



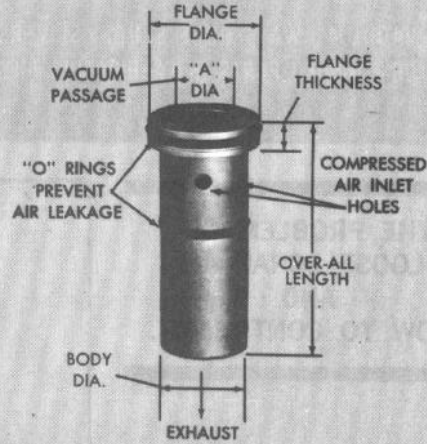
VACUUM SLEEVES

INTRODUCTION: A Vacuum Sleeve is a patented unit using compressed air to create a vacuum. It can be installed directly into a fabricating die.

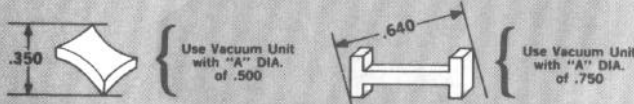
HOW TO SELECT THE PROPER SIZE VACUUM SLEEVE:

There are 2 simple measurements to consider when selecting a vacuum sleeve for your application.

- (1) Measure the longest dimension* of the pieces which are to pass through the vacuum sleeve and add approximately 1/8".
- (2) Select a vacuum sleeve having an "A" DIAMETER equal to, or greater than, this dimension.
- (3) Listed below are 16 sizes of Vacuum Sleeves with an "A" DIAMETER ranging from .109" to 2.0".



*When determining the longest dimension, be sure to consider the stock thickness
— For EXAMPLE:



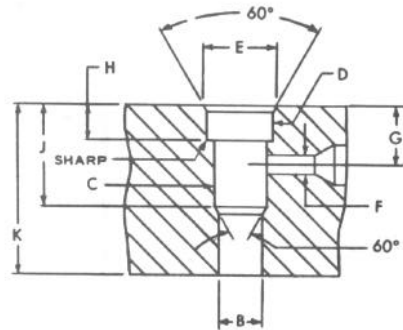
VACUUM SLEEVE CHART																
VACUUM SLEEVE PART NUMBER	VS-110	VS-190	VS-260	VS-320	VS-380	VS-440	VS-500	VS-560	VS-620	VS-680	VS-750	VS-940	VS-1250	VS-1500	VS-1750	VS-2000
"A" DIA. + .003	.109	.191	.261	.323	.377	.4375	.500	.5625	.625	.6875	.750	.937	1.250	1.500	1.750	2.000
FLANGE DIA.	.437	.562	.625	.750	.812	.937	1.000	1.062	1.187	1.312	1.375	1.500	2.000	2.250	2.500	3.000
BODY DIA.	.312	.375	.437	.532	.593	.687	.750	.812	.937	1.000	1.062	1.250	1.625	1.875	2.125	2.500
OVER-ALL LENGTH	1.250	1.437	1.625	1.687	1.750	1.937	2.312	2.500	2.562	2.625	2.687	2.687	3.500	4.000	4.250	4.656
FLANGE THICKNESS	.243	.243	.258	.258	.258	.258	.276	.276	.276	.276	.276	.276	.324	.324	.324	.363
VAC. AT 20 psi	6.5	6.0	6.0	5.5	5.0	5.0	3.8	3.5	3.0	3.0	1.5	1.0	.5	.4	.2	.2
VAC. AT 40 psi	12.5	12.0	12.0	11.5	11.5	11.5	8.0	7.5	6.5	6.5	5.0	3.8	2.3	2.0	1.0	1.0
VAC. AT 60 psi	20.0	20.0	19.5	18.5	18.5	17.5	12.3	12.0	9.5	9.5	7.5	5.5	3.2	3.0	2.2	2.1
VAC. AT 80 psi	24.5	24.0	24.0	23.5	23.0	21.0	16.5	16.5	13.2	13.0	10.5	7.5	4.0	4.0	3.0	2.7

Vacuum was measured in inches of mercury.
For optimum vacuum flow, an operating pressure of 60 psi (max.) is recommended.

The standard VS-110 thru VS-940 are made from steel
The standard VS-940 thru VS-2000 are made from Aluminum.

TO PROPERLY INSTALL VACUUM SLEEVES FOLLOW THESE MACHINING SPECIFICATIONS:

- Break all sharp edges.
- "B" and "D" Diameters to have smooth surface finish.
- "B" Diameter to be concentric with "D" Diameter within .005 T.I.R.
- The inside diameter of hoses, tubings and fittings of air supply line must be as large as the "F" Diameter shown in the drawing at the right.



MACHINING SPECIFICATIONS																
VACUUM SLEEVE PART NUMBER	VS-110	VS-190	VS-260	VS-320	VS-380	VS-440	VS-500	VS-560	VS-620	VS-680	VS-750	VS-940	VS-1250	VS-1500	VS-1750	VS-2000
"B" DIA. + .003	.3125	.375	.4375	.5312	.5937	.6875	.750	.8125	.9375	1.000	1.0625	1.250	1.625	1.875	2.125	2.500
"C" DIA. + .005	.358	.4375	.500	.625	.6875	.8125	.750	.9375	1.0625	1.125	1.1875	1.375	1.500	2.000	2.250	3.000
"D" DIA. + .003	.4375	.5625	.625	.750	.8125	.9375	1.000	1.0625	1.1875	1.3125	1.375	1.500	2.000	2.250	2.500	3.000
"E" DIA. ± .005	.483	.608	.670	.795	.858	.983	1.045	1.108	1.233	1.358	1.420	1.545	2.041	2.291	2.541	3.041
"F" DIA. + .003	.125	.1562	.1875	.1875	.2187	.2187	.250	.250	.2812	.2812	.312	.562	.562	.562	.562	.562
"G" ± .010	.437	.492	.507	.507	.507	.527	.568	.568	.568	.568	.568	.620	.875	.875	.875	1.125
"H" ± .002	.249	.249	.264	.264	.264	.264	.282	.282	.282	.282	.282	.330	.330	.330	.330	.367
"J" ± .010	.625	.734	.750	.750	.750	.790	.854	.854	.854	.854	.854	.958	1.343	1.343	1.343	1.812
"K" (MIN.)	1.000	1.125	1.125	1.188	1.188	1.250	1.312	1.312	1.312	1.312	1.312	1.312	1.875	1.875	1.875	2.5