

## VACUUM EVAPORATION SOURCES

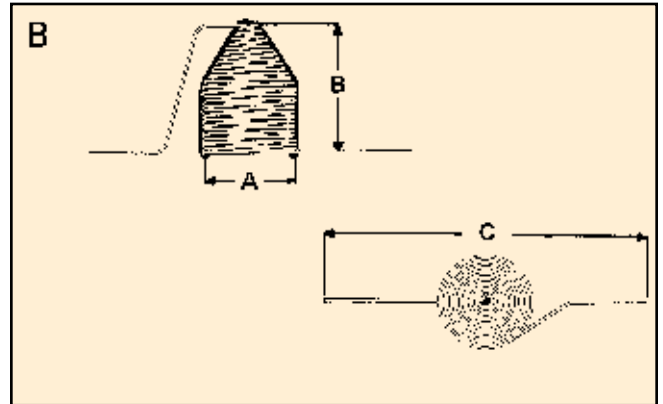
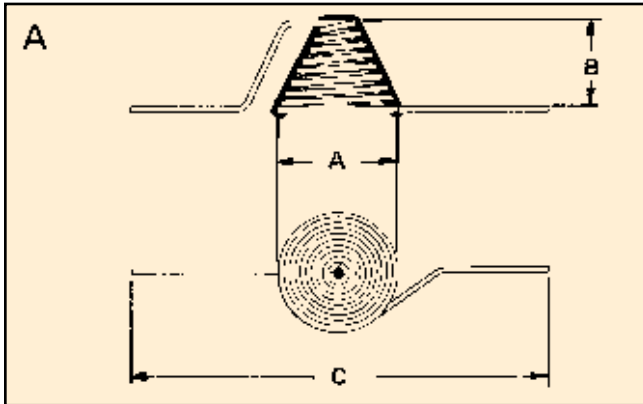
The  $Al_2O_3$  coated evaporation basket was first introduced by CM in 1957. Since that time these evaporator baskets have proven to be vital to the vacuum metallizing industry. The parts consist of either tungsten or molybdenum wire formed into baskets and set at  $1550^\circ C$  in hydrogen atmosphere. These are then coated with pure  $Al_2O_3$  which is sintered in  $H_2$  to form the crucible configuration with an internal heater. Because of the intimate internal contact between the heater wire and the crucible structure and the resulting outstanding heat transfer characteristics, vaporization of the material to be deposited may be achieved at lower heater temperatures, resulting in longer evaporator life.

Another advantage which cannot be overlooked is the excellent directional characteristics of these baskets which is controlled by the wall configuration.

The coated evaporator basket is an important step forward in the field of vacuum deposited films as a means of achieving higher quality in both research and production. This catalog features only those units which have become standard through repeated demand. However, our techniques of manufacturing permits to the fabrication of many different sizes and configurations at nominal cost. Upon receipt of a brief sketch, we will submit a quotation on your specific requirements.



## COATED EVAPORATION BASKETS



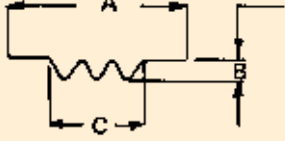
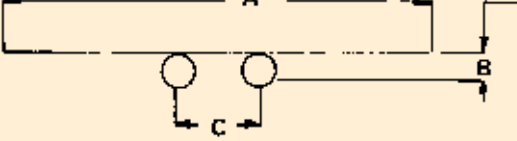
DRG. #	PART NO. COATED	UNCOATED	MATERIAL	WIRE SIZE	DIMENSION (In.)		
					A	B	C
A	R-123-C	R-123	Molybdenum	0.025	1/2	5/16	3
A	R-123-35C	R-123-35	Molybdenum	0.035	3/4	1/2	4
A	R-155-C	R-155	Tungsten	0.030	17/32	11/32	5
B	R-206-C	R-206	Molybdenum	0.025	1/2	11/16	3
B	R-330-C	R-330	Molybdenum	0.025	1/2	15/16	3
B	R-333-C	R-333	Molybdenum	0.025	3/4	11/16	3
B	R-307-C	R-307	Tungsten	0.030	17/32	11/16	5

The following categories of evaporators are not listed by part number due to the wide variety of material, sizes and configurations available. Upon receipt of a brief sketch cm will then match your specifications to a previously manufactured item or submit a specific quotation for your request.

