Isolation pad

AirLoc is the only manufacturer offering conventional laminated pad materials and the new generation of advanced isolation pads.

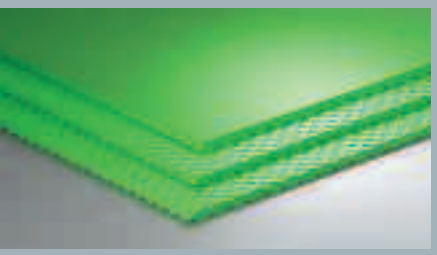
Of course all AirLoc pad materials are RoHS certified.

Today's machines generate dynamic forces that were unthinkable a few years ago. AirLoc's new generation of isolation pads are highly developed materials for preventing problems due to vibrations and structure-borne noise. This new generation of pads effectively combats these problems. The technical and physical values are in line with the latest state of elastomer development and today cover application areas that were not possible a few years ago. Improved compression set and coefficient of friction maintain your machine's stability in the specified position for years, even when the dynamic load is high. Excellent resistance to all coolants, cleaning agents and lubricants used in modern machine engineering operations means that these products can be reliably used trouble-free (e.g. in oil troughs).

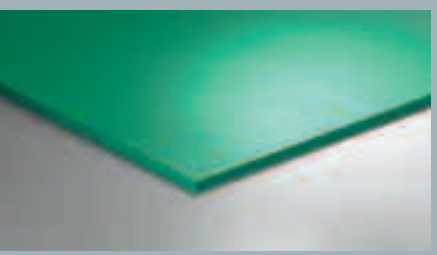
AirLoc pad materials can be easily cut with a ribbon saw, keyhole saw or disk saw to the desired shape. And of course all AirLoc pad materials are RoHS certified.

With our vibration isolation pads, all vibration-caused problems common to today's machine engineering operations can be solved economically and efficiently.

400 Series – the best for outstanding vibration isolation
AirLoc vibration pads of the 400 series have been specially developed for low-frequency applications. Provides very good resistance to many chemicals, lubricants and fuels guarantees long service life. A high coefficient of friction and very narrow production tolerances offer a high level of application security and the best protection for your valuable equipment.



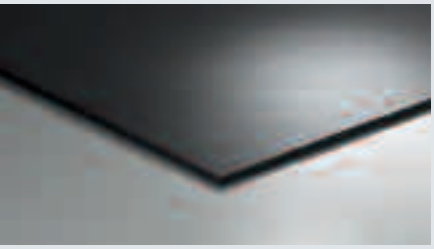
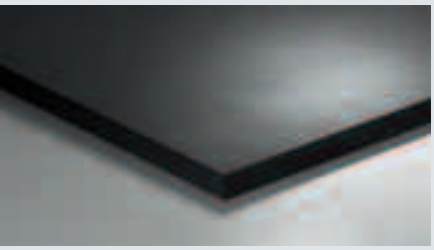
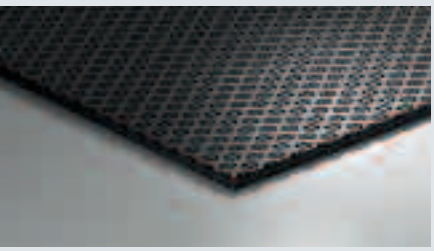
700 Series – universal use for excellent damping
AirLoc vibration pads of the 700 series are the result of 50 years of development and application experience in vibration engineering. Thanks to the high level of damping, the application is secure and extremely effective, even when used in critical operational conditions. Very good resistance to oils, lubricants and fuels makes the 700 series isolation pads ideal for modern, cost-effective production machines and machine tools.



900F Series – dynamic for greatest load-bearing capacity
AirLoc vibration isolation pads of the 900F series were developed for all applications with high static and dynamic forces and for the greatest leveling stability. The very high load-bearing capacity and very good resistance to many chemicals, lubricants and fuels guarantee long service life. This makes the 900F series isolation pads the ideal material for modern, cost-effective production machines and machine tools.

