

Rubber Products  
Global Standards



**ASHUTOSH**®



**CATALOGUE**

**OIL SEAL**

IS : 5382  
  
CM/L  
7995718  
**RINGS & GASKETS AS PER IS 5382 TYPE I TO V**

**WE ARE CERTIFIED FOR QUALITY MANAGEMENT SYSTEMS**

<b>ISO 9001</b>	<b>IATF 16949</b> for <b>AUTOMOTIVE</b>	<b>ISO 14001</b> for <b>ENVIRONMENT</b>	<b>ISO 45001</b> for <b>HEALTH &amp; SAFETY</b>
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**Our Products are Compliant with European Standards REACH & RoHS**

**ASHUTOSH RUBBER PVT. LTD.**

**MANUFACTURERS OF ALL TYPES OF RUBBER & TPE PRODUCTS**

## COMPANY PROFILE

Ashutosh Rubber Pvt. Ltd. is engaged in manufacturing of a wide range of Rubber & TPE (Thermoplastic Elastomer) products. We are an **ISO 9001:2015, IATF 16949:2016, ISO 14001:2015, ISO 45001:2018** certified company by TUV SUD and accredited with ISI certification under Bureau of Indian Standard **IS 5382** and a Performance & Credit Rated Company by CRISIL (A standard & Poor's company) with a rating assigned at **SE 2A** (High Performance Capability & High Financial Strength) and also having D&B D-U-N-S certificate (**D-U-N-S No. 86-255-7690**).

Presently we make more than 9000 different Rubber & TPE Moulded Products for varied applications. Our company uses modern manufacturing process by using **Desma Rubber Injection, Tung Yu, Plus - One Vacuum Moulding Machines and Windsor, PASL Windtech TPE Injection Moulding Machines**. We have been incorporated as a Private Limited company since 2007, being a part of the group which is in this business since 1987. The Company, over and above having modern rubber processing technology, has also modern facility to Process Soft PVC like TPE (Thermoplastic Elastomer).

## MODERN MANUFACTURING FACILITY



DESMA RUBBER INJECTION MOULDING MACHINE



WINDSOR & PASL WINDTECH, TPE INJECTION MOULDING MACHINES



FULL FLEDGED LABORATORY

## INFRASTRUCTRE



UNIT NO.1 CORPORATE OFFICE & RUBBER MOULDING FACILITY



UNIT NO.2 TPE & PLASTIC MOULDING FACILITY



UNIT NO.3 TOOL ROOM FACILITY

## OUR TEAM



MD & CEO - MR. RAJESH KOTHARI



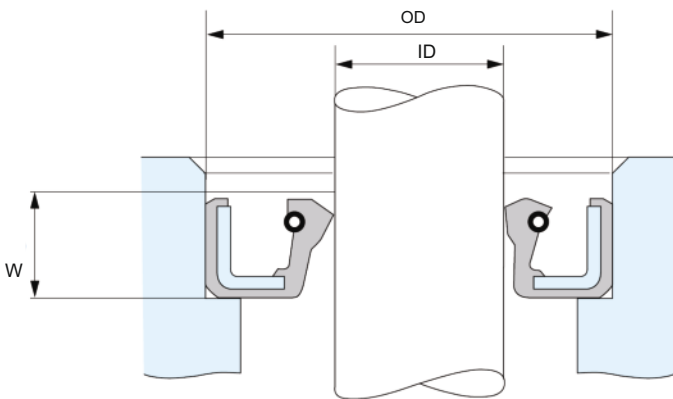
DIRECTOR - MR. ASHUTOSH KOTHARI



OUR TEAM AT UNIT NO. 1

## ROTARY SHAFTS SEALS

One of the most frequently used types of seal is the Rotary Shaft Seal. This is generally used for sealing lubricating oil or grease in rotary shaft applications. In exceptional cases, it is also used to seal other fluids, gases and powdered or granular solids. For trouble-free operation and optimum service life of a seal, shafts must have a satisfactory surface finish, within recommended limits and have no machine lay. Both correct design and material choice are critical if bearings and gears are to be sealed to prevent the leakage of lubricating oils and greases and the ingress of penetrating dust and dirt.



