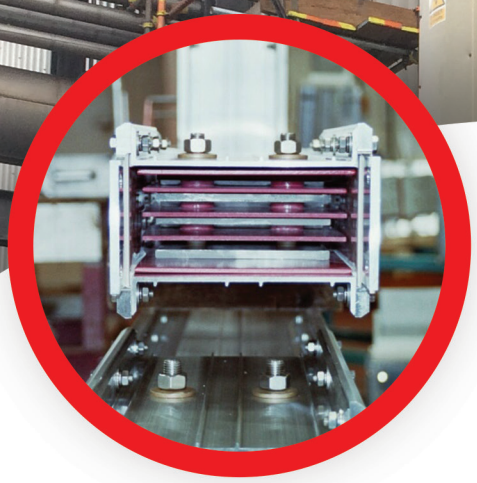

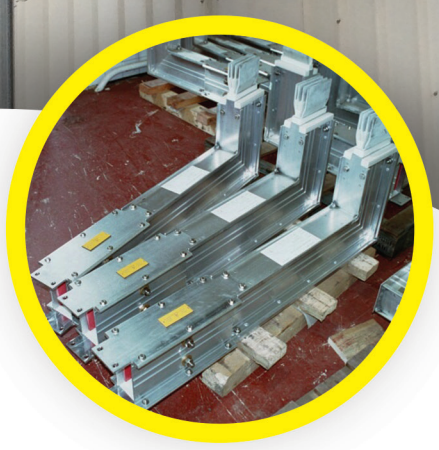

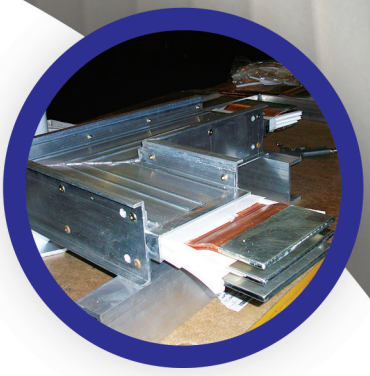

GKW BUSWAY

BUSWAY

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- Low running costs from low impedance
- High mechanical strength for short circuit withstand
- Single body up to 5,000 amps results in compact dimensions
- Adaptable system to suit various applications
- High IP rating at low weight and low cost
- Design through to commissioning from one source

APPLICATIONS

GKW's Busway system has been derived from proven design and application experience gained by GKW engineers over many years of dealing with high current and medium voltage designs. The system provides a low cost alternative to heavy mains and distribution cabling.

Benefits over cables and conventional air insulated busbar systems result from the sandwich construction. A low voltage drop and the subsequent low running costs are inherent in low impedance systems. The aluminium enclosure minimises the magnetic field so that the system can be installed close to sensitive electronic apparatus without causing interference. A high IP rating of IP66 enables the system to be utilised in hostile environments.

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The small cross section and careful selection of fittings enable major space savings in areas along the busbar run and within switchboard cubicles.

GKW's Busway system complies with BS EN 61439-6:2012 and IEC 61439.

The system is designed for use as a horizontal or vertical feeder between switchboards, generators and transformers or with UPS systems. With the use of tapping boxes the system can be utilised as a vertical riser or for factory distribution. With copper conductors the ratings range from 1,000 amps to 5,000 amps in a single housing.

PRODUCT DETAILS

GENERAL CONSTRUCTION

The enclosure is a corrosion resistant aluminium alloy extrusion which totally encloses the phase and neutral conductors in a single body. The sandwich formation results in high short circuit withstand levels and low voltage drop characteristics.

Straight sections are usually supplied in 3.5 metre lengths with other lengths engineered to suit the busbar layout. Tapping outlets are provided where required to suit the contract parameters.

The enclosure degree of protection on feeder trunking is IP66 in accordance with BS EN 60529:1992 + A2:2013. Where tapping outlets are included the IP rating is 42.

Where equipment is utilised outdoors a weather shield/sun canopy is incorporated into the design to eliminate the effects of strong sunlight or rainwater exposure at the joints.

The natural surface of the alloy housing provides an attractive and durable finish. Painting of the trunking is unnecessary, although can be accommodated.

CONDUCTORS AND INSULATION

Conductors are manufactured from HDHC (hard drawn, high conductivity) copper. A fixed neutral conductor is standard, and one conductor bar is used per phase. Consequently the problems of load sharing and thermal imbalance are eliminated. It is possible to supply an oversized neutral where this is required to accommodate unbalanced loads.

Options are available for tinned or silver plated contact surfaces if required.

The conductors are insulated with polyester sheets.

EARTH CONTINUITY

Throughout the range of GKW Busway trunking a twin earth bar is solidly bolted across each joint.

This earth bar has been tested in accordance with ASTA short circuit requirements and forms an integral part of our certification. Where a 'clean' earth is required an internal earth bar can be supplied.

TAPPING OUTLETS

Tapping boxes can be supplied with a variety of devices including fused switches and MCCBs (moulded case circuit breaker). Outlets for plug-in tapping boxes are rated at 400 amps.

SHORT CIRCUIT

Short circuit ratings have been established through Type Testing at ASTA accredited test stations.

JOINT ASSEMBLIES

GKW Busway joints are supplied pre-assembled with fully prepared and protected surfaces. The clamping bolts use high capacity Belleville washers which are progressively tightened to a specific torque. This procedure ensures equal load sharing on multi bolt joints, a feature that cannot be obtained with shear head bolts and provides joints with a high overload capacity. The earth bars across the joint form an integral part of the joint cover.

Where the equipment terminates onto a switchboard a panel flange with the copper conductors splayed to present a usable direct connection is provided. For transformer and generator applications the above arrangement is complemented with flexible tails to link to the conductor bars. If necessary an earth terminal bar can be provided.