



# SIMPLE BUSHINGS



## DESCRIPTION

A flexible bushing has an elastomeric element enclosed between an outer sleeve and a centre axis intended to replace a greased bushing or bearing.

Using flexible bushings enables to allow some degree of rotation in an assembly while eliminating play completely and isolating high frequency vibrations.

## MATERIALS

In general, the outer sleeve and centre axis of flexible bushings are made of :

- Mild steel for the external outer sleeve.
- Medium carbon steel for the centre axis.

To avoid corrosion of the steel parts, the tubes are protected by a layer of phosphate which gives them a grey appearance, the whole being protected by a layer of oil.

## GENERAL TOLERANCES AND HOUSING DIMENSIONS

- Length L (internal tube) :  $\pm 0.1\text{mm}$
- Length *l* (external tube) : JS 15, according to NF E02 100-1 and NF E02 100-2
- Longitudinal overhang :  $(L-l)/2 = \pm 0.4\text{ mm}$

### Tolerance on the internal diameter d: H10

d mm	3 to 6	6 to 10	10 to 18	18 to 30	30 to 50
H10	+ 0.048 + 0	+ 0.058 + 0	+ 0.070 + 0	+ 0.084 + 0	+ 0.1 + 0

### Tolerance on the external diameter D

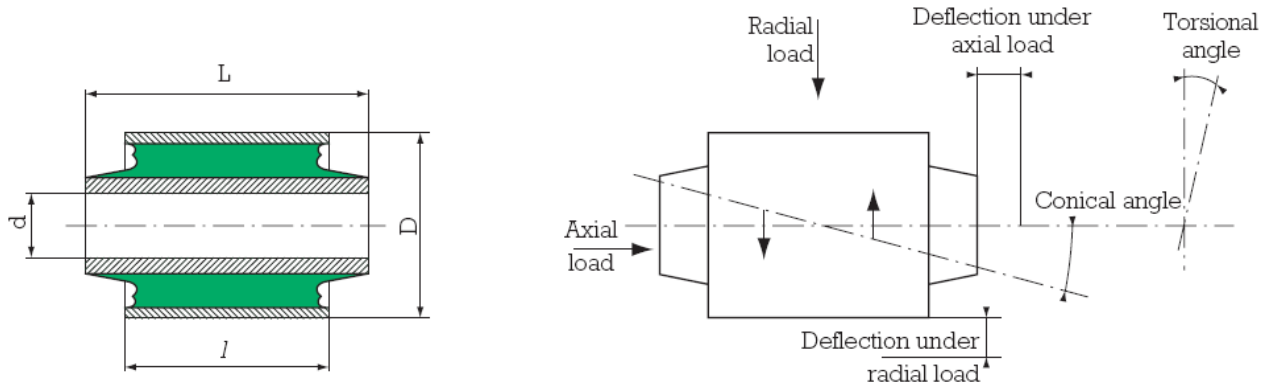
D ≤ 25 mm	25mm < D ≤ 40 mm	D > 40 mm
+ 0.05 + 0	+ 0.1 + 0	+ 0.15 + 0

Our simple bushings are press fit in their housing while the centre tube is clamped on both ends. Such installation will guarantee that all relative movements between the tubes will be absorbed by the elastomer.

### Recommended tolerance for housing Ø D': N9

D' mm	10 to 18	18 to 30	30 to 50	50 to 80	80 to 120
N9	- 0 - 0.043	- 0 - 0.052	- 0 - 0.062	- 0 - 0.074	- 0 - 0.087

# DIMENSIONS



Dimensions					Radial		Torsion	Axial		Conical	Part Number
Ø d mm	Ø D mm	L mm	l mm	Obs	Static Load Lbs	Deflection mm	Max angle degree	Static Load Lbs	Deflection mm	Max angle degree	
6	16	14	12		22	0.07	30°	11	0.3	7°	861601
8	16	17	15		66	0.1	15°	33	1.3	3°	561102
8	16	28	25		144	0.03	20°	99	0.2	1°	861103
8	20	17	15		33	0.1	30°	22	0.3	7°	861603
8	20	19	15		44	0.1	30°	22	0.3	7°	861783
8	32	23.2	18		66	0.5	35°	44	1.5	6°	561418
10	22	17	15		88	0.3	25°	33	0.8	6°	561205
10	22	23	20		121	0.03	20°	77	0.4	1°	861112
10	22	30	25		221	0.2	20°	88	1.5	3°	561207
10	22	33	30		243	0.03	20°	155	0.6	1°	861114
10	22	34	30		121	0.1	30°	77	0.3	3°	861607
10	27	22	17		144	0.5	30°	55	1.5	3°	561613
10	28	27	20	LB	177	0.5	20°	66	1	5°	561424
12	25	23	20		121	0.04	20°	55	0.2	3°	861118
12	25	28	25		221	0.2	20°	88	1	4°	561212
12	25	34	30		265	0.2	20°	110	0.8	3°	561213
12	25	38	35	LB	320	0.04	20°	210	0.4	1°	864105
12	25	44	35		320	0.04	20°	210	0.4	1°	861197
12	25	54	50		1214	0.3	15°	99	0.6	1°	561250
12	26	24	20		77	0.06	30°	44	0.4	7°	861611
12	26	27	23		199	0.1	15°	110	1.5	4°	561283
12	26	34	32		177	0.07	30°	110	0.4	3°	861613
12	28	28	25		110	0.07	30°	55	0.4	7°	861614
12	28	38	32		265	0.25	20°	132	1.5	3°	561446
12	30	30	24		243	0.5	35°	88	1.5	6°	561302
12	30	42	36	LB	464	0.55	30°	77	1.1	2°	561395
12	53	46.5	34		309	1.5	50°	110	2	6°	561122
14	27	28	25		265	0.2	20°	110	1.8	4°	561227
14	27	28	25		199	0.04	20°	99	0.4	3°	861128
14	27	45	40	LB	265	0.2	25°	177	1.5	2°	561269
14	27	49	45		552	0.04	20°	364	0.7	1°	861132
14	27	51.5	43.5		552	0.1	10°	177	1	1°	561493
14	27	54	50	LB	618	0.04	20°	408	0.5	1°	864109
14	28	44	40		552	0.1	15°	177	0.7	1°	561458
14	28	54	50	LB	552	0.1	15°	155	0.7	1°	561617
14	30	28	25		110	0.08	30°	55	0.4	7°	861618
14	30	30	25		110	0.08	30°	55	0.4	7°	861619
14	30	42	38		331	0.2	30°	155	1.9	3°	561305
14	30	42	38		221	0.08	30°	144	0.4	3°	861620
14	32	33	30		287	0.4	25°	132	2	4°	561307
14	32	54	46	LB	420	0.08	25°	276	0.6	2°	864403
14	32	70	65		662	0.2	30°	442	1.1	1°	561309
14.3	30.2	69.8	63.5		817	0.1	20°	420	0.9	1°	861251

