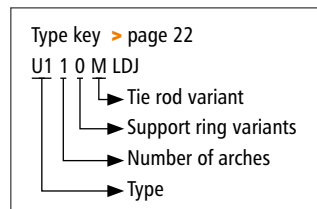


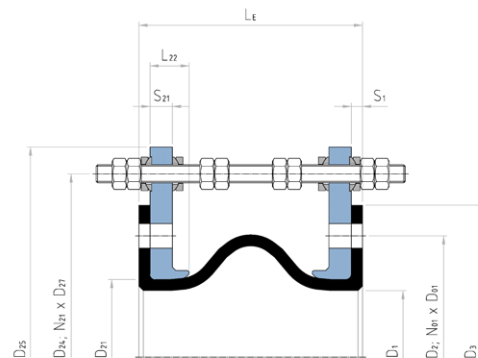
U110M LDJ \varnothing 80 - 4,000 mm



- > **Type U110M LDJ**
without vacuum ring
- > **Type U111M LDJ**
with internal vacuum ring
- > **Type U112M LDJ**
with embedded vacuum ring



Cross section U110M LDJ



Lateral dismantling joint

Design:

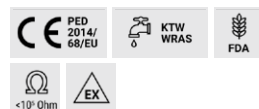
Rubber expansion joints as dismantling joints play a decisive role in the design and layout of pipelines and valves. They are an essential aid during the installation and removal of pipe sections and piping equipment. Without a dismantling joint offering axial, lateral, angular and some minor torsional adjustments, it is almost impossible to insert a valve exactly into a pipe section. Thanks to this all-directional adjustability, the valve can be fitted next to the dismantling joint, and the rubber expansion joint can compensate for installation tolerances prior to being securely connected to the mating flanges.

ditec's dismantling rubber expansion joints are specifically designed for self-retraction to facilitate access to piping and equipment as well as for unmatched ease of installation and subsequent removal. Only the rubber bellows with its close to unlimited medium compatibility is in contact with the fluid so that the use of costly stainless steel materials or special coatings are unnecessary.

Dismantling rubber expansion joints are high elastic, streamlined, have depending from expected installation tolerances or movements single or multiple wide arches with full faced rubber flanges or swivel flanges with sealing bulge, have a cycle life in the tens of millions, are constructed with a high-grade leak-proof tube,

Application:


**Cooling water systems,
desalination plants,
drinking water supply,
plant constructions e. g.
in pipelines, on pumps,
valves**



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




















multiple layers of high-strength cord, a seamless cover, and backing flanges with support collar. Optional with vacuum ring. In compliance with PED 2014/68/EU, FSA Technical Handbook and ASTM F1123 - 87.

Lateral dismantling joints are installed in unanchored piping or isolated equipment. The primary function of the integrated tie rods is to continuously restrain expansion joints axially during normal operation. The tie rods will act as the primary restraint by continuously restraining the full pressure thrust loads. If the pipeline is out of service the tie rods are used also to retract the expansion joint bellow to receive space for dismantling and installation purposes of nearby pipe sections or valves. Tie rod designs are based on the calculated thrust force of the rubber expansion joint at the specified pressure and are attached to the external or internal hardware of the expansion joint.

- Diameters:** \varnothing 80 to 4,000 mm, custom diameters possible
- Length:** $L_E = 200$ to 500 mm (> page 212–217)
Custom length on request
- Pressure:** Up to 100 bar depending on diameter and length
Vacuum stability on request, with vacuum ring up to 0.05 bar absolute
- Movement:** For lateral and angular (2 tie rod design) movements*
For movement capabilities refer to type U110M (> page 212–217)
- 
- Spring rate:** Lateral spring rates (> page 296)

*Installation gap tolerances according to axial movement capability of the expansion joint

