

# TECHNICAL BULLETIN

## ARTMOLDS' VACUUM CHAMBER™

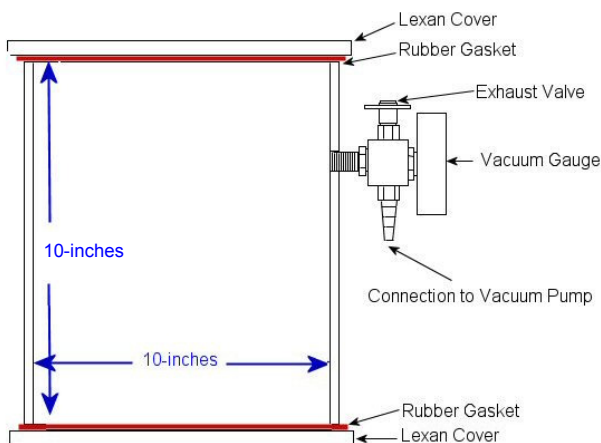
To assure a bubble-free mold when mixing rubbers and silicones a vacuum chamber is required. The ArtMolds' Vacuum Chamber is designed for deaering (eliminating air bubbles) in rubbers. This PVC chamber, along with ½-inch Lexan plates make a safe and efficient unit. The vacuum chamber comes with all fittings, vacuum gauge, rubber gaskets, and top and bottom plates. All you need is your power source and a vacuum pump that will pull up to 29.9-inches of mercury (at sea level) needed to deair your materials.



Specifications	
<b>Capacity</b>	4-gallons +/-
<b>Internal Dimensions</b>	10-inches diameter by 10-inches tall
<b>Maximum Pull</b>	29.9 inches of mercury at sea level *
<b>Weight</b>	20-pounds
<b>* See reverse side for maximum vacuum at other altitudes</b>	

**Vacuumping Process:** Mix your rubber according to the manufacturers directions. The mixing container must hold at least four times the amount of material you are vacuuming, to allow for the expansion of the material. Once your vacuum reaches 29.9-inches of mercury (at sea level), the material will begin to rise (resembling foam). When the material falls it will plateau and not rise any more. You will want to continue to vacuum for another 2-3-minutes to make certain all of the air has been removed from your material. Release your vacuum, remove your material from the chamber. Pour the material slowly starting from the corner of the mold box, or mold, letting the material to flow freely into the box or mold cavity. This method will usually not introduce any new bubbles into the vacuumped material. To insure that the material is totally devoid of air bubbles you can place the entire mold/mold box into the chamber for an additional few minutes. This will assist the material into difficult areas of the mold/mold box.

### VACUUM CHAMBER DETAILS



**Vacuum Pump:** Our ArtMolds Vacuum Chamber was constructed to be compatible with the Robinair 6 CFM two stage vacuum pump. The pump is powerful enough to provided a rapid vacuum to 29.9 inches of mercury (at sea level—see chart on the reverse side for other altitudes) and to provide many years of trouble-free service. Simply connect the plastic tubing provided with our vacuum pump to the intake port of your vacuum pump

**Operation:** Close the exhaust valve on the vacuum chamber. Make certain both gaskets are centered on the rim and your cover plates are centered. Turn on your vacuum pump and monitor your gauge to which will pull up to 29.9 inches Hg. When deaering has completed, turn off the vacuum pump and open the exhaust valve. When air pressure inside the chamber has returned to normal you can easily remove the lid and your deaired material.



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Convert from an altitude in feet or meters above sea level to a pressure reading in [millibar \(mbar, mb or mbr\)](#), [hectopascals \(hPa\)](#), [pounds per square inch \(psi\)](#), [millimetres of mercury](#) at zero degrees celsius ([mmHg @ 0 deg C](#)) or [inches of mercury at zero degrees celsius \( inHg @ 0 deg C\)](#).

