

mercia flexibles

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Mercia Flexibles
Units 19/20 FlexSpace Enterprise Centre
Ludlow Eco Park
Ludlow
Shropshire. SY8 1FF.
United Kingdom

DILATOFLEX TYPE K and T

Rubber Bellows Expansion Joints / Flexible Pump Compensators



- Grade **CC** Rated for 16 BarG @ 90 °C, and 10 BarG @ **110** °C.
- Manufactured within the European Union.
- Type Approved

DILATOFLEX® K

AUTOSTABLE

Rubber Bellows Expansion Joints - Flexible Pump Bellows Compensators

DIMENSIONAL DATA						TECHNICAL DATA								
Nominal Diameter		Nominal length (Ln in mm)	O.D. (mm)			Max. permissible pressure (2) bar		Steel ring required for vacuum greater than ...%	Max. Permissible Movements (not concurrent)				AUTOSTABLE ... at its equilibrium length (Lq in mm)	Approx. weight in kg (steel flanges PN10 / PN16)
			Drilling standards (1)						Axial		Lateral	Angular		
ISO 2084 NF EN 1759-1 NF EN 1092-1			Compression	Elongation	Shearing				angle					
PN 10	PN 16		class 150 (PN 20)	Ln - Lc mm	Le - Ln mm	R mm	α° degree							
ND mm	NPS inch				T ≤ 100 °C	T > 100 °C								
32	1 1/4	130	140	-	16	10	-	25	10	15	20	130	3.0	
40	1 1/2	130	150	130	16	10	-	25	10	15	20	130	3.4	
50	2	130	165	165	16	10	30	25	10	15	20	130	4.0	
65	2 1/2	130	185	185	16	10	30	25	10	15	20	130	4.7	
80	3	130	200	200	16	10	30	25	10	15	17	130	5.0	
100	4	130	220	220	16	10	30	25	10	15	14	135	6.2	
125	5	130	250	250	16	10	30	25	15	15	14	140	7.7	
150	6	130	285	285	16	10	30	20	15	15	10	140	10.0	
200	8	130	340	340	16	10	30	20	20	15	10	145	12.2	
250	10	130	405	405	16	10	30	15	25	15	8	150	16.7	
300	12	130	445	460	485	16	10	30	15	30	15	7	155	20.0

(1) Other drillings available (e.g. PN6, PN25, BS10D-E...)

Floating flanges in zinc-chromated, hot dip galvanized or stainless (304L or 316L) steel

(2) **DW grade:** W.P. 12 bar at 105°C max. for the whole range.

Its lining grade is homologated A.C.S. (sanitary conformity certification)

It falls into art. 1 item 3.2 of the PED 97/23/CE.

Grade CC WP : 16 BarG @ 90 °C / 10 BarG @ 110 °C.

Technical Sheet
AFD-TS- 002/2 from 2008 - 03 - 07

We reserve the right to change our products' specifications when necessary without notice.



CC
Green label

GZ
Orange label

EPC
Cream label

Inner lining grades

YP
Yellow label

AR / CN
Red label

DW
Blue label

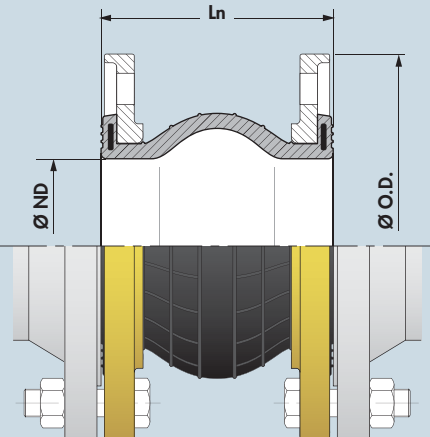
TE
Mauve label



F1
White label

PTFE liner

* see separate technical sheet

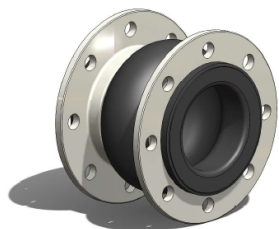


Example of Label



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DILATOFLEX®

Rubber Bellows Expansion Joints - Flexible Pump Bellows Compensators

DILATOFLEX TYPE T

The best among expansion joints

Rubber Bellows Expansion Joints - Flexible Pump Bellows for Pipework for Anti-Vibration, and the Absorption of Movement and Thermal Expansion in Pipelines

