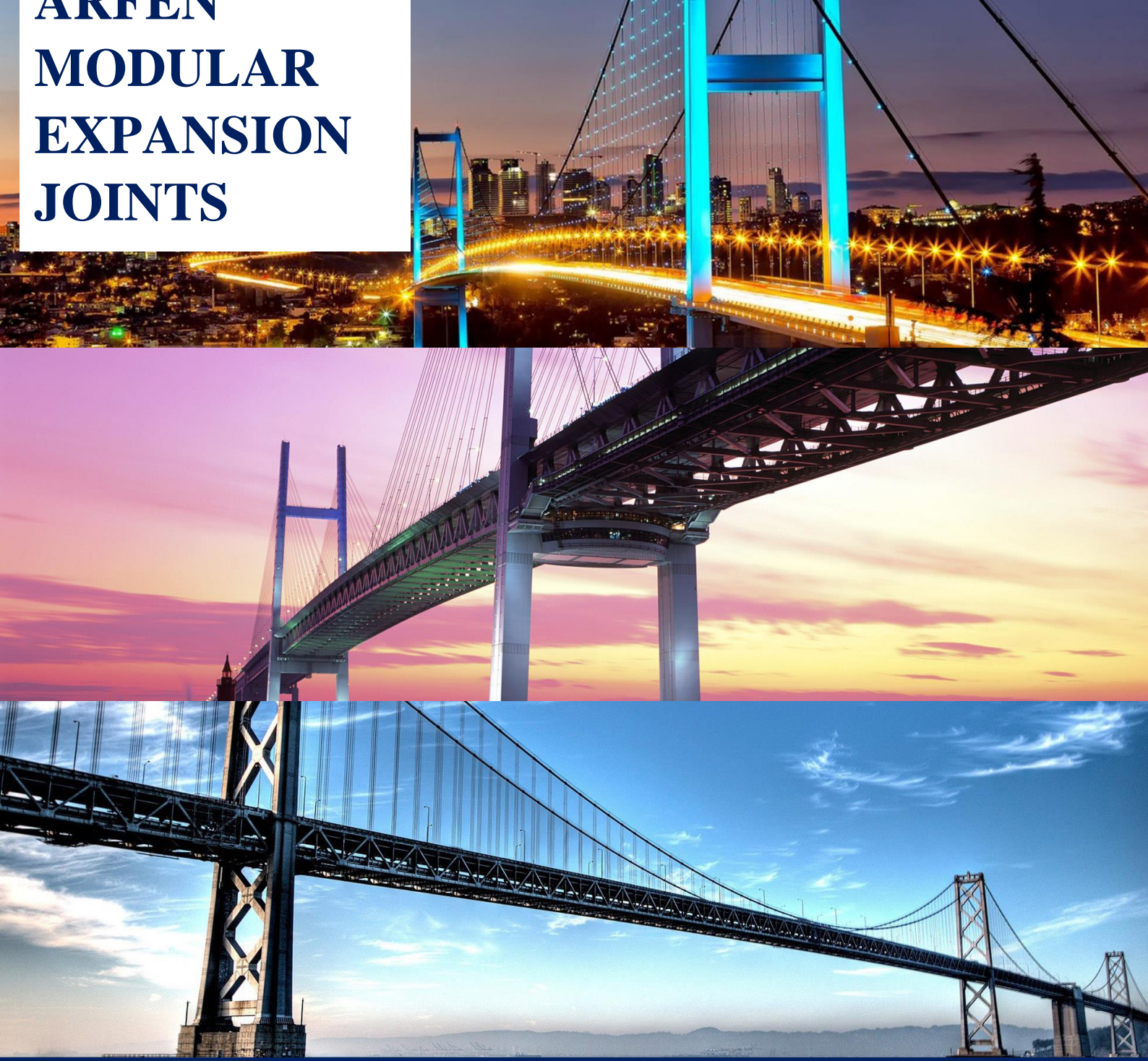


ARFEN MODULAR EXPANSION JOINTS



ARFEN BRIDGE AND CONSTRUCTION TECHNOLOGIES

IND. TRADE. CO. LTD

www.arfen.com.tr

ARFEN BRIDGE AND CONSTRUCTION TECHNOLOGIES

IND. TRADE. CO. LTD

CORPORATE

Arfen has started to operation from 1999 for create trust as a company that finds solutions to the customer's technical needs and requirements.

Arfen made agreements with international partners, so that brings international experiences to our country about bridge bearings, bridge expansion joints, seismic isolators and post-tensioning etc.

Arfen as a construction material manufacturers, is exporting product to 35 countries internationally as well as nationally.

Arfen makes technical meetings with the customer to find solutions and most economical design for their needs in the subject of Arfen. It also makes required applications and maintenances in the construction site if client requests.