Bellows elastomers and reinforcements

Elastomer	Fabric	Marking	°C	Application
EPDM	Polyamid		-40 +100	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDM	Aramid		-40 +100	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMht	Aramid		-40 +120	Cooling water, hot water, seawater, acids, dilute chlorine compounds
EPDMwras	Polyamid		-40 +100	Drinking water, foodstuffs
EPDMwras	Aramid		-40 +100	Drinking water, foodstuffs
EPDMbeige	Polyamid		-40 +100	Foodstuffs
EPDMbeige	Aramid		-40 +100	Foodstuffs
IIR	Polyamid		-20 +100	Hot water, acids, bases, gases
IIR	Aramid		-20 +100	Hot water, acids, bases, gases
CSM	Polyamid		-20 +100	Strong acids, bases, chemicals
CSM	Aramid		-20 +100	Strong acids, bases, chemicals
NBR	Polyamid		-30 +100	Oils, petrol, solvents, compressed air
NBR	Aramid		-30 +100	Oils, petrol, solvents, compressed air
NBRbeige	Polyamid		-30 +100	Oil, fatty foods
NBRbeige	Aramid		-30 +100	Oil, fatty foods
CR	Polyamid		-20 +90	Cooling water, slightly oily water, seawater
CR	Aramid		-20 +90	Cooling water, slightly oily water, seawater
FPM	Aramid		-20 +180	Corrosive chemicals, petroleum distillates
FPMbeige	Aramid		-20 +180	Oil, fatty foods
NR	Polyamid		-20 +70	Abrasive materials
Silicon	Aramid Glass		-60 +200	Air, saltwater atmosphere, foodstuffs, medical technology


PTFE-lining: Firmly embedded against chemical attacks on the interior at the rubber bellows, available starting at \varnothing 300 mm. Take the restriction of the listed movement into account (> page 212–217)

224 Lateral expansion joints with full faced rubber flange




Backing flanges

- Design:** Single- or multi-part integral backing flanges with support collar, clearance holes and tie rod holders (tie rod type B, E, C, M)
 Single- or multi-part backing flanges with support collar, clearance holes and tie rod gusset plates (tie rod type R, K, L)
- Flange norms:** DIN, EN, ANSI, AWWA, BS, JIS, special measurements (> page 298)
- Materials:** Carbon steel, stainless steel
- Coating:** Primed, hot-dip galvanised, special paint

Accessories

- Protective covers:** Ground protective shield
 Protective shield or cover
 Fire protective cover (> page 58)
- Flow liners:** Cylindrical flow liner
 Conical flow liner
 Telescoping flow liner (> page 57)
- Filled arch:**  (> page 42)

Support rings

TYPE	Support rings	Vacuum ring	Pressure	Movement
U110M LDJ		None	Depending on the diameter up to 100 bar, vacuum stability on request	> page 212–213
U111M LDJ		Medium contact, inside the arch	Depending on the diameter up to 100 bar, for vacuum up to 0.05 bar absolute	> page 214–215
U112M LDJ		No medium contact, embedded in the arch	Depending on the diameter up to 25 bar, for vacuum up to 0.05 bar absolute	> page 216–217