Note: LB = Lateral bumper

Dimensions					Radial		Torsion	Axial		Conical	Part Number
Ø d mm	Ø D mm	L mm	I mm	Obs	Static Load Lbs	Deflection mm	Max angle degree	Static Load Lbs	Deflection mm	Max angle degree	
16	32	26	20		155	0.05	20°	77	0.3	2°	861136
16	32	28	25		309	0.2	20°	110	1.6	5°	561312
16	32	30	22		177	0.05	20°	88	0.3	3°	861138
16	32	32	28		287	0.05	20°	144	0.4	3°	861141
16	32	54	50		729	0.05	20°	486	0.4	1°	861143
16	32	54	50	LB	729	0.05	20°	486	0.4	1°	864108
16	32	59	55		883	0.05	20°	574	0.4	1°	861145
16	32	66	60		994	0.05	20°	662	0.4	1°	861146
16	36	38	35		199	0.1	30°	99	0.5	7°	861624
16	40	40	32		210	0.6	5°	###	-	4°	861810
16	52	48	40		199	1	40°	110	4	7°	561520
18	34	33	30		331	0.05	20°	166	0.4	3°	861151
18	34	36	32		353	0.05	20°	177	0.4	3°	861152
18	34	66	60		1082	0.05	20°	707	1.5	1°	861153
18	34	71	65		1192	0.05	20°	795	1.5	1°	861154
18	36	46	40		486	0.04	20°	320	0.4	1°	861156
18	42	38	35		221	0.1	30°	110	0.5	7°	861627
20	38	42	38		508	0.2	25°	166	1	3°	561384
20	38	59	55		662	0.15	20°	110	1	2°	561335
20	38	59	55		905	0.04	20°	596	1.5	1°	861160
20	38	76	70		1391	0.04	20°	927	1.5	1°	861162
20	38	81	75		1546	0.04	20°	1027	1.5	1°	861163
20	42	42	38		662	0.3	25°	199	1.5	4°	561404
20	50	50	40		342	0.5	5°	331	0.7	4°	861817
22	40	45	40		552	0.05	20°	1236	0.4	3°	861166
22	40	86	80		1877	0.06	20°	375	1.5	1°	861167
24	42	50	45		751	0.06	20°	442	0.4	3°	861169
24	42	55	50		883	0.05	20°	1612	0.4	3°	861170
24	42	96	90		2429	0.02	20°	132	1	1°	861171
24	48	44	40		353	0.3	20°	265	1.5	2°	561411
24	48	58	50		773	0.3	20°	817	2	2°	561400
24	58	58	48		475	1	5°	353	-	4°	861818
26	44	66	60	LB	1104	0.2	15°	353	1	1°	561454
28	48	36	34		696	0.05	20°	464	0.5	3°	861173
28	48	66	60		883	0.15	20°	596	1.1	2°	561409
28	48	66	60		1192	0.06	20°	1987	0.5	3°	861175
28	52	108	100		1766	0.1	30°	309	0.7	3°	861637
28	66	66	56		1104	1.5	40°	221	3.5	7°	561601
28	66	66	56		773	1	5°	707	3	4°	861819
30	50	128	120		4195	0.07	20°	574	2.5	1°	861178
32	52	66	60		1325	0.15	10°	662	2.2	1°	561503
32	52	66	60		1325	0.06	20°	###	0.3	3°	861180
32	56	55	50		684	0.08	30°	331	0.7	7°	861638
32	56	116	108		2208	0.1	30°	1435	0.7	3°	861639
36	58	130	120		4195	0.08	20°	2208	1	1°	861182
38	64	76	70		1987	0.07	20°	994	0.5	3°	861183
38	64	135	125		5299	0.1	20°	2870	1.5	1°	861184
38	66	60	55		994	0.1	30°	486	0.7	7°	861642
42	78	66	60		1501	0.07	30°	751	1	7°	862601
42	78	86	80		2208	0.5	10°	442	1.6	1°	561701
42	78	86	80		2804	0.08	20°	1391	0.8	3°	862101
42	78	140	130		4416	0.6	20°	883	2	1°	561702
56	93	250	170		5741	0.6	15°	3091	2	0,3°	561901

Note: LB = Lateral bumper