400 Series – the best for outstanding vibration isolation

AirLoc vibration isolation pads of the 400 series have been specially developed for low-frequency applications. Provides very good resistance to many chemicals, lubricants and fuels guarantees long service life. A high coefficient of friction and very narrow production tolerances offer a high level of application security and the best protection for your valuable equipment.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Sensitive devices that are affected by vibrations. Low structure height.	**410** without profile	2.00100.__	10	36 – 145	50	6.5
	Highly effective isolation for sensitive devices that are affected by vibrations.	**425** without profile	2.00425.__	25	36 – 109	22	4.5
	Production machines on multi storied buildings, measuring machines.	**B1** profile both sides	2.00132.__	13	14.5 – 72.5	21	6
	Passive isolation for sensitive devices, e.g. laboratory instruments and weighing equipment.	**B2** profile both sides	2.04202.__	26	14.5 – 72.5	14	5
	Foundation isolations, passive isolation for very sensitive devices and systems.	**B3** profile both sides	2.04203.__	39	14.5 – 72.5	10	4
		B4 profile both sides	2.04204.__	52	14.5 – 72.5	9	3.5

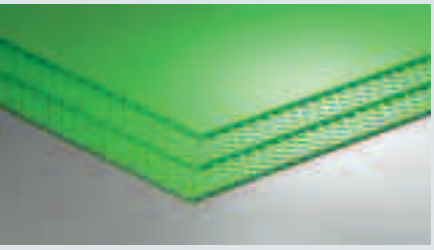
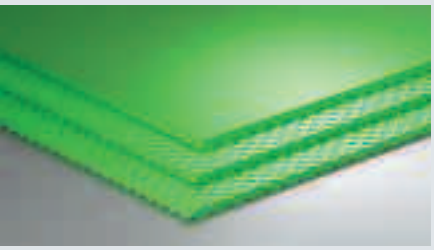
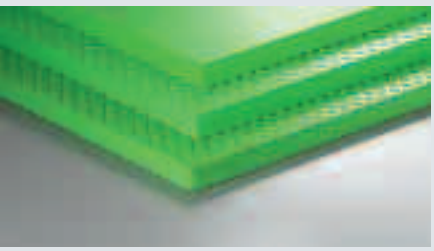
Temperature range –20 °C to +80 °C
Coefficient of friction 0.9
Shore hardness 40 – 45° Shore A

Standard pad sizes 400 series	Index	L mm	W mm	
Other dimensions in all shapes available from stock upon request.	_._____.70	1000	500	Only types 410 and 425
	_._____.71	500	500	
	_._____.72	500	250	
	_._____.76	250	250	
	_._____.80	200	200	
	_._____.85	125	125	
	_._____.86	100	100	

Multi-layered pads, see page 12, pad sets. For more information please visit our website.

700 Series – universal use for excellent damping

AirLoc vibration pads of the 700 series are the result of 50 years of development and application experience in vibration engineering. Thanks to the high level of damping, the application is secure and extremely effective, even when used in critical operational conditions. Very good resistance to oils, lubricants and fuels makes the 700 series isolation pads ideal for modern, cost-effective production machines and machine tools.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Economical isolation pad with high damping. Low structure height. Suitable for production systems, general machine engineering.	**710** without profile	3.07100.__	10	72.5 – 290	92	19
		711 profile one side	3.07101.__	10	72.5 – 290	77	18
		712 profile both sides	3.07102.__	10	72.5 – 290	71	17
	Universally usable isolation pad with high damping effect. Many years of proven performance in all printing presses, paper and textile machines.	**715** without profile	3.07150.__	15	72.5 – 290	81	13
		716 profile one side	3.07151.__	15	72.5 – 290	67	16
		717 profile both sides	3.07152.__	15	72.5 – 290	58	15
	Highly effective isolation pad especially developed for machines with high dynamic force, such as presses, sheering machines and stamping machines.	**725** without profile	3.07250.__	25	72.5 – 290	44	10
		726 profile one side	3.07251.__	25	72.5 – 290	33	8
		727 profile both sides	3.07252.__	25	72.5 – 290	33	8

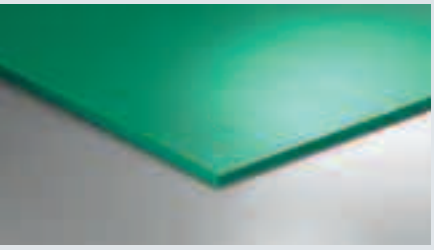
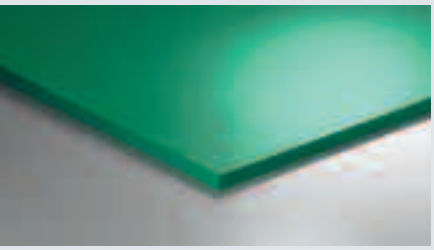
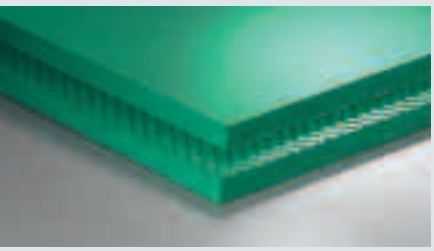
Temperature range –15 °C to +100 °C
Coefficient of friction 0.8
Shore hardness 70 – 75° Shore A