## Ordering Procedure

Order in sequence as follows :

**A - Quantity**

**B - Size (I.D. x O.D x W)**

**C - Material**

**D - Types (e.g A, AS, B, BS...)**

**Example :**

A	B	C	D
Quantity	Size	Material	Types
10,000 Pcs.	13 x 22 x 7mm	Nitrile	A

### Sealing

A good lubricating oil forms a strong tenacious film on gears, bearings and shafts and is not easily removed from the pressure bearing surfaces of these. However, where the shaft extends away from the equipment, this oil film must be retained. In Oil Seals, the pressure or radial load exerted by the sealing lip must be sufficient to retain the oil film, whilst not so high that excessive friction losses or wear can occur. Good Oil Seal design is therefore a balance between optimum running properties of the material, lip design and integral garter spring.

### Working principle

During rotation of the shaft, a hydrodynamic film of lubricant is produced beneath the sealing lip, the thickness of which depends on shaft speed, oil temperature, oil viscosity and the pressure or radial load exerted by the sealing lip on the shaft. Due to capillary forces and the surface topography of the shaft, the fluid being sealed forms a meniscus under the sealing lip and is prevented from leaking. The fluid, the seal material, the film thickness, the sealing lip geometry and the surface topography of the shaft are governing factors in the realisation of these capillary forces. A used seal having a shiny wear flat with hardening and radial cracking is indicative that it had operated on a shaft which was too smooth and /or that the radial load exerted by the lip was too high. A used seal having a wide wear flat is indicative that it had operated on a shaft which was too rough, especially if there was no hardening or radial cracking and could also be associated with incorrect sealing lip geometry.

## CONSTRUCTION OF THE OIL SEAL

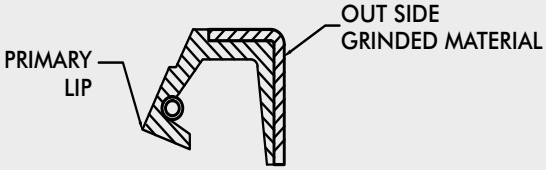
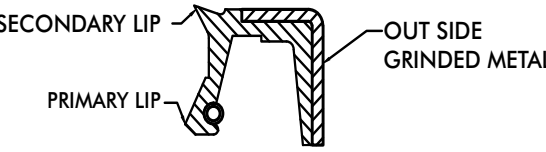

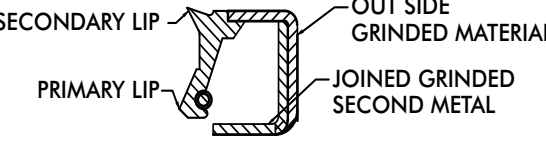
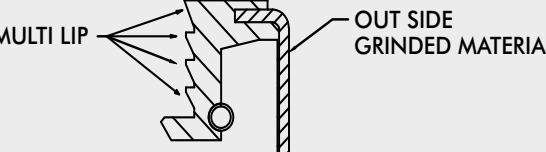
DIN 3760/3761 describes the standardisation of design, dimensions and tolerances of Oil Seals.

DIN	Standard 3760/3761
A	Rubber Covered
AS	As Type A With Dust Lip
B	Metal Cased Design
BS	As Type B With Dust Lip
C	Double Metal Cased
CS	As Type C With Dust Lip

## TYPE OF OIL SEAL

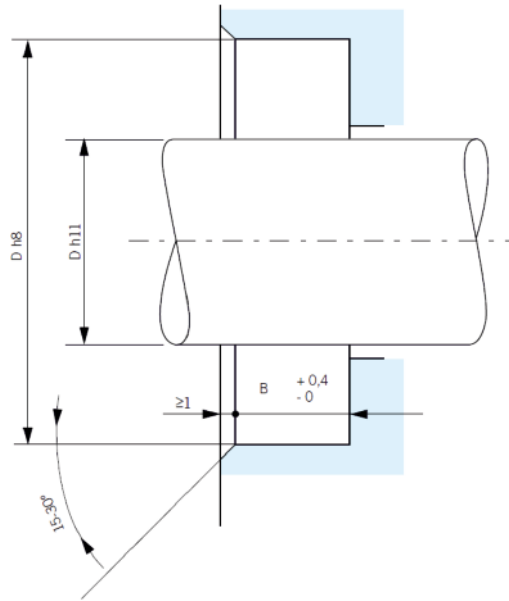
Type	Oil Seal	Description
TYPE-A	<p><b>RUBBER COVERED SINGLE LIP &amp; SINGLE SPRING</b></p>	<p>The most commonly used type is A type. This type has a steel insert &amp; has rubber outside diameter. The rubber gives a good sealing capability, even when the housing is not fully in tolerance. The outside diameter, with inner metal reinforcement case, allows press-fitting in the housing, with sufficient interference on the rubber to provide static sealing.</p>
TYPE-AG	<p><b>RUBBER COVERED WAVY DESIGN</b></p>	<p>This has ribbed outer surface to absorb the thermal expansion of housing.</p>
TYPE-AS	<p><b>RUBBER COVERED DOUBLE LIP &amp; SINGLE SPRING</b></p>	<p>This has additional secondary lip to prevent dust from entering sealing surface.</p>
TYPE-AGS	<p><b>RUBBER COVERED DOUBLE LIP &amp; SINGLE SPRING WITH GROVE WAVES</b></p>	<p>This is combination of type AG &amp; AS</p>