CC	16 bar - 90°C
AR/CN	10 bar - 110°C
GZ	16 bar - 90°C
TE	
YP	
AB	16 bar - 100°C
EPC	
DW	16 bar - 90°C
	12 bar - 105°C

The expansion joint Type T allows big displacement, high resistance to pressure and a very good behaviour in exceptional conditions.



Drinking water agreement Grade DW



25 bars @ 55°C possible on request with model DIL-TP.

Example of label:



Range of diameters:

ND 32 - 40 - 50 - 65 - 80 - 100 - 125
150 - 200 - 250 - 300 - 350 mm

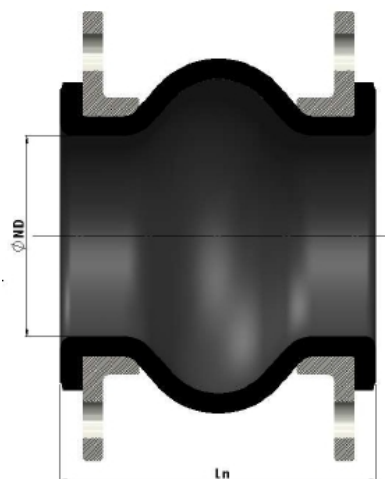
Lengths :

DN 32 to 200 : 150 mm
DN 150 to 350 : 200 mm

Working conditions:

Displacements		Normal*
AXIAL	Compression	30 mm
	Elongation	30 mm
LATERAL		20 mm

*normal conditions : 1 x 10⁶ cycles



Angular displacement												
DN (mm)	32	40	50	65	80	100	125	150	200	250	300	350
Normal (°)	20	20	20	20	20	20	10	10	10	10	10	9

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AN EFFICIENT SOLUTION FOR A WIDE RANGE OF APPLICATIONS

BUILDING INDUSTRY

- ▶ Central heating and air conditioning
- ▶ Hot and cold water systems
- ▶ Fire extinction systems

POWER GENERATION

- ▶ Cooling systems, pumping stations, etc. for conventional and nuclear power plants

PETROLEUM INDUSTRY

- ▶ Cooling systems
- ▶ Fuel handling

NAVAL CONSTRUCTION

- ▶ Machine cooling systems
- ▶ Sanitary installations
- ▶ Fire extinction systems
- ▶ Fuel handling

METALLURGY

- ▶ Blast furnace gas
- ▶ Compressed air
- ▶ Industrial water systems

WATER TREATMENT

- ▶ Production and distribution of drinking water, waste water treatment

FOOD INDUSTRY

- ▶ Drinking water and other beverage and foodstuff handling systems

CHEMICAL INDUSTRY

- Fluid handling systems:
- ▶ acids, bases, hydrocarbons, emulsions, solutions, air, gas, steam, water, etc.