Standard pad sizes 700 series	Index	L mm	W mm
Other dimensions in all shapes available from stock upon request.	_._____.70	1000	500
	_._____.71	500	500
	_._____.72	500	250
	_._____.76	250	250
	_._____.80	200	200
	_._____.85	125	125
	_._____.86	100	100

Multi-layered pads, see page 12, pad sets. For more information please visit our website.

900F Series – dynamic for greatest load-bearing capacity

AirLoc vibration isolation pads in the 900F series have been developed for all applications with high static and dynamic forces and for the greatest leveling stability. The very high load-bearing capacity and very good resistance to many chemicals, lubricants and fuels guarantee long service life. This makes the 900F series isolation pads the ideal material for modern, cost-effective production machines and machine tools.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Economical isolation pad for high static loads. Low structure height. For machining centers, machine tools with the highest level of constancy.	**910F** without profile	3.09100.__	10	109 – 580	70	21
	High load capacity isolation pads, especially for transfer lines and long-bed machines.	**915F** without profile	3.09150.__	15	109 – 580	62	18
	Isolation pad for machines with high dynamic force, such as presses, sheering machines and stamping machines.	**925F** without profile	3.09250.__	25	109 – 580	42	14
		927F profile both sides	3.09252.__	25	109 – 435	39	12

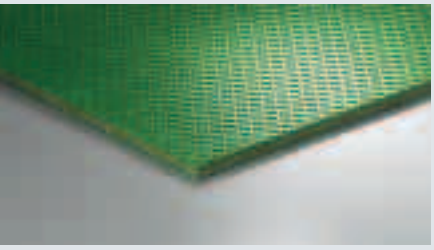
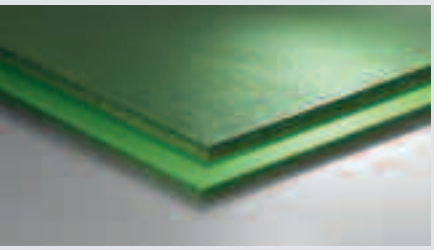
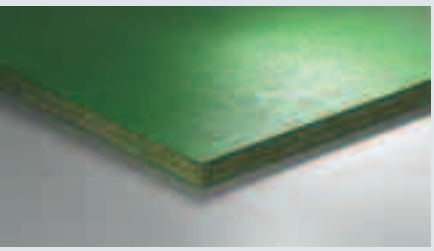
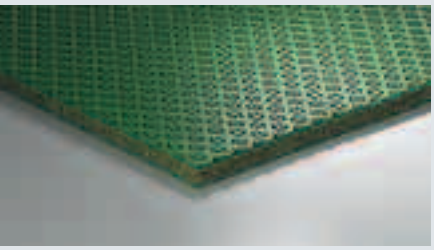
Temperature range –20 °C to +80 °C
Coefficient of friction 0.8
Shore hardness 90 – 95° Shore A

Standard pad sizes 900F series	Index	L mm	W mm
Other dimensions in all shapes available from stock upon request.	_._____.70F	1000	500
	_._____.71F	500	500
	_._____.72F	500	250
	_._____.76F	250	250
	_._____.80F	200	200
	_._____.85F	125	125
	_._____.86F	100	100

Multi-layered pads, see page 12, pad sets. For more information please visit our website.

Composite pads series – tried and proven

AirLoc vibration isolation pads in composite quality for all applications have been tried and proven for over 50 years. Many years of experience and thousands of successful applications make these pads the ideal material for any kind of machine setup.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Universally applied. Well suited for machine tools and printing presses.	**4.17.4** profile both sides	1.00402.__	15.5	43.5 – 116	53	13
	Isolation pads with very high level stability, especially for transfer lines and machining centers.	**610** without profile	1.00610.__	14	140 – 435	59	12
	High load capacity isolation pads for heavy-duty transfer lines and long-bed machines.	**4.17.6** without profile	1.00600.__	14.5	140 – 435	61	16
	High load capacity isolation pads for machines with high dynamic force.	**4.17.50** without profile	1.00500.__	25.5	87 – 290	45	9
	Soft isolation pads for highly effective vibration isolation of presses and stamping machines, also on multi storied buildings.	**32** profile both sides	1.00302.__	22	14.5 – 43.5	31	11

