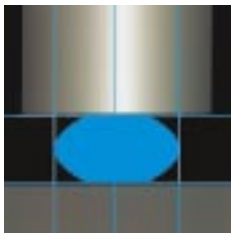


BATRA RING

(1) Natural frequency : 7 to 22 Hz

DESCRIPTION

The BATRA ring comprises a rubber ring bonded to two metallic washers one with a circular groove, the other with a mating circular ridge which allows BATRA rings to be mounted one on top of another.

OPERATION

The design of the BATRA ring gives the following basic characteristics :

- Behaviour identical to that of a metallic spring plus damper.
- Robustness :
  - well behaved under shock.
  - removal of the risks of suspension collapse.
- Flexibility easily tailored by stacking BATRA rings.
- Transverse creep limited by the two bonded armatures.

APPLICATIONS

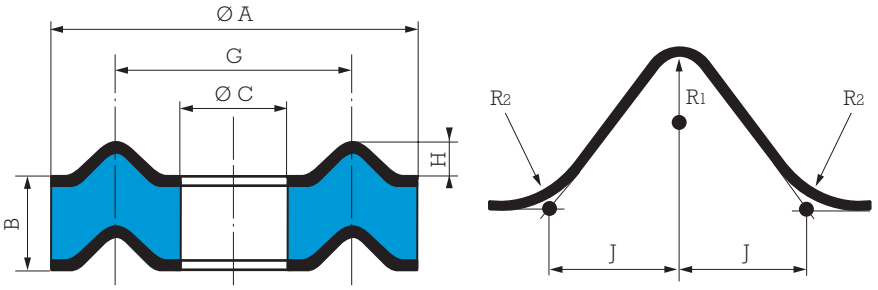
BATRA rings may be used :

- For making suspensions that are very flexible vertically and also damped by the natural properties of the rubber (road and rail vehicles).
- For making very effective anti-shock buffers (wagons, cars, gantries).

For special applications, where the quantities would justify custom manufacture, it is possible to supply Special BATRA rings either with only one bonded lower armature or "all rubber".
For special cases of shock, there are Special BATRA rings with overlapping, non-bonded, armatures.

(1) Natural frequencies with max/min loads, see : OPERATING CHARACTERISTICS.

DIMENSIONS



Reference	Ø A mm	B mm	Ø C mm	G mm	H mm	J mm	R_1 mm	R_2 mm	Weight g
541050	50	11	14	32	4	5	2.5	1.5	45
541083	80	27	41.5	61	4	6	3	3	220
541082	86	27.5	32	65	5	7	4	2	300
541100	100	28.5	32	65	5	7	4	2	415
541112	115	30	50	85	10	10	5	3	540
541145	140	35	55	100.5	10	10	5	3	890
541146	146	20	55	100.5	10	10	5	3	750
541144	146	35	55	100.5	10	10	5	3	980
541175	170	35	60	115	10	10	5	3	1360
541174	170	50	60	115	10	10	5	3	1680
541185	185	40	95	140	10	10	5	3	1510
541249	250	50	70	160	10	10	5	3	2600
541250	250	59	70	160	10	10	5	3	4400

See current price list for availability of items.

OPERATING CHARACTERISTICS

Static compression		Dynamic compression			Reference
Nominal load daN	Deflection mm	Load daN	Deflect mm (1)	Ø A maxi	
50-200	0.8	600	3.5	57	**541050**
90-360	3	1100	7	90	**541083**
125-500	3	1500	7	100	**541082**
175-700	3	2100	7	115	**541100**
210-850	3	2500	7	130	**541112**
325-1300	3.5	4000	9.5	150	**541145**
375-1500	3	4500	7	158	**541144**

Static compression		Dynamic compression			Reference
Nominal load daN	Deflection mm	Load daN	Deflect mm (1)	Ø A maxi	
475-1900	1.1	5700	2.5	158	**541146**
500-2000	3	6000	9.5	190	**541175**
500-2000	5.3	6000	14	190	**541174**
500-2000	4.5	6000	12	205	**541185**
1125-4500	4.5	13500	12	282	**541249**
1125-4500	5.5	13500	13	282	**541250**

(1) The instantaneous deflection indicated in this table is approximate as it depends on the impact speed. **1 kg ≃ 1 daN**
It is possible to use a metallic cushion for this application.

ASSEMBLY

The rings are centred using the grooves and ridges. To avoid play under no-load conditions, the stack should be pre-compressed by 3 to 10% of its height. It is also necessary to leave sufficient room around the stack for the sideways expansion under load.