Arfen is a technical manufacturer uses more than 21 years of engineering experience, which is a company in Turkey with name and patent rights of self-developed products. Arfen brings revenue to our country by exporting engineering products to 35 different countries.

Arfen makes design and production to meet the requirements of international standards under ISO-9001 Quality Management System.

Arfen provides more economical alternatives for customers with experienced engineers and high technical knowledge.

All bearings are manufactured according to EN-1337-3 and all isolators are manufactured according to EN-15129. Bearings and isolators can be manufactured according to different national standards as well, if customer requests. All other products are manufactured in accordance to TSE (Turkish Standard Institute) and international standards. Quality control tests are carried out in the Arfen laboratory.

We will continue to give service to "Finding Solution" for our customers.

Arfen Bridge and Construction Technologies Ind. Trade. Co. Ltd.



MODULAR EXPANSION JOINTS

The modular expansion joints are designed taking into consideration the required movement capacity. This type of expansion joints is used in situations where the movements to take place on a bridge exceed the single-span joint capacity. Sealing is provided by rubber gasket. Thus, water and chemicals are prevented from damaging infrastructure and superstructure.

In addition, the steel elements are resistant to corrosion and have high fatigue strength. They radiate less noise.

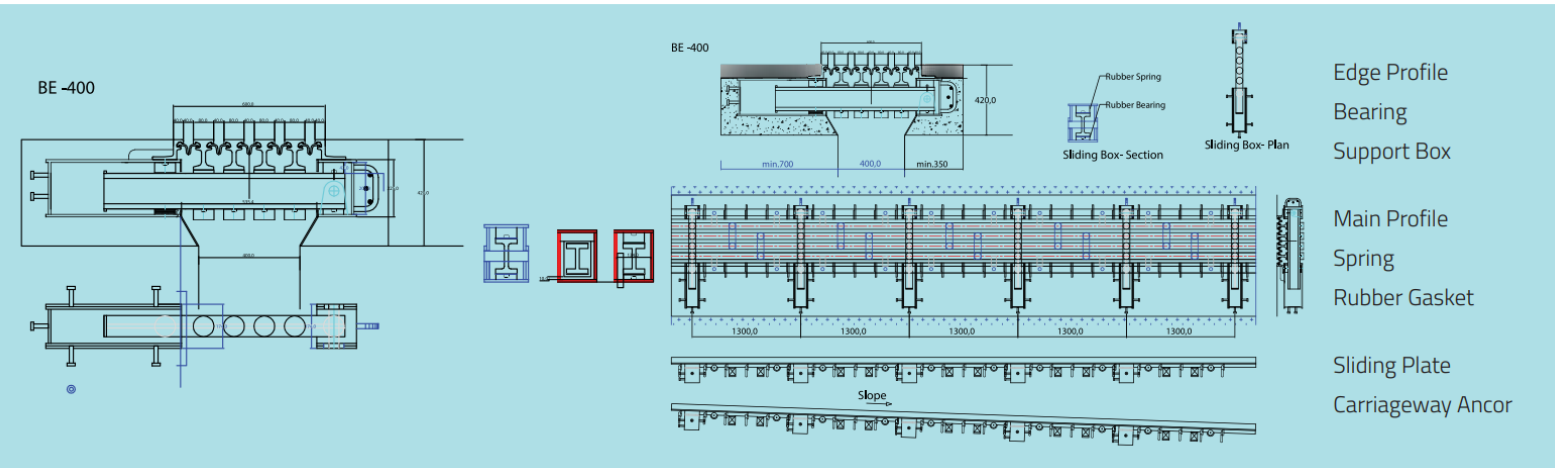
Each of our expansion joints is subjected to static calculations based on the EN and AASHTO H30-S24 load standards. Also used steel and rubber material are produced according to EN standards. Modular joints are produced accordance to ISO 9001.

The modular expansion joint consists of multiple pieces to provide greater than 80 mm movement. It has horizontal moving capacities which continue such as 160 mm, 240 mm, 320 mm, 400 mm, 480 mm, 560 mm, etc. and maximum capacity 1200 mm for use in the transverse direction in the bridges, the carrier is fixed to the structure by means of structured ropes.



