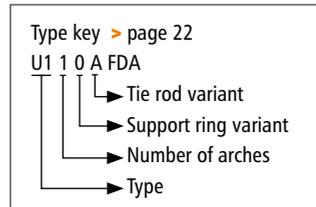


B100 B110 U100A U110A FDA Ø 80 - 4,000 mm
 Ø up to 4,000 x 4,000 mm
 Ø up to 6,000 x 3,000 mm



> **Type U110A FDA**
 without vacuum ring

> **Type U112A FDA**
 with embedded vacuum ring



FDA rubber expansion joint

Design: High elastic, streamlined, cylindrical, single or multiple arch bellows with dead space free slip-on sleeve ends (type B100 and B110), full faced rubber flanges (type U100A and U110A) or Tri-clamp hygienic flange connection vulcanized to the rubber body, designed to compensate all directional movements, have a cycle life in the tens of millions, individually constructed depending from the service pressure and temperature with a high-grade leak-proof tube, single or multiple layers of fabric(s) and a seamless cover. Fixing accessories furnished according to end fitting such as clamps or backing flanges. Optional with embedded support ring. In compliance with PED 2014/68/EU, FSA Technical Handbook and ASTM F1123 - 87.

Rubber bellows are individually mold-manufactured from single or multiple unvulcanized rubber sheets and appropriate elastomer laminated reinforcements and hot vulcanized afterwards to a homogenous expansion joint without seam or gluing. Standard internal surface of the bellow is smooth.

Large range of different foodstuff-compliant elastomers on stock individually chosen for the service medium, in conformity with food regulations according FDA or EU 1935/2004.

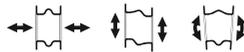
Tie rods can be externally or internally attached when the support structure or adjacent piping equipment have load limitations to take over the thrust forces of the expansion joint bellow under pressure.

Application:
 Rubber expansion joints for applications in meat processing, dairy and bakery technology, chocolate and vegetable oil processing, beverage industry, brewery technology and pharmaceutical industry e.g. for pipelines, CIP systems, on pumps, fittings, apparatus and weighing containers



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

- Sizes:** Ø 80 to 4,000 mm
 Ø up to 4,000 x 4,000 mm or 6,000 x 3,000 mm
 Custom sizes possible
- Length:** Standard $L_e = 150$ to 400 mm
 Custom length on request
- Pressure:** Up to 100 bar depending on diameter and length
 Vacuum stability on request, with embedded vacuum ring up to 0.05 bar absolute
- Movement:** For large axial, lateral and angular movements
 For movement capabilities refer to the specific type



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: Specific styles are available with fluoroplastic lining which covers all wetted surfaces in the tube and flange areas

104 Universal expansion joints with full faced rubber flange

Backing flanges

- Design:** Single- or multi-part round or rectangular backing flanges with clearance or threaded holes, depending from pressure with or without support collar. Optionally integral backing flanges with tie rod holders
- Flange norms:** DIN, ANSI, EN, AWWA, BS, JIS, special measurements (> page 298)
- Materials:** Carbon steel, stainless steel or aluminium
- Coating:** Primed, hot-dip galvanised, special paint

Clamps

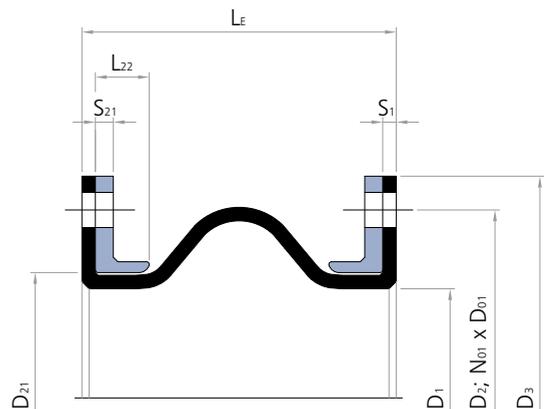
- Design:** Depending on pressure and the diameter, endless clamp belt, screw thread belt, small clamps or hinge bolt clamps. At higher pressures, 2 parallel clamps per side
- Width:** Endless clamp belt: $\frac{3}{4}$ "
Screw thread belt: $\frac{1}{2}$ "
Small clamp: depending on \varnothing : 9–12 mm
Hinge bolt clamp: depending on \varnothing : 18–30 mm
- Materials:** Endless clamp belt with screw lugs (tongs): 1.7300
Screw thread belt with threaded screw lugs: 1.4310
Small clamp, belt and housing: 1.4016 (Screw steel galvanised)
Hinge bolt clamp, belt and housing: 1.4016 (Screw steel galvanised)

Accessories

- Protective covers:** Ground protective shield
Protective shield or cover
Fire protective cover (> page 58)

- Filled arch:**  (> page 42)

Cross section U110A



Support rings

TYPE	Support rings	Vacuum ring	Pressure	Movement
U110A FDA		None	Depending on the diameter up to 100 bar, vacuum stability on request	> page 74
U112A FDA		No medium contact, embedded in the arches	Depending on the diameter up to 40 bar, for vacuum up to 0.05 bar absolute	> page 76
Materials				
Stainless steel, embedded		Carbon steel, embedded		



Silicon rubber expansion joints for food applications with aramid inserts and Tri-clamp end fittings