## TYPE OF OIL SEAL

Type	Oil Seal	Description
TYPE-B	 <p><b>OUTER METAL CASE SINGLE LIP &amp; SINGLE SPRING</b></p>	This has close outer tolerance with outer ground metal.
TYPE-BS	 <p><b>OUTSIDE METAL CASE DOUBLE LIP &amp; SINGLE SPRING</b></p>	This is same as B but with extra dust lip.
TYPE-C	 <p><b>TOTALLY ENCLOSED TYPE WITH SINGLE LIP &amp; SINGLE SPRING</b></p>	This provides extra stiffness for outer metal.
TYPE-CS	 <p><b>TOTALLY ENCLOSED TYPE WITH DOUBLE LIP &amp; SINGLE SPRING</b></p>	Same as C but with extra dust lip.
TYPE-MML	 <p><b>OUTSIDE METAL CASE MULTI LIP &amp; SINGLE SPRING</b></p>	This is special design for rough working condition to prevent dust from outside

## SHAFT MATERIALS TOLERANCES OF SEALS & HOUSING

The size of the housing where the Oil Seal has to be pressed in has to meet certain requirements. The housing has to be rather smooth (finely machined). Nominal tolerances according to ISO H8.



	Roughness	Tolerance Of The Passing
Shaft	$Ra \leq 0.6 \mu m$	h11
Housing	$Ra \leq 6 \mu m$	H 8

To simplify the assembly, it is recommended that the housing is lubricated. The housing should have a finish of ca.  $Ra = 6 \mu m$ . Oil Seals with a rubber case cannot rust, in contrast to Oil Seals with metal cases. Moreover, Oil Seals with a rubber case can seal a lightly damaged housing much better than metal cased Oils Seals.

To simplify the correct assembly of the Oil Seal, it is recommended that the housing has a  $30^\circ$  chamfer on the front side for a minimum length of 1 mm. The Oil Seal, when mounted, has to fall within the limits of this chamfer. For the assembly depth, there is a tolerance of  $-0/0,4mm$ . The Oil Seals have an interference fit in the housing, which provides a good press fit, preventing any leakage.

### Excessive and permitted ovality on the outside diameter (data according to DIN 3760)

Outside Diameter oil seal (D)	Types of Oil Seal			Permitted ovality (for all types)
	A	B	C	
<50 mm	+0.30/+0.15	+0.20/+0.10	+0.20/+0.10	0.25
50-80 mm	+0.35/+0.20	+0.23/+0.13	+0.23/+0.13	0.35
80-120 mm	+0.35/+0.20	+0.25/+0.15	+0.25/+0.15	0.5
120-180 mm	+0.45/+0.25	+0.28/+0.18	+0.28/+0.18	0.65
180-300 mm	+0.45/+0.25	+0.30/+0.20	+0.30/+0.20	0.8
300-500 mm	+0.55/+0.30	+0.35/+0.23	+0.35/+0.23	1

## COMMON MATERIALS

In the standard construction, our Oil Seals are made from oil and grease resistant rubber based on NBR (Perbunan). This material has very good running properties and excellent wear resistance. For high shaft speeds, large radial tolerances and good chemical resistance a range of other rubber materials is available.

