

BEARING PLATE WASHERS FOR ROCK BOLT ASSEMBLIES

DESCRIPTION

Bearing plate washers are used with rock anchor installations to provide areal support and load distribution to the rock surface in the vicinity of the installation. Bearing plates differ in their surface profile, material thickness and size, as well as hole diameter.

FEATURES

- Manufactured from hot rolled commercial grade steel
- Square or rectangular
- Press-profiled surfaces contribute to strength, avoiding excessive use of heavy steel
- Dog-eared corners are provided
- Wide variety of options available: flat, domed, ribbed, hole size, plate thickness, width and length.

BEARING PLATE OPTIONS

Below are the common options – other variations may be available on request.

TYPE	SQUARE SIZE	THICKNESS	HOLE SIZE
Flat	100, 125, 300 mm	4.5, 5.0, 6.0 mm	As per bar diameter requirements
Domed dog ear	125, 150 mm		As per bar diameter requirements
Ribbed dog ear	125, 150 mm		As per bar diameter requirements
Flat Dogear	125 mm		As per bar diameter requirements

PROFILES

Flat

Flat washers are simple plates, provided with a hole for the bolt.

Domed

The surface of the plate is pressed into a domed profile. Dome washers are selected for applications where the hole and the rock surface are not at right angles, for example angled holes or uneven rock surface. Used with a spherical seat or a ball-nosed nut the washer is able to articulate under the seat enabling self-alignment and ensuring flush contact with the rock surface. The hole in the domed washer is therefore necessarily of a greater diameter than the bar diameter.

The domed profile also provides greater pull-through strength, enabling the steel content to be optimised.

Ribbed

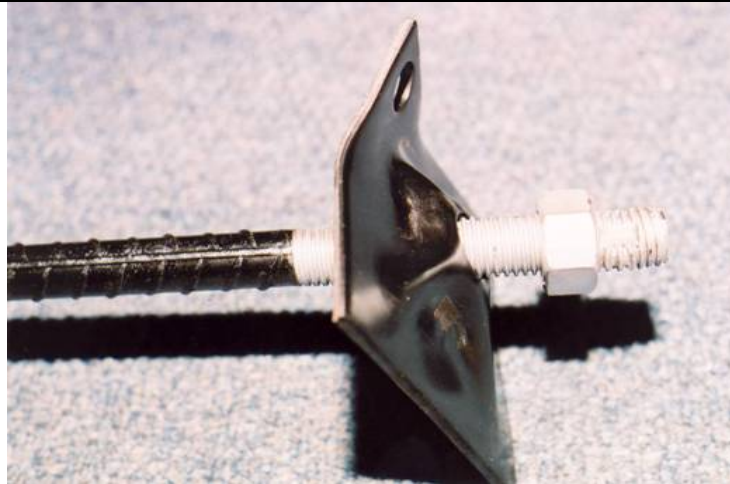
The surface of ribbed washers is pressed into four ribs, radiating from a domed central portion around the hole. The ribbed profile provides strength and stiffness. Ribbed washers are selected for applications where bolts are installed

at right angles to the plane of the rock and where flat rock surfaces are experienced. The hole size provides a loose fit for the bar but does not allow excessive play.

Dogears

Most washers are provided with a turned-down (dogeared) corner equipped with a hole. These enable the attachment of lightweight services or airflow direction indicators.

APPEARANCE



Ribbed Dogear washer showing nut and bar



Domed Dogear Washer showing spherical seat nut and bar