-1000	ft	-304.80	m	is	1050.41	mb/hPa	15.235	psi	787.87	mmHg	31.018	inHg
-900	ft	-274.32	m	is	1046.64	mb/hPa	15.180	psi	785.05	mmHg	30.907	inHg
-800	ft	-243.84	m	is	1042.89	mb/hPa	15.126	psi	782.23	mmHg	30.796	inHg
-700	ft	-213.36	m	is	1039.15	mb/hPa	15.072	psi	779.42	mmHg	30.686	inHg
-600	ft	-182.88	m	is	1035.41	mb/hPa	15.017	psi	776.62	mmHg	30.576	inHg
-500	ft	-152.40	m	is	1031.69	mb/hPa	14.963	psi	773.83	mmHg	30.466	inHg
-400	ft	-121.92	m	is	1027.98	mb/hPa	14.910	psi	771.05	mmHg	30.356	inHg
-300	ft	-91.440	m	is	1024.28	mb/hPa	14.856	psi	768.28	mmHg	30.247	inHg
-200	ft	-60.960	m	is	1020.59	mb/hPa	14.802	psi	765.51	mmHg	30.138	inHg
-100	ft	-30.480	m	is	1016.92	mb/hPa	14.749	psi	762.75	mmHg	30.030	inHg
-50	ft	-15.240	m	is	1015.08	mb/hPa	14.723	psi	761.37	mmHg	29.975	inHg
<b>Sea Level</b>	<b>ft</b>	<b>0</b>	<b>m</b>	<b>is</b>	<b>1013.25</b>	<b>mb/hPa</b>	<b>14.696</b>	<b>psi</b>	<b>760.00</b>	<b>mmHg</b>	<b>29.921</b>	<b>inHg</b>
50	ft	15.240	m	is	1011.42	mb/hPa	14.669	psi	758.63	mmHg	29.867	inHg
100	ft	30.480	m	is	1009.59	mb/hPa	14.643	psi	757.26	mmHg	29.813	inHg
200	ft	60.960	m	is	1005.95	mb/hPa	14.590	psi	754.52	mmHg	29.706	inHg
300	ft	91.440	m	is	1002.31	mb/hPa	14.537	psi	751.80	mmHg	29.598	inHg
400	ft	121.92	m	is	998.689	mb/hPa	14.485	psi	749.08	mmHg	29.491	inHg
500	ft	152.40	m	is	995.075	mb/hPa	14.432	psi	746.37	mmHg	29.385	inHg
600	ft	182.88	m	is	991.472	mb/hPa	14.380	psi	743.67	mmHg	29.278	inHg
700	ft	213.36	m	is	987.880	mb/hPa	14.328	psi	740.97	mmHg	29.172	inHg
800	ft	243.84	m	is	984.298	mb/hPa	14.276	psi	738.28	mmHg	29.066	inHg
900	ft	274.32	m	is	980.727	mb/hPa	14.224	psi	735.61	mmHg	28.961	inHg
1000	ft	304.80	m	is	977.166	mb/hPa	14.173	psi	732.93	mmHg	28.856	inHg
2000	ft	609.60	m	is	942.129	mb/hPa	13.664	psi	706.65	mmHg	27.821	inHg
2500	ft	762.00	m	is	925.123	Mb/hPa	13.418	psi	693.90	mmHg	27.319	inHg
3000	ft	914.40	m	is	908.117	mb/hPa	13.171	psi	681.14	mmHg	26.817	inHg
4000	ft	1219.2	m	is	875.105	mb/hPa	12.692	psi	656.38	mmHg	25.842	inHg
<b>Denver, CO</b>	<b>ft</b>	<b>1524.0</b>	<b>m</b>	<b>is</b>	<b>843.073</b>	<b>mb/hPa</b>	<b>12.228</b>	<b>psi</b>	<b>632.36</b>	<b>mmHg</b>	<b>24.896</b>	<b>inHg</b>
6000	ft	1828.8	m	is	811.996	mb/hPa	11.777	psi	609.05	mmHg	23.978	inHg
7000	ft	2133.6	m	is	781.854	mb/hPa	11.340	psi	586.44	mmHg	23.088	inHg
8000	ft	2438.4	m	is	752.624	mb/hPa	10.916	psi	564.51	mmHg	22.225	inHg
9000	ft	2743.2	m	is	724.285	mb/hPa	10.505	psi	543.26	mmHg	21.388	inHg
10000	ft	3048.0	m	is	696.817	mb/hPa	10.106	psi	522.66	mmHg	20.577	inHg
15000	ft	4572.0	m	is	571.820	mb/hPa	8.2935	psi	428.90	mmHg	16.886	inHg
20000	ft	6096.0	m	is	465.633	mb/hPa	6.7534	psi	349.25	mmHg	13.750	inHg

Please note that the calculated values are not absolutely precise conversions and should be treated only as a guide.