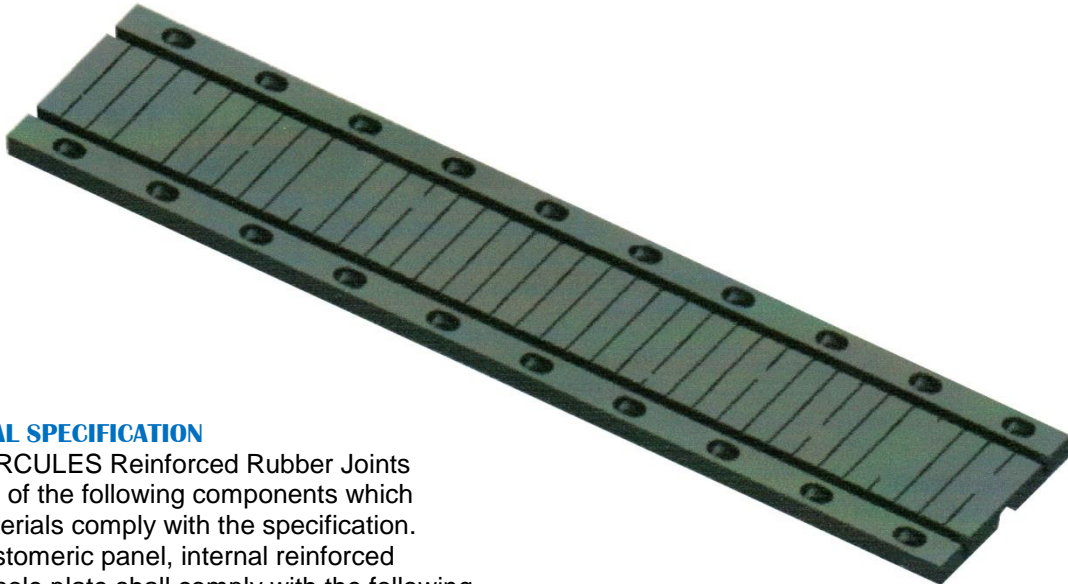


HERCULES RUBBER JOINT (HRJ) SERIES**Structural Joint with Elastomeric Reinforced Panel System****INTRODUCTION**

The HERCULES REINFORCED RUBBER JOINTS are designed according to UK Highways Agency Department standard BD33/94. The joint consists of elastomeric molded panel which are reinforced with internal reinforcement steel plates & sole plates. The elastomeric molded panel consists of chloroprene rubber which is resist to ozone & oil. The joints are supplied in standard module length and assembled between modules by tongued and grooved interlocking system. The panels to be bolted to the structural deck by using anchor bolts.

**MATERIAL SPECIFICATION**

The HERCULES Reinforced Rubber Joints consists of the following components which the materials comply with the specification. The elastomeric panel, internal reinforced plate & sole plate shall comply with the following materials specification:

Table 1 Material Specification

Material	Specification
Internal Reinforced & Sole Plates	BS 4360, ASTM A 36 or equivalent
Elastomeric Panels	Refer to Table 2. Material specification.
Bolts & Nuts	DIN 934, AASHTO M164 or equivalent

INSTALLATION OF JOINT

The Hercules Reinforced Rubber Joint shall be designed to facilitate ease of installation and removal in the future without damaging any of the permanent bridge structure. The Reinforced Rubber Joint shall be installed according to manufacturer's installation method statement.

The Elastomeric Panel shall comply to the following requirements which tested according to ASTM Test Methods.

Table 2 Physical Properties of Rubber

Properties	Requirements	Test Method
Tensile Strength, kgs/cm ²	130	ASTM D412
Elongation at Break, %	400% min.	ASTM D412
Hardness, Shore 'A'	60±5	ASTM D2240
Resistance to permanent set (After 22 hrs at 70°C)%	30 max.	ASTM D395-89 Method B
Oil resistance, Immersion ASTM No.3 approximately 168 hrs at 25°C, Volume change %	18 max.	DIN 53531
Ozone Resistance (48 hrs at 38°C, 20% strain, 50 pphm in air)	No Cracks	ASTM D1149
Low temperature brittleness, at 40°C	Not Brittle	ASTM D746