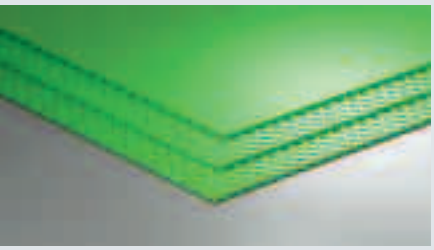
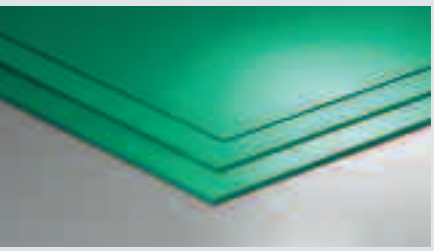
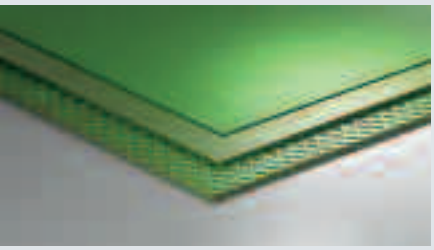
Temperature range 0 °C to +70 °C
Coefficient of friction 0.6 – 0.8

Standard composite pad sizes	Index	L mm	W mm
Other dimensions in all shapes available from stock upon request.	_._____.70	1000	500
	_._____.71	500	500
	_._____.72	500	250
	_._____.76	250	250
	_._____.80	200	200
	_._____.85	125	125
	_._____.86	100	100

Multi-layered pads, see page 12, pad sets. For more information please visit our website.

Non-skid and shim pads

AirLoc non-skid and shim pads are used as intermediate shims between two steel surfaces or to compensate different heights when a machine is set up. The use of top, proven materials mean applications you can count on for a long machine life.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Excellent non-skid properties.	**405** without profile	2.00050.__	5	36 – 145	–	–
	Universally applied, long-term stability.	**705** without profile	3.07050.__	5	72.5 – 290	–	–
		706 profile one side	3.07051.__	5	72.5 – 290	–	–
		707 profile both sides	3.07052.__	5	72.5 – 290	–	–
	High load capacity, good leveling stability, high long-term stability.	**902F** without profile	3.09020.__F	2	109 – 580	–	–
		903F without profile	3.09030.__F	3	109 – 580	–	–
		905F without profile	3.09050.__F	5	109 – 580	–	–
	Proven quality with excellent form stability.	**SP0** without profile	1.00000.__	2.5	145 – 435	–	–
		S0 without profile	1.00200.__	5.5	145 – 435	–	–
		SL profile both sides	1.00222.__	7	58 – 174	–	–

Temperature range:

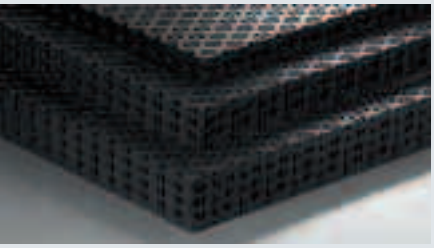
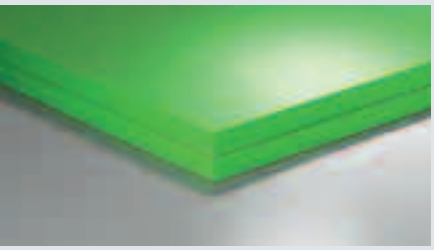
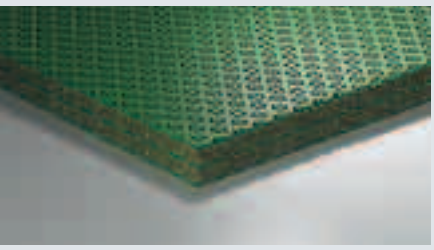
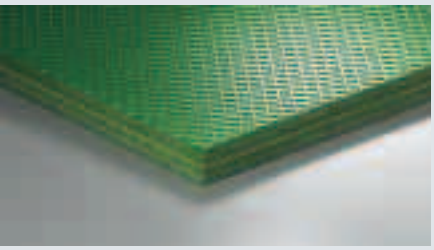
400 and 900F	**–20 °C to +80 °C**
700	**–15 °C to +100 °C**
SP0, S0 and SL	**0 °C to +70 °C**
Coefficient of friction	**0.6 – 0.9**

Standard pad sizes for non-skid and height compensation pads	Index	L mm	W mm
Other dimensions in all shapes available from stock upon request.	_._____.70	1000	500
	_._____.71	500	500
	_._____.72	500	250
	_._____.76	250	250
	_._____.80	200	200
	_._____.85	125	125
	_._____.86	100	100

Multi-layered pads, see page 12, pad sets. For more information please visit our website.

