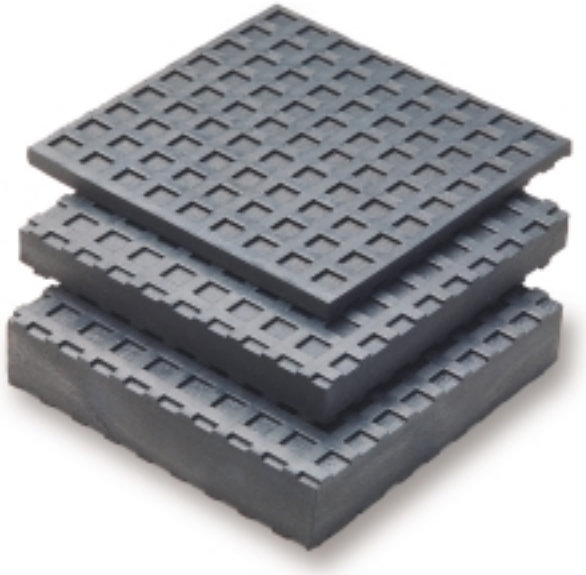
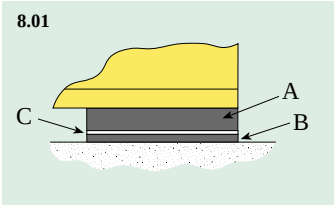
Elastic shock and vibration absorbing materials



NBR
Colour: Black
Description: High Performance vibration & shock damping material with excellent chemical resistance properties
Construction: Moulded from high grade nitrile (NBR) rubber, in various hardnesses to suit desired loadings, natural frequency and isolation efficiency.

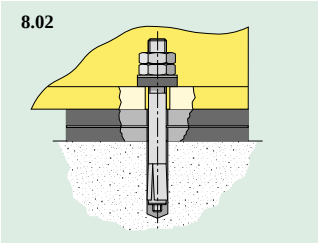
Applications:
Passive isolation: Sensitive equipment such as Measuring,Test and Electronic equipment
Active Isolation: Impact machinery including mechanical and hydraulic presses, turret punch presses, injection moulding machines, hydraulic equipment and structural steelwork.
Variants NBR *P1 Plain one side, treaded one side.
Other properties
Creep: Minimal
Operational Life: 65 years + (subject to environment)
Oil and Chemical Resistance: Conditional, full chemical resistance table available on request.
Natural Frequency Range: Low to medium
Damping: High
Working Temperature Range: °C: -30 to + 120
(Properties subject to change outside range °C: -10 to + 80)
Standard Sheet Sizes mm:
1000x500, 500x500 and other sizes to order. Pads can be supplied against customer drawings including holes, slots etc.
Cutting and drilling:
Cut with circular saw, band saw or water jet, holes with drill or punch
Health and Safety:
Wear protection against any dust created when cutting and or drilling
Building Materials class: B2
Compression set: 1.27% at 23°C
70 hours 15% initial deflection 30 mins unload.
Normal working life: 65 years +

8.01



Free standing installation on multiple pads A& B with metal shim(s) C for levelling.

8.02



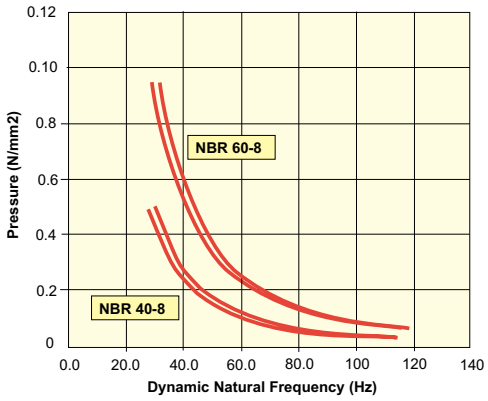
Bolt through pad installation using single, or multiple pad configuration, AW washers and bushes.

NBR			NBR-40-8			NBR-60-8			NBR-70-8			NBR-70-15			NBR-70-25			NBR-70-50		
Static Compression Modulus	**Ecs**	**N/mm2**	3.4			7			12			12			12			12		
Specific Spring Constant	**SSC**	**N/mm/mm2**	0.43			0.88			1.50			0.80			0.48			0.24		
Thickness T	**mm**		8			8			8			15			25			50		
Damping C/Cc			0.1			0.09			0.09			0.09			0.09			0.09		
Coeff. of Friction (dry)			0.9			0.8			0.8			0.8			0.7			0.7		
Hardness Shore AIRDH A	**+/- 3**		40			40			70			70			70			70		
Ratio Dyn to Static Modulus	**D**		5			5			5			5			5			5		
Maximum Static Pressure	**MSP**	**N/mm2**	0.5			1			1.5			1.5			1.5			2		
Maximum Static Pressure	**MSP**	**kg/cm2**	5			10			15			15			20			20		
Maximum Overload Pressure	**MOP**	**N/mm2**	1			2			3			3			3			4		
	Static Loading Pressure																			
	N/mm2	**mPa**	**kg/cm2**	**fsv**	**fdv**	**d**	**fsv**	**fdv**	**d**	**fsv**	**fdv**	**d**	**fsv**	**fdv**	**d**	**fsv**	**fdv**	**d**	**fsv**	**fdv**	**d**
	0.10	0.10	1	33	73	0.24	47	105	0.11	62	138	0.07	45	101	0.13	35	78	0.21	25	55	0.42
	0.20	0.20	2	23	52	0.47	33	74	0.23	44	97	0.13	32	71	0.25	25	55	0.42	17	39	0.83
	0.30	0.30	3	19	42	0.71	27	61	0.34	36	80	0.20	26	58	0.38	20	45	0.63	14	32	1.25
	0.40	0.40	4	16	37	0.94	24	53	0.46	31	69	0.27	23	50	0.50	17	39	0.83	12	28	1.67
	0.50	0.50	5	15	33	1.18	21	47	0.57	28	62	0.33	20	45	0.63	16	35	1.04	11	25	2.08
	0.60	0.60	6							25	56	0.40	18	41	0.75	14	32	1.25	10	23	2.50
	0.70	0.70	7							23	52	0.47	17	38	0.88	13	29	1.46	9	21	2.92
	0.80	0.80	8							22	49	0.53	16	36	1.00	12	28	1.67	9	19	3.33
	0.90	0.90	9							21	46	0.60	15	34	1.13	12	26	1.88	8	18	3.75
	1.00	1.00	10							19	44	0.67	14	32	1.25	11	25	2.08	8	17	4.17
	1.25	1.25	12.5							17	39	0.83	13	28	1.56	10	22	2.60	7	16	5.21
	1.50	1.50	15							16	36	1.00	12	26	1.88	9	20	3.13	6	14	6.25
	1.75	1.75	17.5													8	19	3.65	6	13	7.29
	2.00	2.00	20													8	17	4.17	6	12	8.33

