



TECHNICAL STATEMENT

DB 80 6M K180S LIGHTING COLUMN ELEMENT

Anchor Plate Maximum Loading Capacity

The product DB 80 6m K180S Lamp Post Element is being produced in Sweden for several projects according to the drawing B705530-EN. This product is being also supplied to various installers in the Swedish market who install the element together with various specifications of lighting columns. The purpose of this technical statement is to provide the maximum Moment and Shear Force capacity of the DB 80 6m K180S Lamp Post Element anchor plate, so that suitable lighting columns can be specified for the element.

Basis system DB 80 6m K150S

The system DB 80 6m K150S is a free standing restraint system installed on asphalt which was positively crash tested and CE-certified to the performance class H1 W4 ASI B according EN 1317. The weight of the standard 6m element is approximately 3.230kg.

Special unit DB 80 6m K180S with lamp post mounting

The product DB 80 6m K180 Lamp Post Element shown on drawing B705530-EN was designed on the basis of the standard product DB 80 6m K150S. The weight of the Lamp Post Element is approx. 4.250 kg. It contains an enhanced tension bar, type K180, to guarantee at least the same structural performance as the original tension bar used in the DB 80 / 6m K150S. The coupling has the same height as the original product to ensure a comparable behaviour at the connection point between the standard DB 80 element and the DB 80 Lamp Post Element. Because of the additional reinforcement within the element, it is significantly strengthened in order to withstand possible forces imposed by the anchor plate of the lighting column. The additional element weight provides higher inertia and therefore acts positively against deflection.

Turning Moment and Shear force capacity of element anchor plate

The calculation provides the maximum forces which can be applied to the anchor plate of the Lamp Post Element. Swedish safety class 3 was selected and the maximum moment and shear force values for a proposed lighting column must not exceed these stated values. These forces are independent from the maximum moment and shear forces of the DB 80 6m K180S Lamp Post Element to act as a foundation for a lighting column, which have not been defined as part of this technical statement.

These values should be assessed on a project specific basis according to local environmental conditions like wind loading and foundation.

Summary

The maximum moment and shear forces capacity of the DB 80 6m K180 Lamp Post Element anchor plate is as follows:

Moment 24.7kNm

Shear Force 3.5kN

When specifying a project specific lighting column for this product, it will be necessary to compare the above stated maximum forces with those which are specified on the lamp post data sheets. When fixing a lamp post or lighting column to the DB 80 6m K180 Lamp Post Element, the above stated maximum forces must not be exceeded.

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Marco Pollok
DELTA BLOC International GmbH
Head of Engineering



Hugh McGarry
DELTA BLOC International GmbH
Senior Project Engineer

DELTA BLOC International GmbH
Industriestrasse 28, 2601 Sollenau, Austria
Tel.: +43 57715 / 470 - 0
office@deltabloc.com
www.deltabloc.com



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