Rubber Type	Material Code	Heat resistance in Oil
<b>Nitrile</b> High wear resistance good running properties for general use	NBR	-35 °C to +100 °C -31 °F to +212 °F

## COMMON MATERIALS

Rubber Type	Material Code	Heat resistance in Oil
<b>Polyacrylate</b> Better heat, oil and chemical resistance than NBR It is recommended for use in oil which contain load bearing additives such as EP gear oils	ACM	-20 °C to +130 °C -4 °F to +266 °F
<b>Viton</b> High level of chemical resistance High temperature resistance	FPM (FKM)	-15 °C to + 180 °C 5 °F to +356 °F
<b>Silicone</b> Wide temperature range Commonly used in low temperature applications Very Prone to mechanical damage during fitting	MVQ	-50 °C to +150 °C -58 °F to +302°F
<b>Hydrogenated Nitrile</b> HNBR has rubber superior mechanical properties & abrasion resistance Higher temperature resistance.	HNBR	-40°C to +130°C -40°F to +266°F

### Max. Temperature (°C) of the sealing medium

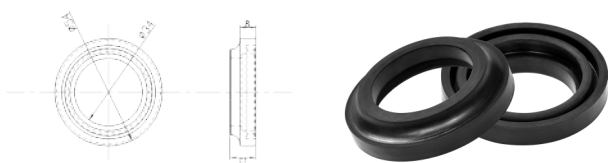
Elastomer	Min. temp.	Motor oil	Gearbox oil SAE	ATF oil	Hypoid oil	Grease	Fuel	Brake fluids
NBR	-35	100	80	100	80	90	90	-
ACM	-20	130	120	130	120	*	*	-
MVQ	-50	150	130	*	-	*	*	-
FPM	-15	180	150	170	150	*	150	-
HNBR	-40	130	110	130	110	120	120	120

- For these media the elastomer is not resistant

\* Within these groups, there are media which can be sealed by the elastomer in question, although these media could have a disadvantageous influence on the elastomer.

## ASHUTOSH SPECIAL OIL SEAL

Sr. No.	ID	OD	Width 1	Width 2	Type	Our Item No.
1	34	55	13	8	SPECIAL	AP 3256



## ASHUTOSH READY MADE "READY - TOOLED" OIL SEALS

Sr. No.	ID	OD	Width	Type	Our Item No.
Inch Size Oil Seal					
1	50 (12.7)	112(28.5)	37 ( 9.4 )	A	AP 1783
2	62 (15.9)	112(28.5)	37 ( 9.4 )	A	AP 1782
3	118 (30)	187(47.5)	31 ( 8 )	A	AP 1765
4	150(38.1)	250(63.5)	37(9.4)	A	AP 1148
5	187(47.5)	300(76.2)	50(12.7)	A	AP 1144
6	187(47.5)	300(76.2)	43(11)	AS	AP 1742
7	200(50.8)	300(76.2)	50(12.7)	A	AP 1744
8	200(50.8)	300(76.2)	50 (12.7)	AS	AP 2572
9	212 (53.9)	300(76.2)	50 (12.7)	A	AP 946
10	250 (63.5)	350(88.9)	50 (12.7)	A	AP 1764

NOTE:- SIZE IN BRACKET INDICATES METRIC SIZE IN MM.

## ASHUTOSH READY MADE "READY-TOOLED" OIL SEALS

Sr. No.	ID	OD	Height	Type	Our Item No.
1	8	18	7	AS	L3514
2	10	24	7	AS	L1001
3	12	18	5	DOUBLE METAL (A)	L4257
4	12	19	5	AGS	L1140
5	13	22	7	A	AP1315
6	14	24	4	AS	L3510
7	14	30	13	AS	L3515
8	14	35	15	Z	L4254
9	15	24	4	AS	L3511
10	15	26	6	A	AP1339
11	15	35	7	AS	L1127
12	15	42	7	A	L3512
13	16	24	7	A	AP1316
14	16	25	7	AS	AP2699
15	16	25	7	AS	L660
16	17	28	7	A	AP1317
17	17	35	8	AS	L1104
18	17	35	10	AS	L1105
19	19	35	5	A	L1103
20	20	30	7	AS	L3885
21	20	38	7	A	AP1756
22	20	40	10	AGS	L1000
23	20	42	7	AS	L3659
24	20	47	7	AS	AP3353
25	22	35	7	A	AP1318
26	24	47	7	A	AP3136
27	24	47	9	AS	L3980
28	25	35	7	A	AP1761
29	25	35	10	AS	L4180
30	25	40	7	A	AP1753
31	25	42	7	AS	L3658
32	25	42	9	AS	L4245
33	25	42	10	AS	AP1762/L459
34	25	42	10	AS	L459
35	25	45	8	AS	AP2761
36	25	45	8	AS	AP870A
37	25	45	10	A	AP1758
38	25	48	9.3	A	L3693
39	25	50	7	AS	L3691
40	25	52	7	A	AP1752
41	28	47	10	A	AP2626
42	28	50	10	AS	L4182
43	29	45	10	AS	AP3058
44	29	57	10	A	L3763
45	30	40	5	A	L4246
46	30	42	8	AS	L3887