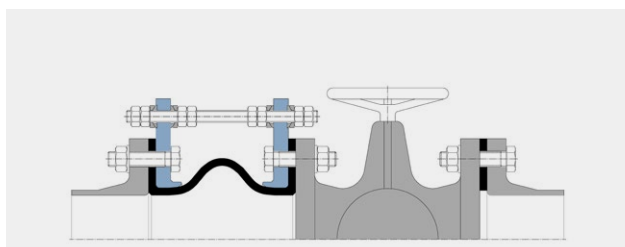
Materials

Stainless steel

Carbon steel, rubberised

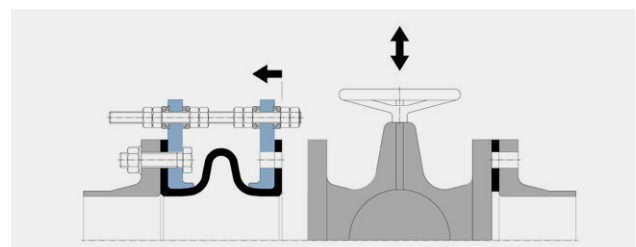
Carbon steel, embedded

Working principle of a dismantling joint



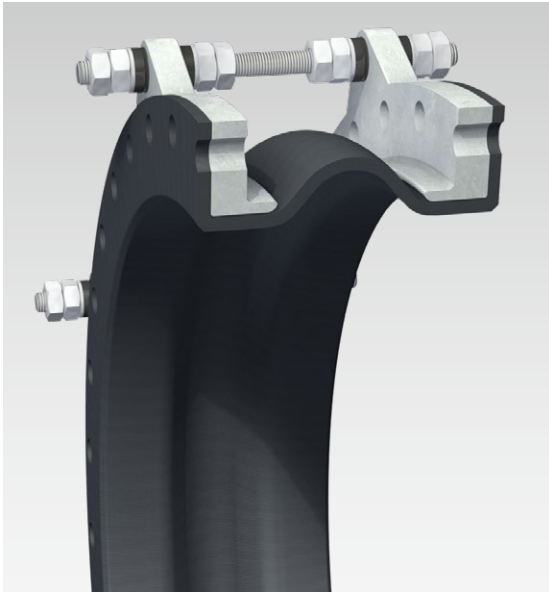
in operation

Note: check tie-rod clashing with valve or pump body



for maintenance

Tie rods

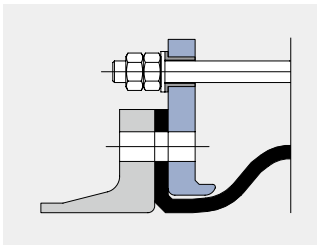


Design: Dimensioning according to design pressure (test pressure) based on the Pressure Equipment Directive

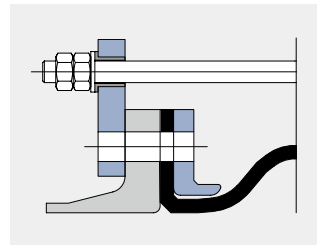
Materials: Carbon steel
Stainless steel

Coating: Spherical washers/ball disks: PTFE coated
Tie rods: galvanised, hot-dip galvanised or PTFE-coated

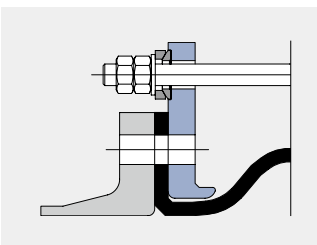
Example: Type U110M LDJ



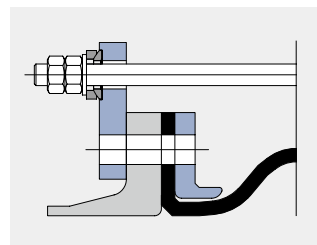
Type U110B
Tie rods mounted outside in rubber bushing to accommodate pressure thrust forces



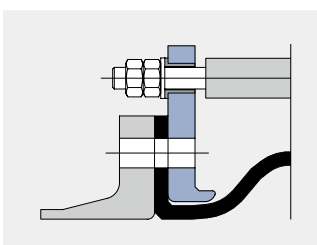
Type U110R
Gusset plates: Tie rods mounted outside in rubber bushing to accommodate pressure thrust forces



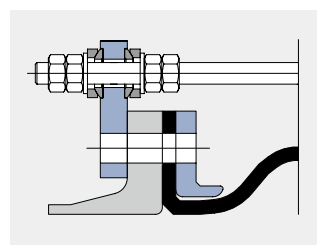
Type U110E
Tie rods mounted outside in spherical washers and ball disks to accommodate pressure thrust forces



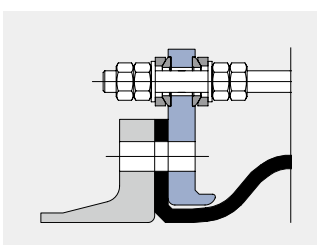
Type U110K
Gusset plates: Tie rods mounted outside in spherical washers and ball disks to accommodate pressure thrust forces



Type U110C
Tie rods mounted outside in rubber bushing and inside with compression sleeve to accommodate pressure/vacuum thrust forces



Type U110L
Gusset plates: Tie rods mounted outside and inside in spherical washers and ball disks to accommodate pressure/vacuum thrust forces



Type U110M
Tie rods mounted outside and inside in spherical washers and ball disks to accommodate pressure/vacuum thrust forces