 LC	211199	Length coupling for Bandraster 125 mm	
BR125 WC	211201	Wall connector for Bandraster 125 mm	
BR125 C100.5 H	181105	Flat hanger for Bandraster 125 mm	(H) 100
BR125 HB	188185	Bent hanger for Bandraster 125 mm	(H) 84.5
	188410	Lower part nonius hanger 125 mm	
	237264	Wall spring FIXT	

Upper part nonius suspension hangers are also required for this system. See Table 8 for more details.

Components for 150 mm Bandraster 3150

Table 7

See page 3 for component images.

Chicago Metallic 150 mm Bandraster 3150	SAP n°	Component	Description (H x W x L)
Bandraster main runner			
BR150	170075	Bandraster main runner 150 mm – without slots	35 x 150 x 3600 mm
Z-sections			
Depends on length of plank and module dimensions. See Table 2.			
Wall angles			
L32x19	319743	L Profile: Perimeter wall angle trim	32 x 19 x 3050 mm
W10x15	190369	Shadow Angle 15 x 12 x 8 x 15 x 3050 mm	15 x 12 x 8 x 15 x 3050 mm
Additional components			
BR150 LC	211205	Length coupling for Bandraster 150 mm	
BR150 WC	211216	Wall connector for Bandraster 150 mm	
BR150 H	188216	Flat hanger for Bandraster 150 mm	(H) 100
BR150 HB	188218	Bent hanger for Bandraster 150 mm	(H) 84.5
	211207	Lower part nonius hanger 150 mm	
	23764	Wall spring FIXT	

Upper part nonius suspension hangers are also required for this system. See Table 8 for more details.

Nonius hangers to use with Bandraster grid

Our range of nonius ceiling hangers can suit suspension depths from 185 to 1170 mm.

Table 8

SAP n°	Component	Description (H x W x L)	Suspension depth range (mm)
211169	Upper part nonius hanger	90	185 - 220
165459	Upper part nonius hanger	140	190 - 275
165451	Upper part nonius hanger	240	285 - 370
211170	Upper part nonius hanger	340	385 - 470
211167	Upper part nonius hanger	440	485 - 570
211171	Upper part nonius hanger	540	585 - 670
211168	Upper part nonius hanger	640	685 - 770
165468	Upper part nonius hanger	740	785 - 870
194651	Upper part nonius hanger	840	885 - 970
194653	Upper part nonius hanger	940	985 - 1070
165434	Upper part nonius hanger	1040	1085 - 1170
165409	Intersection clip 10228	Use 2 clips per no	onius hanger

Performance



System load bearing capacity

The height of the Z profiles required depends on the weight of the plank and the span between bandraster profiles. The following Z profiles must be used to limit deflection to 2.5 or 4.0 mm.

Dimensions (mm)		Max. 2,5	mm deflection		Max. 4,0 mm deflection			
-	Rockfon Blanka	Rockfon Blanka dB41	Rockfon Blanka dB43	Rockfon Blanka dB46	Rockfon Blanka	Rockfon Blanka dB41	Rockfon Blanka dB43	Rockfon Blanka dB46
-	App. 3.4-4.1 kg/m²	Appr. 5.6 kg/m²	App. 7.0 kg/m²	App. 7.9 kg/m²	App. 3.4-4.1 kg/m²	App. 5.6 kg/m²	App. 7.0 kg/m²	App. 7.9 kg/m²
1200 x 300	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
1500 x 300	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
1800 x 300	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
2100 x 300	Z40	Z40	Z50	Z50	Z40	Z40	Z40	Z50
2400 x 300	Z50	Z50	Z70	Z70	Z40	Z50	Z50	Z50
1200 x 600	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
1500 x 600	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
1800 x 600	Z40	Z40	Z40	Z50	Z40	Z40	Z40	Z50
2100 x 600	Z50	Z50	Z70	Z70	Z50	Z40	Z50	Z50
2400 x 600	Z70	Z70	Z70	-	Z50	Z50	Z70	Z70



Corrosion resistance

Class B (EN13964).



Demountability

Planks installed in Rockfon System Bandraster Dznl/AEX are fully demountable.