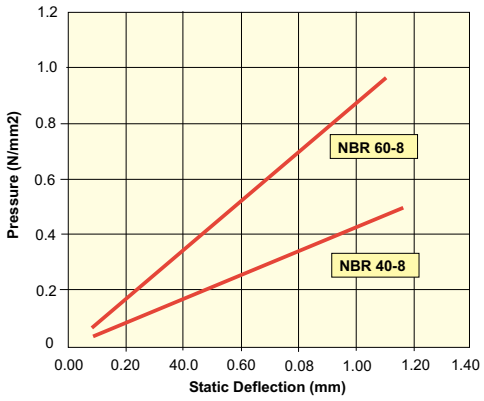
This information is for guidance only

Vertical		
Static Natural Frequency	Hz	***fsv***
Dynamic Natural Frequency	Hz	***fdv***
Static Deflection	mm	***d***

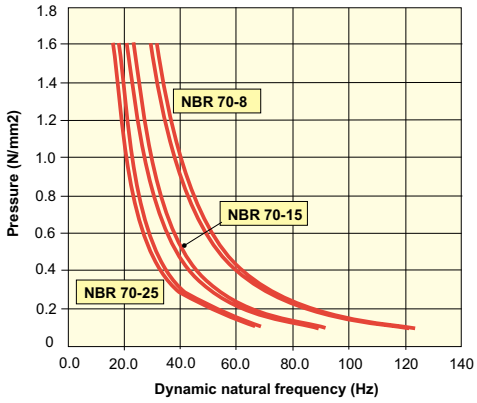
Pressure v Dynamic Natural Frequency
NBR 60 and NBR 40



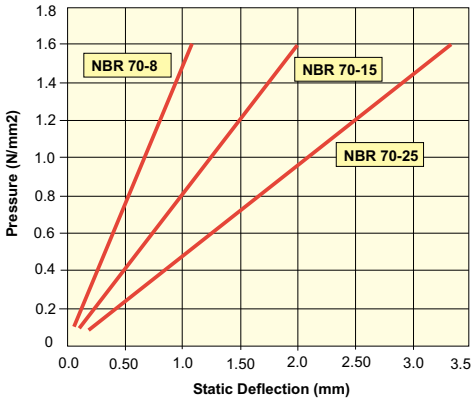
Pressure v Static Deflection
NBR 60 and NBR 40



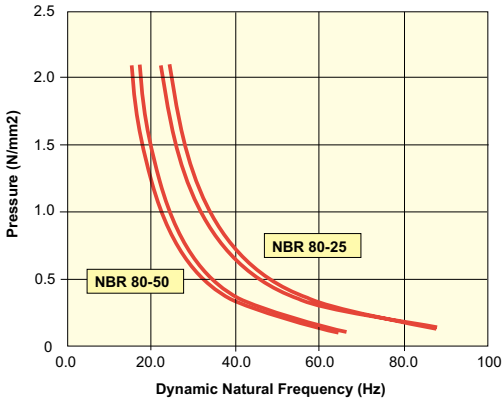
Pressure v Dynamic Natural Frequency
NBR 70



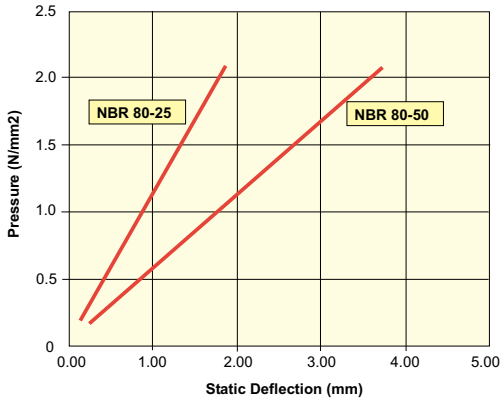
Pressure v Static Deflection
NBR 70



Pressure v Dynamic Natural Frequency
NBR 80



Pressure v Static Deflection
NBR 80



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