Sr. No.	ID	OD	Height	Type	Our Item No.
47	30	42	10	AS	L4114
48	30	47	10	A	AP2760
49	30	50	7	AS	L4187
50	30	52	10	AS	AP3184
51	30	58	7	AS	L3661
52	30	60	10	AS	AP3358
53	30	62	10	AS	AP956
54	32	45	7	AS	AP3082
55	32	72	10	AS	L3859
56	33	48	8	AS	AP2909A
57	33	52	10	AS	L4260
58	34	54	10	A	AP1146
59	34	55	13	Z	AP3256
60	35	42	4	WITHOUT SPRING (AS)	L3513
61	35	47	7	AS	AP1145
62	35	47	10	AS	L4183
63	35	52	7	AS	AP1751/AP2892
64	35	53	7	AS	AP1751-1/L-648
65	35	54	10	A	AP898
66	35	55	8	AS	AP2895/L647
67	35	55	10	AS	L4206
68	35	57	12	AS	L3981
69	35	60	10	AS	L3764
70	35	62	7	A	L3618
71	35	62	7	AS	L3871
72	35	62	10	AS	AP957
73	35	62	10	AS	L641
74	35	72	7	AS	AP1743
75	35	72	8	AS	AP2966/L475
76	35	72	8	AS	L475
77	35	72	10	AS	L118
78	35	80	10	AS	L158B
79	35	85	10	AS	AP905
80	35	85	10	AS	L119
81	35	100	10	A	AP3004/L677
82	36	47	8	A	AP1754
83	38	50	7	A	AP2841
84	38	54	7	A	AP1748
85	38	62	10	AS	L4181
86	38.1	63.5	10	PITTER	AP1148/L414
87	40	54	10	A	AP2759
88	40	56	7	A	AP1757
89	40	59	10	A	L1041
90	40	60	10	AS	AP1148/L414
91	40	62	7	A	AP2968
92	40	62	7	AS	L642



## ASHUTOSH READY MADE "READY-TOOLED" OIL SEALS

Sr. No.	ID	OD	Height	Type	Our Item No.
93	40	62	10	AS	L653
94	40	62	12	COLLAR	AP2985
95	40	62	12	DOUBLE SPRING	L666
96	40	65	10	A	L3982
97	40	70	10	AS	AP3450
98	40	72	10	AS	AP2897/L643
99	40	72	10	AS	L643/AP2896
100	40	80	7	AS	L759
101	40	80	10	AS	AP2705/L661
102	40	90	8	AS	AP2963
103	40	90	8	AS	L665
104	40	90	10	A	L4072
105	42	58	7	AS	L3662
106	42	62	10	A	L3820
107	42	62	10	AS	L722/AP2987
108	45	60	7	AS	L664
109	45	62	10	AS	AP2988
110	45	62	10	AS	L4188
111	45	65	8	AS	AP2893/L654
112	45	65	8	AS	L654
113	45	70	10	AS	AP2898/L650
114	45	72	10	AS	AP2136/L244
115	45	78	11	AS	L285
116	45	80	10	AS	AP2703/L668
117	45	80	10	AS	L668
118	45	85	10	AS	AP2701/L659
119	45	100	10	AS	AP2904/L649
120	47.63	76.2	12	PITTER	L413
121	48	65	10	AS	L3841
122	48	72	10	AS	L1128
123	48	75	10	AS	L4199
124	50	62	10	AS	L4184
125	50	65	8	AS	L3620
126	50	70	8	AS	AP2840/ AP2894/L451
127	50	72	10	AS	L1129/L4185
128	50	73	10	DOUBLE SPRING	L4243
129	50	76.5	12	A	AP1781
130	50	78	10	AS	AP2839/L440
131	50	78	13	AS	L3880
132	50	78.3	10	MML	AP692
133	50	80	8	AS	L763
134	50	80	10	AS	AP2702/L743
135	50	90	10	A	L782
136	50.8	76.2	12	LISTER	L412
137	51	72	9.5	AS	L134
138	52	72	10	AS	AP3449