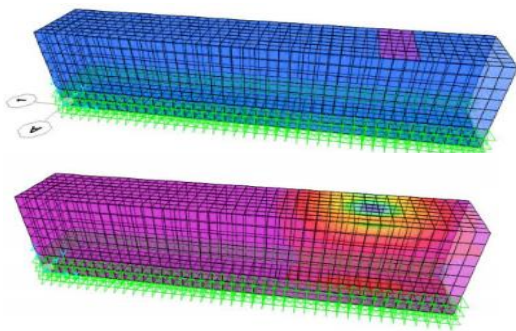
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GENERAL DESCRIPTION

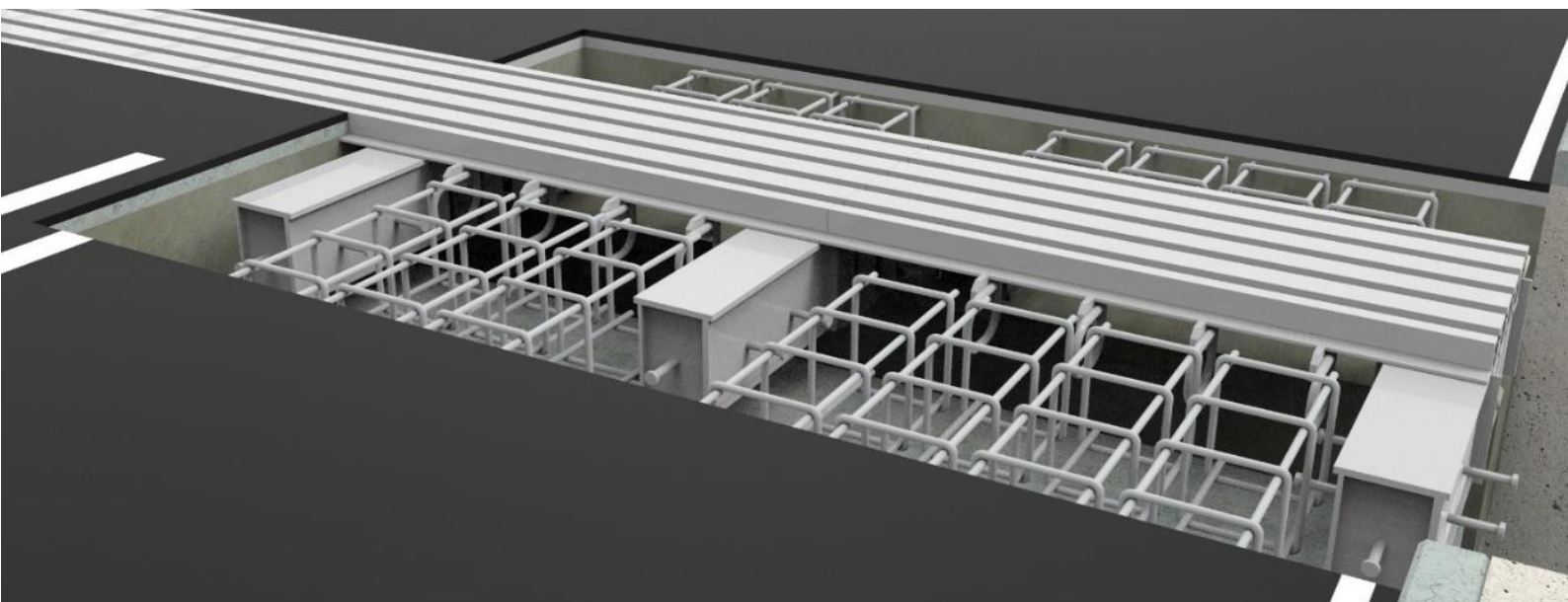


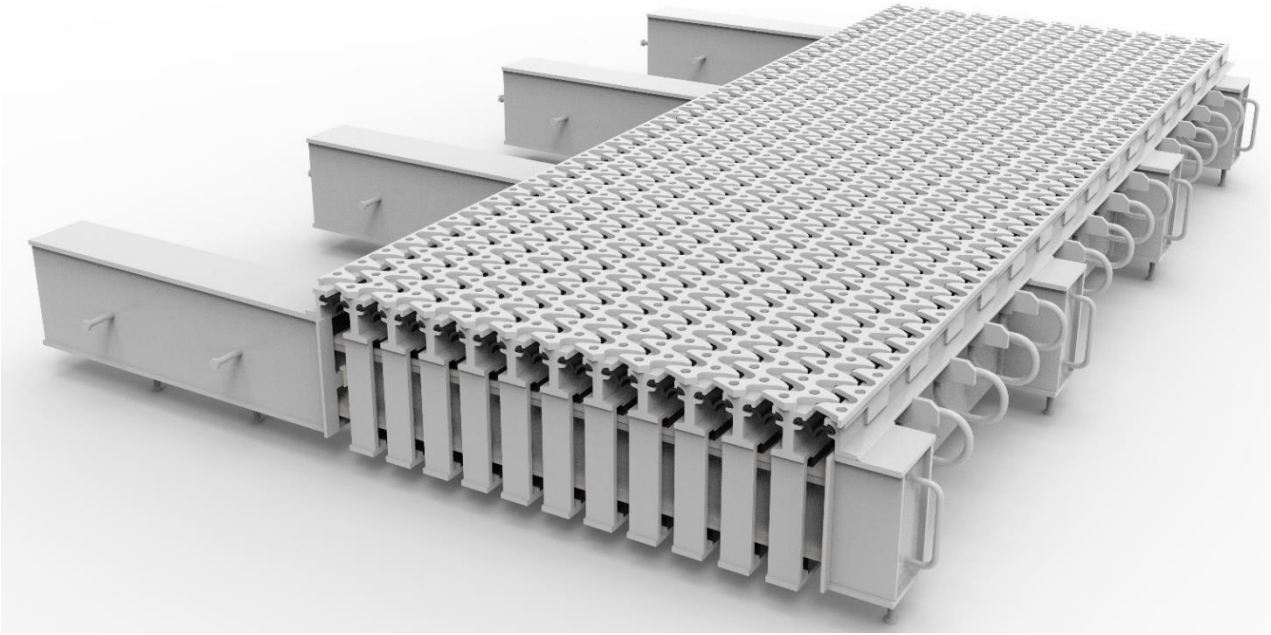
- The assembly phase of the modular expansion joints is very important for the joint life and in particular the following points should be taken seriously. Transverse and longitudinal equipment must never be cut in the application area. All longitudinal bars must be fixed to stirrups. Care will be taken to ensure that the expansion joint is positioned and fixed in accordance with the project plan cross-section. No matter how strong the system is, if the point of connection of the expansion joint is weak and it is not properly connected to the bridge system.

- The expansion joint should be fixed between 10-20 °C temperature. The asphalt wear layer (or concrete) on the side of the expansion joint must be at least 3 mm higher than the expansion joint. Box elements must be well supported with concrete. Particular attention should be paid so that there is no air gap at the bottom of the expansion joints.



