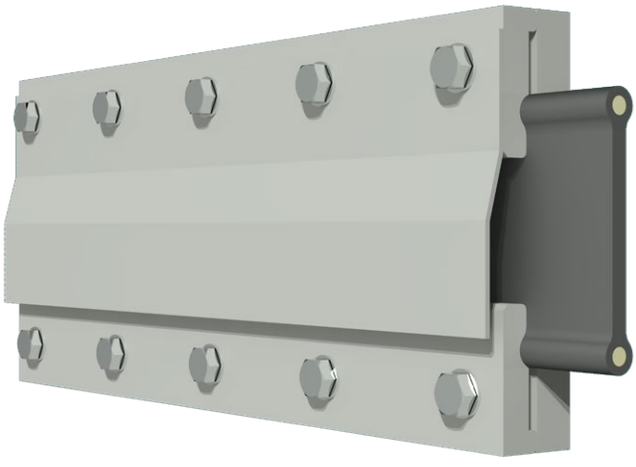
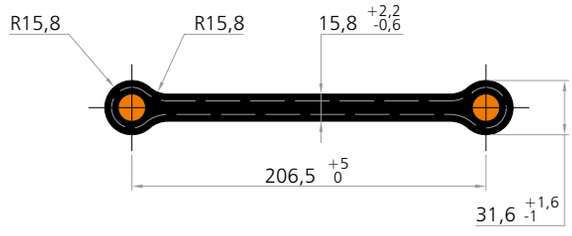
Dog bone expansion joint



Cross section Dog bone



Dog bone expansion joint

Design: Straight rubber belt type expansion joint with self-sealing rubber knobs on both sides to insure leak tightness, designed to compensate axial compression and lateral movements, constructed of laminated fabric plies, tied to a solid bulb core, all bonded, covered in rubber and vulcanised. Dog bone types with molded arch are also available.

It is initially furnished with specially machined steel clamping fixtures, as a component of the condenser. As standard, it is designed to operate under full vacuum and at temperatures up to 120°C. Future replacements typically involves changing the rubber element only.

All dog bone joints will require a splice to make endless. Only one splice per joint is necessary. For new construction, most dog bones can be supplied with a factory splice. Subsequent replacements, most often require a field splice, due to added interference with the condenser. In any case, splicing should be done by experienced technicians.

Length: According to customer specification

Width: Standard = 240 mm

Media: Water, steam, air

Pressure: +1,5 bar / full vacuum

Movements: (max.)* Axial compression = 30 mm
Axial extension = 3 mm
Lateral displacement = 16 mm

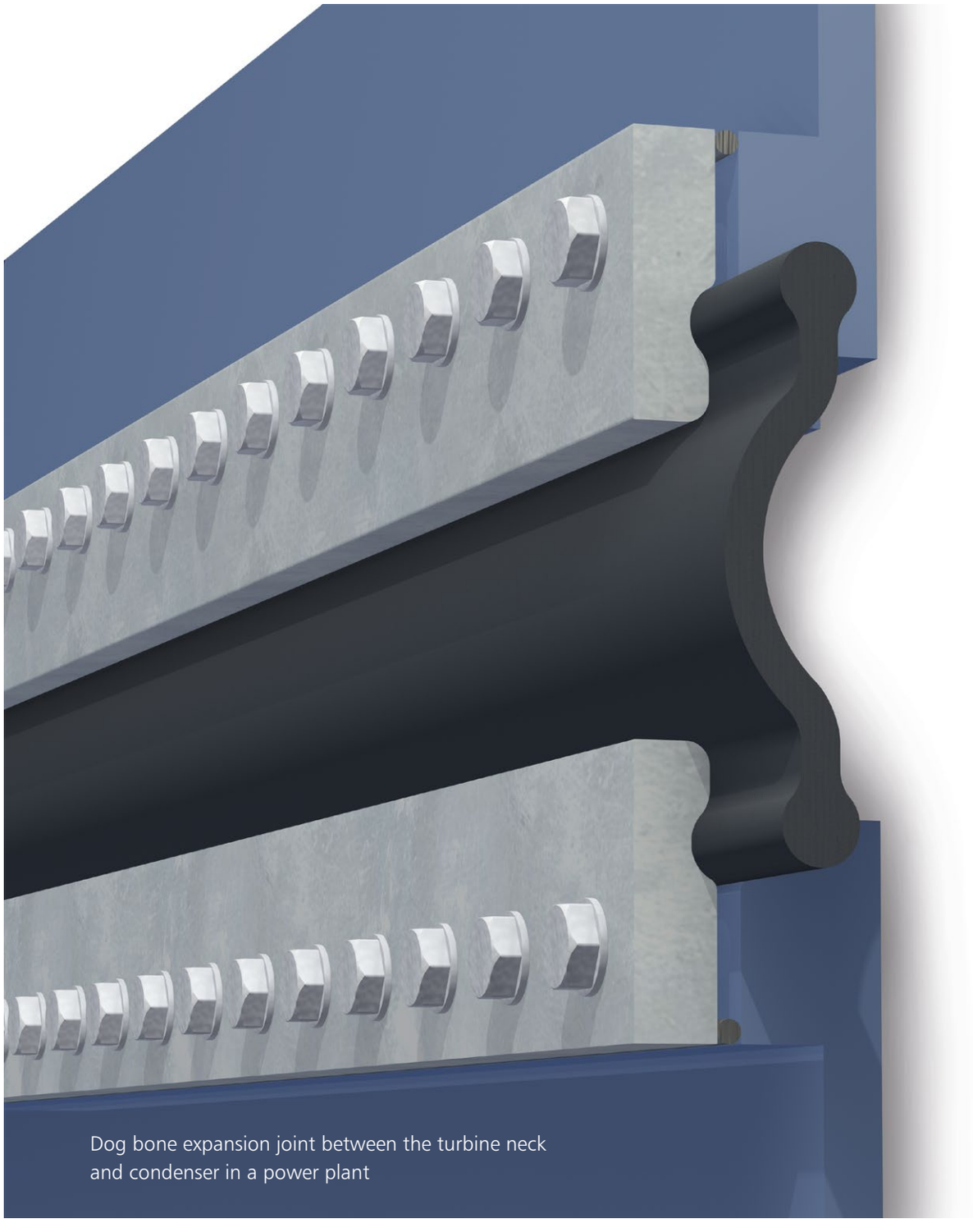
*for a standard width of 240 mm

Application:
Dog bone expansion joints are used as flexible connection between turbines neck and condensers in power generating stations, to isolate low pressure steam turbines from condensers. One of its main functions is to absorb the differential thermal compression and lateral movements of the two components, as the equipment heats and expands during operation. Dog bone expansion joints transfer minimal forces and moments on the turbine exhaust flange.

Request assembly instructions at:
www.ditec-adam.de/en/contact

Bellows elastomers and reinforcements

Elastomer	Fabric	°C	Remark
EPDM	Polyamid	up to 100°C	with peaks of 120°C for max. 36 hours during whole service life
EPDMht	Aramid	up to 120°C	with peaks of 140°C for max. 36 hours during whole service life
CR	Polyamid	up to 90°C	with peaks of 110°C for max. 36 hours during whole service life
FPM	Aramid	up to 140°C	with peaks of 160°C for max. 36 hours during whole service life



Dog bone expansion joint between the turbine neck and condenser in a power plant