

# Ancon ESD, ESDQ, DSD & DSDQ Shear Load Connectors

## Building Product Information Sheet

Ancon ESD, ESDQ, DSD & DSDQ Shear Load Connectors are designed to transfer shear loads across permanent movement joints in concrete construction and allow horizontal movement to take place over time. Each Shear Load Connector is a two-part assembly comprising a sleeve and a dowel component. The range consists of four types of two-part assemblies, and in a range of sizes to accommodate design resistances up to 950kN. Standard assemblies include:

1. ESD: a connector comprising a single dowel with matching cylindrical sleeve, designed to accommodate longitudinal movement and where loads are small.
2. ESDQ: a connector comprising a single and rectangular sleeve assembly, designed to accommodate longitudinal and lateral movement when loads are small.
3. DSD: a connector comprising a double dowel with matching double cylindrical sleeve, designed to accommodate longitudinal movement at higher loads.
4. DSDQ: a connector comprising a double dowel and matching double rectangular sleeve assembly, designed to accommodate longitudinal and lateral movement at higher loads.

Installation of Ancon Shear Load Connectors is a fast and accurate process, drilling of either formwork or concrete is not required. The sleeve is simply nailed to the formwork ensuring subsequent alignment of the dowel, essential for unhindered movement.

Ancon Shear Load connectors can be used for movement joints in floor slabs, suspended slabs, and for replacing corbels, double columns and beams at structural movement joints. Applications in civil engineering include joints in bridge parapets, bridge abutments and diaphragm wall construction.

### Composition

- Ancon Shear Load connectors are manufactured from stainless steel to ensure a high degree of corrosion resistance.

### Supporting documentation

- Full product details are available in supporting technical documentation. See: DSD/ESD Shear Load Connectors. Available from: <https://www.ancon.co.nz/products/shear-load-connectors>
- Installation Guide available. See: DSD/DSDQ Shear Load Connectors, available from: <https://www.ancon.co.nz/downloads/installation-guides>

### Product Identifier

- DSD \_\_\_\_, DSDQ \_\_\_\_, ESD \_\_\_\_, ESDQ \_\_\_\_.

### Manufacturer and Importer Details:

<b>Place of Manufacture:</b>	Overseas
<b>Manufacturer:</b>	Leviat Poland, Leviat sp. z o.o. ul. Rozwojowa 3 62-800 Kalisz Poland
<b>Manufacturer Phone:</b>	+48 62 7604 000
<b>Importer Name:</b>	Leviat New Zealand Limited
<b>Importer Address:</b>	246D James Fletcher Drive, Otahuhu, Auckland, 2024
<b>Importer Website:</b>	<a href="http://www.leviat.com/en-nz">www.leviat.com/en-nz</a>
<b>Importer Email:</b>	<a href="mailto:info.nz@leviat.com">info.nz@leviat.com</a>
<b>Importer Phone:</b>	+64 9 276 2236
<b>Importer NZBN:</b>	9429031339056

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### Relevant Building Code clauses:

- Clause B1 Structure — B1.3.1, B1.3.2, B1.3.3, B1.3.4
- Clause B2 Durability — B2.3.1 (a)
- Clause F2 Hazardous Building Materials — F2.3.1

### Contributions to Compliance:

#### Clause B1 Structure

- Ancon Shear Load Connectors will contribute to compliance subject to intended use and in accordance with the design of a suitably qualified engineer. Ancon Shear Load Connector design capacities have been calculated in accordance with Eurocodes (BS EN 1992-1-1:2004 Design of Concrete Structures – General Rules and Rules for Buildings, BS EN 1993-1-1:2005 Design of Steel structures – General Rules for Buildings, BS EN 1993-1-4:2005 Design of Steel Structures – Supplementary Rules for Stainless Steels, BS EN 1993-1-8:2005 Design of Steel Structures – Design of Joints, BS EN 1994-1-1:2004 Design of Composite Steel and Concrete Structures) and from a proven design method developed by Eligehausen (Eligehausen, R., Mallee, R. and Silva, J.F., 2013. Anchorage in concrete construction. John Wiley & Sons.) and presented in the supporting technical documentation.

#### Clause B2 Durability

- **B2.3.1 (a).** Ancon Shear Load Connectors will meet the provisions of B2.3.1 (a) of not less than 50 years subject to placement and use in accordance with the design and required durability assessment and consideration of the responsible engineer working to the appropriate design and environmental standards.

#### Clause F2 Hazardous Building Materials

- **F2.3.1.** Ancon Shear Load Connectors meet the performance requirements under Clause F2.3.1.

### Limitations on the use of the building product:

- Ancon Shear Load Connectors must be installed in correct orientation for the direction of the load.
- Local reinforcement is required around each connector to guarantee that the forces are transferred between the connectors and the concrete. Correct detailing in accordance with appropriate design codes and the recommendations provided by Ancon is required to attain the full capacity of Ancon Shear Load Connectors.
- Ancon Shear Load Connectors shall be used subject to the specific engineering design of a Chartered Professional Engineer.

### Installation requirements:

- Ancon Shear Load Connectors shall be used subject to the specific engineering design of a Chartered Professional Engineer.

### Maintenance requirements:

- Ancon Shear Load Connectors shall be installed by a competent contractor in accordance with Leviat installation instructions and the specific engineering design and guidance of the designer. Installation guidelines are available in supporting technical documentation.

### Warning or ban:

- This product is not subject to any warning or ban under section 26 of the Building Act 2004