Sr. No.	ID	OD	Height	Type	Our Item No.
139	55	70	8	AS	L3621
140	55	70	10	AS	AP2726
141	55	72	10	AS	AP2899/L644
142	55	72	10	AS	AP2899-1/ L4186
143	55	75	8	AS	L760
144	55	75	10	A	L4197
145	55	78	8	AS	L738/L3805
146	55	80	8	AG	AP3455/L120
147	55	80	10	AS	AP2900/L652
148	55	80	10	AS	L652
149	55	85	8	AS	AP2967
150	55	85	8	AS	L663
151	55	90	10	AS	AP2901/L657
152	57	76.25	12	A	AP1089
153	58	80	10	A	AP1741
154	59.5	77	12	A	AP954
155	60	80	10	AS	AP2838/L640
156	60	80	13	A	AP1773
157	60	90	8	AS	L1130
158	60	90	13	AS	AP2905/645
159	60	100	10	AS	L3760
160	62	90	10	AS	L651/AP2902
161	65	80	10	AS	AP2989/L721
162	65	85	10	AS	AP2704/L662
163	65	85	17	MML	L67
164	65	85	18	AS	L4205
165	65	90	10	DOUBLE SPRING (AS)	AP2837/L209
166	65	100	10	A	L3619
167	70	85	10	AS	AP2725
168	70	90	10	AS	AP3456
169	70	90	13	AS	AP2964/L656
170	70	92	16	AS	L655
171	70	110	10	AS	L646/AP2906
172	75	100	10	DOUBLE METAL (AS)	L3821
173	75	100	10	AS	L4179/ AP2990/L723
174	75	100	10	AS	L723
175	78	100	10	A	AP880
176	78	100	10	AS	L123
177	78	100	12	A	AP1081
178	79	100	17	MML	L3582
179	80	100	8	AS	L4078
180	80	100	16	MML	L68
181	85	98	6	WITHOUT SPRING	AP1740
182	85	100	5	WITHOUT SPRING	AP2721
183	85	105	15	DOUBLE SPRING	L667
184	85	106	15	COLLAR	AP2986

**ASHUTOSH READY MADE "READY-TOOLED" OIL SEALS**

Sr. No.	ID	OD	Height	Type	Our Item No.
185	86	98	6	WITHOUT SPRING	AP1739
186	87	98	6	WITHOUT SPRING	AP1737
187	88	98	6	WITHOUT SPRING	AP1738

Sr. No.	ID	OD	Height	Type	Our Item No.
188	90	127.5	13	A	AP1301
189	120	145	15	DOUBLE METAL (A)	L3822
190	224	250	15	A	AP1299

# OUR RUBBER PRODUCTS

We MANUFACTURE 9000 DIFFERENT RUBBER & TPE PRODUCTS FOR VARIED APPLICATIONS.



## WE MAKE RUBBER PRODUCTS FOR

- AUTOMOBILE ORIGINAL EQUIPMENT MANUFACTURERS (OEM-AUTO)
- AGRICULTURAL EQUIPMENTS
- ORIGINAL EQUIPMENT MANUFACTURERS (OEM-OTHERS)
- POWER TRANSMISSION (COUPLINGS)
- PIPE INDUSTRY
- CEMENT CONCRETE INDUSTRY
- PUMPS & FOOT VALVES
- OIL ENGINE GENERATORS
- ANTI VIBRATION MOUNTINGS
- RUBBER ELECTRICAL INSULATORS
- HYDRAULIC & PENUMATICS
- CUSTOM MADE RUBBER PRODUCTS

## READY MADE RUBBER PRODUCTS RANGE OF

- O-RINGS
- OIL SEALS
- O-RINGS BOXES

# ASHUTOSH RUBBER PVT. LTD.

**MANUFACTURERS OF ALL TYPES OF RUBBER & TPE PRODUCTS**

### Corporate Office & Factory :

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