Arfen joints are analyzed under the desired loads and delivered in accordance with the standards, together with the analysis reports for the project.

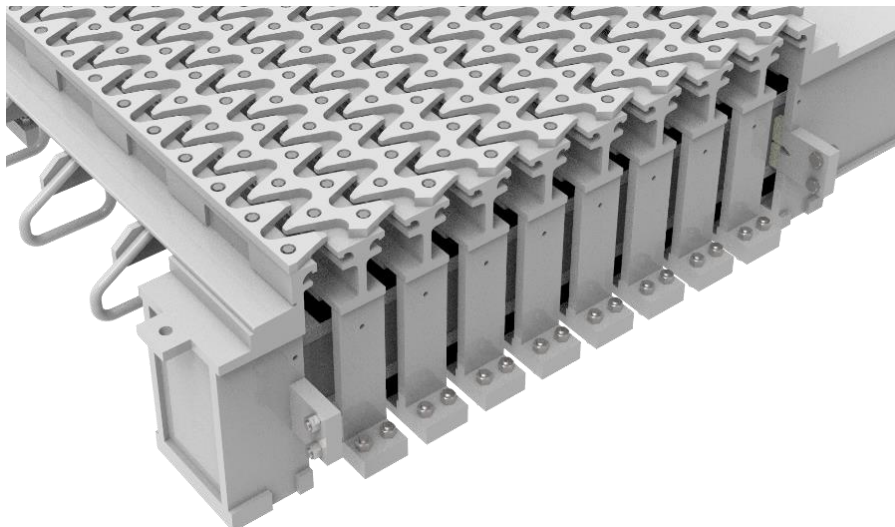




SOUND ISOLATION MODULAR EXPANSION JOINTS

Arfen has developed a modular expansion joint with sound isolation. Thanks to this lesson, sound isolation was achieved at the joint, regardless of the number and weight of vehicles passing along the road. Thanks to the 10-20-30mm thick plates placed on the joint, the sound level that can occur has been minimized.

	Specification	Standard
Edge Beam	S235JR	EN10025 (DIN17100)
Centre Beam	S355JR	EN10025 (DIN17100)
Anchor	S235JR	EN10025 (DIN17100)
Joist(Transverse Beam)	S235JR	EN10025 (DIN17100)
Rubber Seal	EPDM	DIN53505, DIN53504
Sliding Surface	Stainless Steel 1.4401 PTFE	DIN17441, DIN53455, DIN53505,DIN53479



TYPE	Range of Movement (mm)
BE160	160
BE240	240
BE320	320
BE400	400
BE480	480
BE560	560
BE640	640
BE720	720
BE800	800
BE880	880
BE960	960
BE1040	1040
BE1200	1200

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Haliç, İSTANBUL

Supplied Projects

*Turkey,
Turkmenistan,
Bosnia,
Iraq,
Nigeria*



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