Compatible Planks Overview

Rockfon System Bandraster Dznl/AEX is compatible with the following Rockfon planks:

•		Module Dimensions (mm)									
Tiles	Thickness (mm)	1200 x 300	1500 x 300	1800 x 300	2100 x 300	2400 x 300	1200 x 600	1500 x 600	1800 x 600	2100 x 600	2400 x 600
Rockfon Blanka	20-25	•	•	•	•	•	•	•	•	•	•
Rockfon Blanka dB41	30	•	•	•	•	•	•	•	•		
Rockfon Blanka dB43	40	•	•	•	•	•	•	•	•		
Rockfon Blanka dB46	50	•	•	•	•	•	•	•	•		

Grid Installation

Grid layout and hanger location

Rockfon Dznl/AEX planks can be installed in Rockfon System Bandraster Dznl/AEX. Some layout options are shown below depending on the size of the plank. For other layout options, contact Technical Services.



Installation requirements

During and after grid installation, it is important to check that Bandraster profiles are perfectly aligned horizontally. A maximum level difference of +/- 1.0 mm is recommended between profiles. This tolerance is valid for all directions.

It is essential that installers use a Z hook profile every three Z profiles to ensure optimum stability of the bandraster profiles. It is important to make sure that bandraster profiles are perfectly parallel by measuring the edge to edge distance between them with a maximum tolerance of +/- 1.0 mm.







The length of the Z profiles is determined in the following way:

Bandraster profile width	Z profile length
50 mm	A - 43.1 = L
75 mm	A - 68.1 = L
100 mm	A - 93.1 = L
125 mm	A - 118.1 = L
150 mm	A - 143.1 = L

L = length of Z-section's face. A = module dimension.



Plank Installation





Cross section AEX edge and bandraster profile.

Cross section Dznl edge and Z profile.



1. Install the first plank and engage the Z profile into the Dznl edge.



2. Place the next plank carefully into position.



3. Install the next Z profile and next plank in the same way.

Minimum installation depth (mm)

Planks installed in Rockfon System Bandraster Dznl/AEX provide full de-mountability. The installation depth is defined as the distance from the underside of the plank to the underside of the substrate, where the hangers are fixed. D is the minimum installation depth for easy plank installation and demountability.

Plank thickness	Dimensions	D	
	mm		
20-25	1200 x 300 1200 x 600 1500 x 300 1500 x 600 1800 x 300 1800 x 600 2100 x 600 2400 x 600	Height of the Z-profile used + 22 mm	
30			
40			
50			



Perimeter Finish Options

Below are examples of perimeter finishing. Further details can be found on **www.rockfon.co.uk**



Perimeter finish with wall angle trim.



Perimeter finish with shadow wall angle trim.

Service integration

Rockfon ceiling planks are easy to cut and therefore it is very easy to integrate service installations in Rockfon ceiling planks. The cut-outs can be made with a simple utility knife.

When the system is installed to bear load, Rockfon recommends using a yoke or additional support arms that spread the weight of the service installation. The size of the yoke should not be larger than the total module size. The use of additional suspension hangers / independently suspending the service is recommended. When using support arms to spread the weight of the installation, Rockfon recommends and the use of additional suspension hangers to minimise deflection of the ceiling system. When installing modular services in Rockfon System Bandraster Dznl/ AEX please be aware of the edge design of the ceiling plank and module size of this solution. Because of the ceiling plank design, a specific type of modular service should be chosen in order to create an aesthetically pleasing and well leveled ceiling surface. The actual size of the ceiling plank is nearly its module size and the face of the plank sits approx. 11 mm below the base of the Z-profile or is on the same height as the Bandraster profile.

Planning

A proper planning of the installation will result in less re-work and less ceiling plank damages. Rockfon recommends discussing the project planning thoroughly and well in advance with other trades that have to work in or near the suspended ceiling. By doing so damaged ceiling planks and dirty spots on the finished ceiling surface can be minimised, which reduces costs on the project.