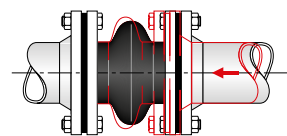
Lining Grade Identification colour and designation	Typical Applications	W.T. Working temperatures	
Green label CC	▶ Central heating and air conditioning water	-35 °C	+90 °C/ 110 °C
Blue label DW	▶ Drinking Water Approved ▶ Domestic cold and hot water	-25 °C	+90 °C/ 105 °C
Cream label EPC	▶ Food products ▶ White Food Grade liner ▶ Option Stainless Steel flanges	-25 °C	+95 °C
White label ES	▶ Steel Mesh Reinforced ▶ Superheated water ▶ Hot water vapour	-35 °C	+140 °C
Red label AR/CN	▶ Abrasive or corrosive products (weak acids and bases) ▶ Industrial water, sea water ▶ Low-temperature water vapour	-35 °C	+90 °C
Orange label GZ	▶ Gas, compressed air, fuel, oil ▶ Petroleum products with aromatic content < 40% ▶ Sanitation water	-20 °C	+90 °C
Blue label HH	▶ Industrial and waste water ▶ Hydrogen gas, nitrogen	-20 °C	+90 °C
Yellow label YP	▶ Strong acids ▶ Strong bases ▶ Aggressive chemicals	-25 °C	+100 °C
Grey label AB	▶ Strong acids ▶ Strong bases ▶ Weak chlorinated products	-35 °C	+100 °C
Mauve label TE	▶ Industrial water ▶ Acidic water ▶ Diluted acids and bases	-25 °C	+100 °C
White label F1	▶ Special highly aggressive products (Working pressure limited to 6 bar max.)	-35 °C	+110 °C



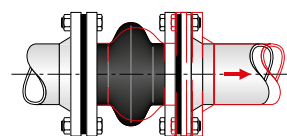
The inner lining to be used for a specific fluid (composition, concentration, temperature, etc.) should be selected according to our Chemical Resistance Chart.

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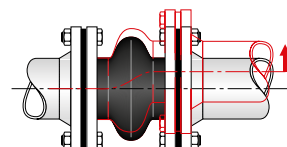
Operating Principles



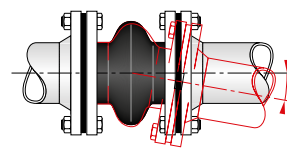
AXIAL COMPRESSION



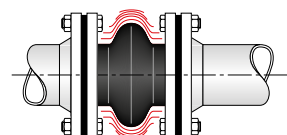
AXIAL ELONGATION



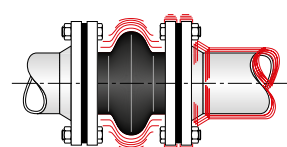
LATERAL DEFLECTION



ANGULAR DEFLECTION



WATER HAMMER REDUCTION

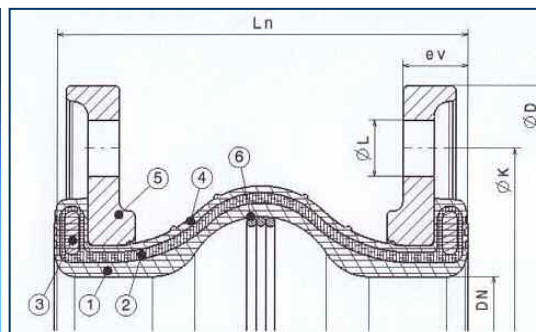
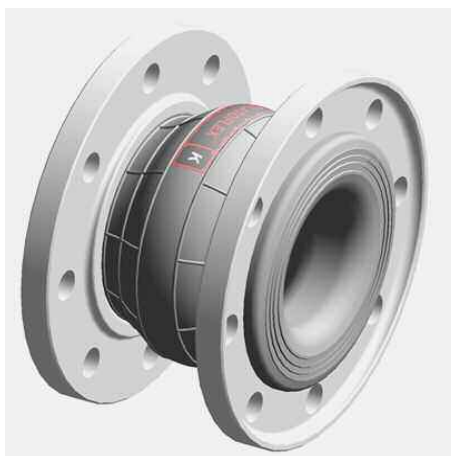


ELIMINATION OF VIBRATION

Rubber Bellows Expansion Joints - Flexible Pump Bellows for Pipework for Anti-Vibration, and the Absorption of Movement and Thermal Expansion in Pipelines

Options :

- Stainless Steel Flanges
- Tied and Hinged Versions
- Vacuum Rings
- Food Grade **EPC** and Potable Water Grade **DW** Versions
- High Pressure Type **KP** Rated for 25 BarG @ 55 °C
- Other Rubber Grades for Chemicals, Oils, etc.
- Type **K1** with PTFE Internal Liner
- Flame Guards
- Longer Length Type **T**, and Double Sphere Type **K2** & **T2**



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