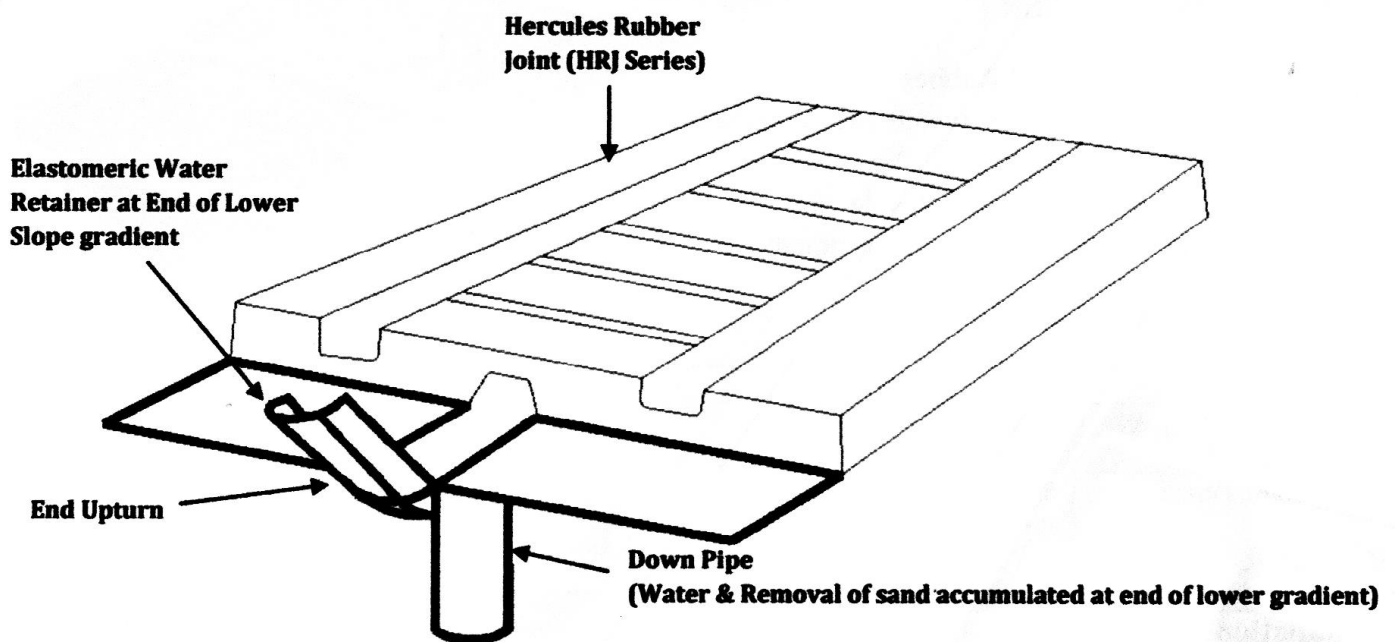
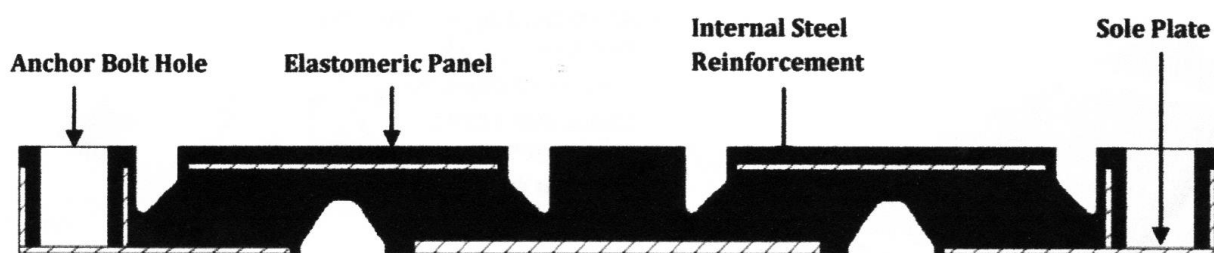
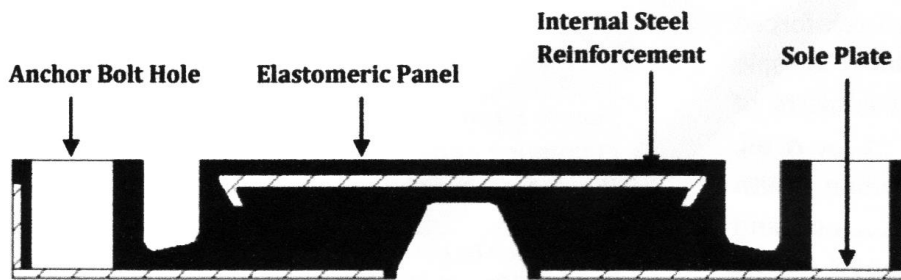
The Reinforced Rubber Joints designed for movement in the range from 50 mm. to 400 mm.