Pad sets

If the properties of the individual isolation pads are insufficient for optimal vibration isolation, isolation pads can be layered for additional adjustment. By layering 2 to 4 isolation pads to a set, the vertical natural frequency is reduced and effective vibration isolation is achieved.

Order no. = article no. + index	Area of application	Type	Article no.	Pad thickness mm	Load psi	Natural frequency, medium load (Hz) vertical	horizontal
	Soft quality for low-frequency isolation jobs, passive isolation of building vibrations, tiered machine setup, laboratory instruments, microscopes, EDP systems, analysis scales, foundation isolation.	**B2** profile both sides	2.04202.__	26	14.5 – 72.5	14	–
		B3 profile both sides	2.04203.__	39	14.5 – 72.5	10	–
		B4 profile both sides	2.04204.__	52	14.5 – 72.5	9	–
	This 70° shore A material is characterised by very high damping and is therefore especially suitable for isolating setups of presses and similar machines. No profile, good non-skid properties.	**K813** without profile	3.04813.__	50	72.5 – 290	31	–
	Well suited as soft foundation isolation material. It is primarily used under foundations of presses and large machine tools of all kinds.	**K975** profile both sides	1.04975.__	44	14.5 – 43.5	20	–
	Well suited as standard quality for foundation isolations. It is primarily used under large foundations of newspaper printing presses and other heavy machines with big dimensions.	**K905** profile both sides	1.04905.__	36.5	43.5 – 116	27	–

Temperature range 0 °C to +70 °C
Coefficient of friction 0.6 – 0.8

Standard pad sizes for pad sets	Index	L mm	W mm	
Other dimensions in all shapes available from stock upon request.	_._____.70	1000	500	Only types K813, K975, K905
	_._____.71	500	500	
	_._____.72	500	250	
	_._____.76	250	250	
	_._____.80	200	200	
	_._____.85	125	125	
	_._____.86	100	100	

For more information please visit our website.

Foundation isolation

Foundations are for making a machine rigid or for gathering several machine components onto a common load-bearing ground. The additional weight of the foundation has a positive effect on the vibration behaviour. However, there are limits to this positive effect. Only by using vibration isolation and the resulting decoupling from the building ground can the area be reliably protected against disturbing vibrations.

AirLoc has many years of experience in designing foundation isolations. From the first vibration analysis to the site inspection of the laid foundation, we are your one-stop supplier.

Figure 1:
Foundation tank before installing the vibration isolation pads

Figure 2:
After installing the isolation (green)

Figure 3:
Block preparation for pouring the foundation

Figure 4:
Web rotary press

The basic principle of foundation isolation
The machine foundation is placed in a concrete tank for vibration isolation. Between foundation block and tank there is a layer of vibration isolation material. The calculation of this isolation layer requires considerable know-how and many years of experience in the vibration engineering.

Key parameters are:
- Total weight of foundation and machine
- Dynamic forces and moments of the machine
- Natural frequencies of the system
- Vibration isolation efficiency.

AirLoc isolation system for foundation isolation
The AirLoc foundation isolation has the following characteristic properties:
- Complete isolation of the machine block in vertical and horizontal directions
- Tuning the isolation frequency through project-specific design (number and distribution of the isolation pads) based on the effective load bearing mass, i.e. the customer-specific conditions.

In contrast to full surface isolations, the AirLoc isolation pads are adapted in terms of variable dimensions and number to the particular project. The AirLoc foundation isolation is calculated based on the effective load and laid according to the specific area. This permits tuning the full area of the installed foundation isolation to the current conditions.

Implementation example
The implementation of a foundation isolation system for a web rotary press documents the large-scale dimensions that are involved. Figure 1 shows the foundation tank before laying the isolation pads. In Figure 2 they are already laid. The actual vibration isolation elements are the green pads. Between them are the systems we have developed. This protects the covered vibration isolation material from the reinforcement and foundation concrete (Figure 3). After completion of the machine installation, the foundation can hardly be seen (Figure 4).

For more information please refer to our foundation brochure or visit our website.