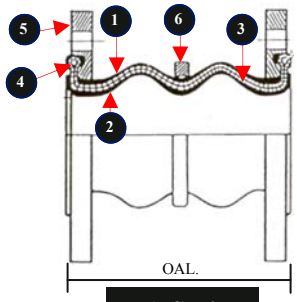
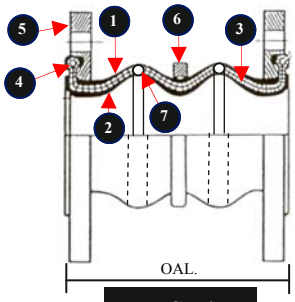
Double Sphere Rubber Expansion Joint



DA Series



DU Series

Item	Construction	Material
1	Tube	Synthetic Rubber(1)
2	Cover	Synthetic Rubber(1)
3	Reinforcing Fabric	Synthetic Fiber Cord
4	Reinforcing Wire	Carbon Steel
5	End Flanged(2)	SS41(3)
6	Root Ring**	Carbon Steel
7	Reinforcing Ring	Carbon Steel

(1) Rubber Standard : EDPM, CR, NBR
(2) Flanged Drilling : JIS 10K, ANSI1150, PN10/16
(3) Optional : SS304, SS316

Size ID	1" - 12"	14" - 24"	Operating Conditions
Working Pressure *SA Series*	16 bar	8 bar	
Working Pressure *SU Series*	20 bar	10 bar	
Burst Pressure	60 bar	24 bar	
Vacuum Rating *DA Series*	650 mm/Hg		
Vacuum Rating *DU Series*	750 mm/Hg		
Working Temp.	-20° to +100° C		

**Root ring MUST be installed when pressure (test surge operation) Exceed the rating below :

Size ID 5" - 10" exceed 10 bar
Size ID 12" - 14" exceed 7 bar
Size ID 16" - 24" exceed 4 bar

Type DA200 & DU200

Nominal Pipe		Length	Axial (mm) Compression	Axial (mm) Elongation	Lateral (mm) Movement	Angular Movement
Size ID (mm)	Size ID (inch)	OAL (mm)				
40	1-1/2	175	50	30	45	35°
50	2	175	50	30	45	35°
65	2-1/2	175	50	30	45	35°
80	3	175	50	30	45	35°
100	4	225	50	35	40	35°
125	5	225	50	35	40	35°
150	6	225	50	35	40	35°
200	8	325	60	35	35	30°
250	10	325	60	35	35	30°
300	12	325	60	35	35	30°
350	14	350	40	30	30	20°
400	16	350	40	30	30	20°
450	18	350	40	30	30	20°
500	20	350	40	30	30	20°
600	24	350	40	30	30	20°

WARNING :

*CONTROL UNITS **MUST BE** USED TO PROTECT RUBBER EXPANSION JOINTS FROM EXCESSIVE MOVEMENT IF PIPING IS NOT PROPERLY ANCHORED*

Type DA202

Nominal Pipe		Length	Axial (mm) Compression	Axial (mm) Elongation	Lateral (mm) Movement	Angular Movement
Size ID (mm)	Size ID (inch)	OAL (inch)				
40	1-1/2	7	50	30	45	35°
50	2	7	50	30	45	35°
65	2-1/2	7	50	30	45	35°
80	3	7	50	35	45	35°
100	4	9	50	35	40	35°
125	5	9	50	35	40	30°
150	6	9	50	35	40	30°
200	8	13	60	35	35	30°
250	10	13	60	35	35	30°
300	12	13	60	35	35	20°

*Control units assemblies should be set at the maximum allowable expansion and/or contraction of the joint and will absorb the static pressure thrust developed at the expansion joint. When used in this manner, they are an **additional safety factor (safety device)** minimizing possible failure of the expansion joint and possible damage to the equipment. Control units will adequately protect the joints, but the user should be sure that pipe flange strength is sufficient to withstand total force that will be encountered.*

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Rubber Expansion Joint

"PREVENTING LARGE EXPANSION MOVEMENT "

KN- Spool type rubber expansion joints , the primary difference between the molded type and the spool type is in the manufacturing process. The spool type is made by hand-build process. Because of the manufacturing process, customization is available to fulfill specific/special requirements of sizes (Up to 3,000 mm available), lengths, working pressure, movements, and connections.

KN - Spool type rubber expansion joints is commonly used in general piping systems requiring that both lower and higher pressure resistance and movement absorption capability ***where KN standard molded type rubber expansion joints*** are not engineering suitable. Spool type rubber expansion joints are popularly used in large-sized piping systems of public waterworks and wastewater projects to solve differential settlement problems (land sinking).

KN - Spool type rubber expansion joints can be produced in single, double and triple arch. and also with wide arch profile. Manufactured utilizing tire industry technology latest. With flanged ends, beveled ends, insertion end are available for different pipe connection. The spool type rubber expansion joints can be produced for above-ground and underground service purpose. Normally, standard material are IR, EPDM and CR rubber , NBR, Hypalon and Viton rubber are an optional.

APPLICATIONS:

The main functions of *KN - Spool type rubber expansion joints* are to protect piping from elongation, contraction and movement reactions caused by thermal fluctuations, pumping surges, settlement of foundations, load stresses, earth movements etc. In addition, they are also used to isolate vibrations, noise, sock and oscillations in pipe lines at pump or machines etc. They also serve to compensate for misalignment and eliminate electrolysis.

For these benefits, they are widely used in almost all of the industrial piping systems in :

- *Power generating stations*
- *Heating, Ventilating and air conditioning*
- *Pulp and paper mill*
- *Petrochemical and industrial process piping*
- *Desalination plants*
- *Steel mill*
- *Waste water treatment and sewage disposal plants*

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