Hercules Part No.	Total Movement (mm)
HRJ - 50	50
HRJ - 65	65
HRJ - 80	80
HRJ - 100	100
HRJ - 165	165
HRJ - 230	230
HRJ - 250	250
HRJ - 260	260
HRJ - 300	300
HRJ - 400	400

Reinforced Rubber Joint System

Construction Details

HRJ -50, 65, 80, 100 & 165



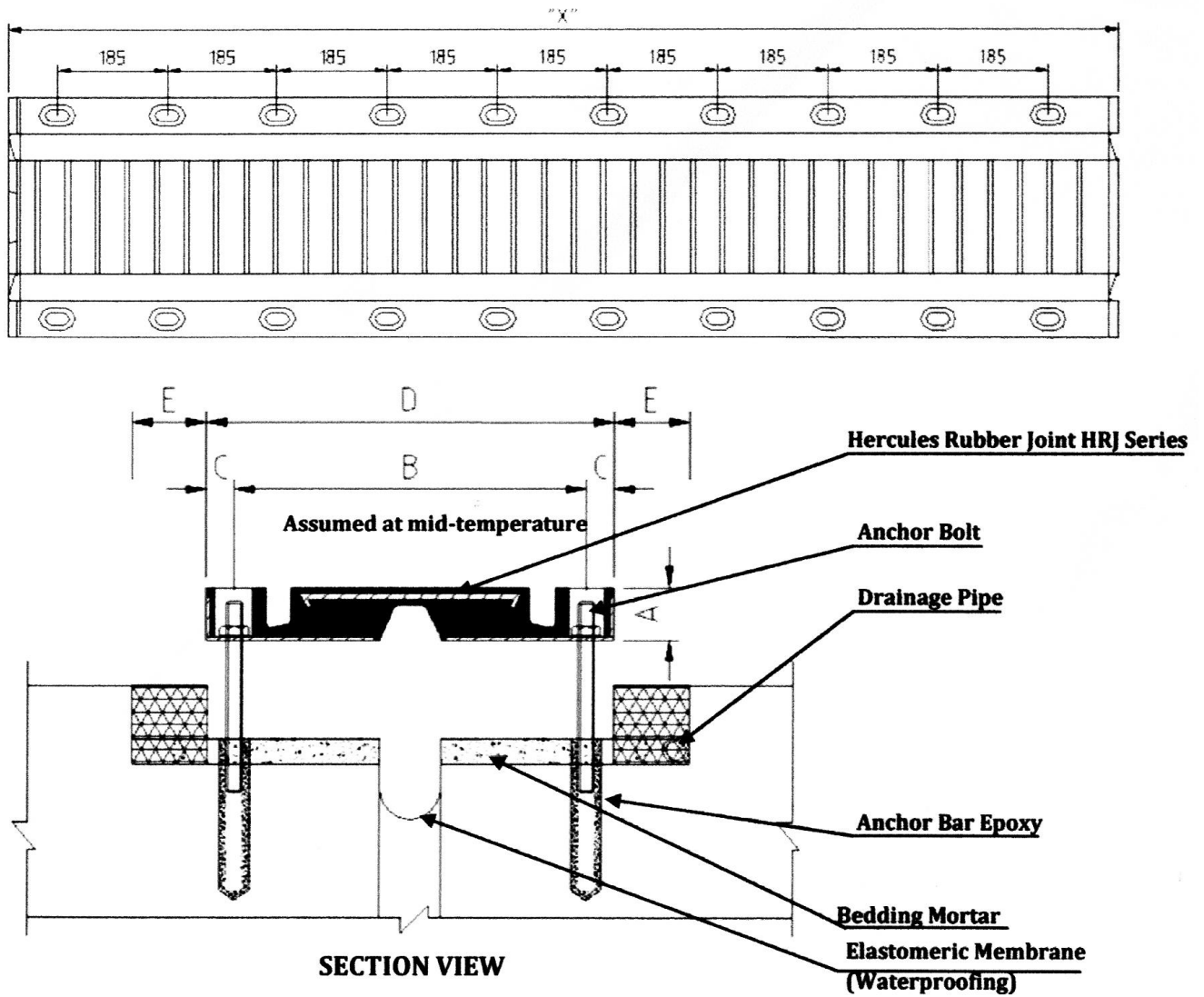
HERCULES Rubber Joint End details incorporated elastomeric retainer with upturn & down pipe for removal of sand normally accumulated at the end of lower gradient during downpour.

Important Note:

Sand accumulated at end of Joints to be flush out through the downpipe. The purpose is to avoid accumulation of sand at the end of joints which may be dangerous to motorist.

Reinforced Rubber Joint System





PART NO. & OVERALL DIMENSIONS

Part No.	A,(mm)	B,(mm)	C,(mm)	D,(mm)	E,(mm)	X, Module Length (mm)
HRJ - 50	43	220	30	280	150	1865
HRJ - 65	48	280	40	360	150	1865
HRJ - 80	50	340	40	420	150	1865
HRJ - 100	54	350	45	440	150	1865
HRJ - 165	75	615	45	705	150	1865
HRJ - 230	78	792	45	882	150	1865
HRJ - 250	80	812	45	902	150	1865
HRJ - 260	85	820	45	910	150	1865
HRJ - 300	100	1036	55	1146	150	1250
HRJ - 400	130	1300	55	1410	150	1250