Overview load bearing capacity

	Weight of installations		
-	< 0.25 kg/pcs	0.25 ≥ 3.0 kg/pcs	> 3.0 kg/pcs
Small service integration; Spot- or downlight. speaker. ventilation etc.	Drawing A	Drawing B	Suspend separately
Big service integration; Downlight. speaker. ventilation. etc.	Drawing A	Drawing B	Suspend separately
Modular lighting- or ventilation fixture	Drawing C; System load bearing capacity (if evenly distributed over grid in kg/m²)		

When installing services in Rockfon System Bandraster Dznl/AEX you should always follow local building regulations if more strict than the load bearing capacity constraints Rockfon recommends in the above table. Contact your local Rockfon technical service for more information on suitable lighting fixtures, accessories and the availability of CAD drawings of the different services integrated in Rockfon system Bandraster Dznl/AEX. Special solutions with integrated services are, if available, shown on page 17 of this document; 'Tools'.

Drawing A

The integration of a spotlight, smoke detector, speaker, etc. (weighing < 0.25kg/pcs). Rockfon recommends installing spots and downlights centralized in the plank.



Drawing B

The integration of a downlight, spotlight, smoke detector, loud speaker, etc. (weighing $0.25 \ge 3.0$ kg/pcs). Usage of a plywood yoke* to spread the load on the back of the tile (as shown in the detail) or usage of support arms to spread the load to the grid system is strongly recommended. The use of additional suspension hangers to reduce deflection and a centralized installation of the lighting in the tile is strongly recommended.



* The thickness of the plywood or metal yoke needs to be adapted relative the weight, size and position of your service integration (e.g. downlight or speaker). The Plywood or metal yoke itself must not deflect after installing your service integration.

Drawing C

The integration of a modular light or air vent (evenly distributed over grid), weighing max. the system loading capacity. It is strongly recommended to suspend the service independently. Alternatively use services equipped with supporting arms on minimum two opposite sides to transfer the weight of the service to the top of the bulb of the grid.



Specific Solutions

Sound barrier and partition wall solutions

Bandraster profiles are perfect for placing sound barriers. Sound Barriers contribute to noise control and reduce noise from being transmitted between rooms. They can also be used to reduce the spread of fire in the ceiling void.

Bandraster can easely be combined with partition walls. In order to make a rigid connection between bandraster and partition wall Rockfon advises to "brace" position the nonius hangers as shown on the drawing.



Mitred bandraster

This will make a solid and clean corner joint.



General installation recommendations

Junction between ceiling and wall or other vertical surface

The perimeter trim should be fastened to vertical surfaces at the required level using appropriate fixings every 300-450 mm. Ensure that butt joints between adjoining lengths of trim are neat and that the trim is free from kinks and remains true and level. For the best aesthetics, use as long a length of trim as possible. The minimum recommended cut length is 300 mm.

Timber trims, timber shadow battens and metal

Timber should not be used with fire resisting/protecting ceilings.

Junction between ceiling and curved vertical surface

The use of a preformed curved perimeter trim is the most appropriate method. Rockfon can provide details of curved perimeter trims on request.

Corners

Perimeter trims should be neatly mitred or butt jointed at all corner joints. Overlap mitres are acceptable on metal trims on internal corner joints unless specified otherwise.

Suspension grid

Unless specified otherwise, the ceiling should be set out symmetrically and where possible, perimeter planks should be greater than 200 mm in width. The hangers should be fastened with appropriate top fixings and to the bandraster at 1200 mm centres (or less with greater load). For proper grid installation, make sure the bandraster profiles are perfectly aligned horizontally and diagonals or modules are equal (see requirements and tolerances on page 11).

Main runner joints should be staggered and within 450 mm of the end of the bandraster where it terminates at a perimeter.

Additional hangers may be necessary to support the weight of ceiling services.

Planks

It is recommended to use clean nitrile or PU coated gloves when installing Rockfon planks in order to avoid finger prints and pollution of the surface.

Cutting is made easily with a sharp knife. All off-cuts and holes must be treated according to local Building Regulations.

For an optimised work environment, we recommend installers always observe common work practices and follow the installation advise as shown on our packaging.

The installation of $1800 \times 600 \text{ mm}$ and larger planks is recommended to be done by two persons.

Note! Certain smooth matt surfaces are directional. To ensure consistency of the finished ceiling, it is important that all tiles are mounted in one direction indicated by the arrow printed on the back of each plank.

Tools

Rockfon has developed specific tools that are available on **www.rockfon.co.uk**



Visit our online CAD Library or BIM portal to assist you in your project design.



Generate specification texts for our products on our website.



Explore our vast library of reference projects on our website.

Sounds Beautiful