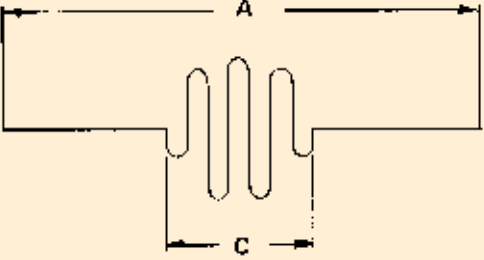
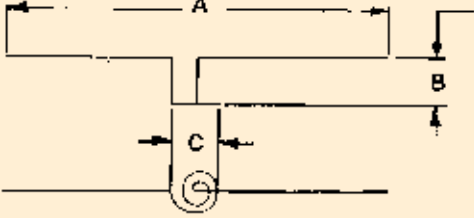
## METALLIZING COILS

MATERIAL WIRE-SIZE		
3 x .025W		<p>A – Overall Length B – I.D. C – Coil Length D – Total Turns</p>
3 x .030W		
4 x .030W		
3 x .004W		
040W		

## POINT SOURCES

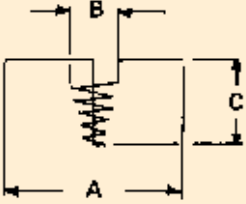
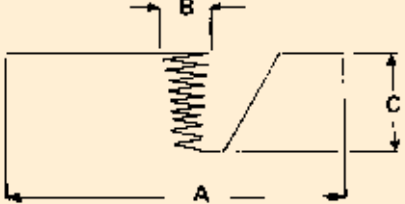
	<p><b>MATERIAL WIRE-SIZE</b></p> <p>3 x .025W          3 x .030W          4 x .030W          .060W</p>	
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## EVAPORATION HEATERS

<p><b>MATERIAL WIRE-SIZE</b></p> <p>0.30W          .040W          .060W</p>		
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## UNCOATED BASKETS

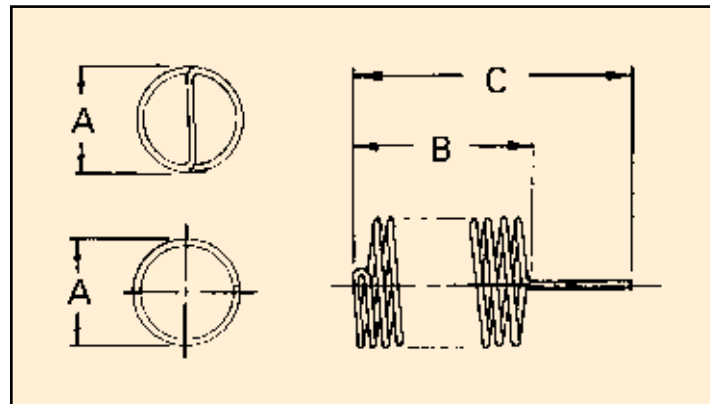
## CRUCIBLE HEATERS

	<p><b>MATERIAL WIRE-SIZE</b></p> <p>3 x .025W          3 x .030W          4 x .030W          .040W</p>	
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## TUNGSTEN HEATERS FOR DISPENSER TYPE CATHODES

In response to the increasing demand for heaters to be used in conjunction with dispenser cathodes (Phillips Cathodes) CM has developed a standard set of heaters as indicated in prints No. R-336-7. These, which are available from stock, represent only a fraction of the many types manufactured by CM. The majority of heaters are fabricated to customer prints.

Heater cathodes systems of the dispenser type are finding wide use in both research and industry in Laser applications, power tubes and in general electronic research.



PART. NO.	A	B	C	WIRE SIZE	PART. NO.	A	B	C	WIRE SIZE
R-336-1	0.375	0.625	1.625	0.030	R-336-11	1.000	0.750	1.750	0.040
R-336-2	0.375	0.875	1.875	0.030	R-336-13	1.000	0.350	1.350	0.040
R-336-4	0.475	0.325	1.325	.017/.020	R-336-14	0.260	0.375	1.375	0.010
R-336-6	0.550	0.625	1.625	.025/.030	R-337-1	.355	1.250	2.250	0.017
R-336-8	0.720	0.500	1.500	0.030	R-337-2	.375	.375	1.375	0.025
R-336-9	0.800	0.625	1.625	.025/.030	R-337-4	.230	.500	.875	0.007

CM-Incorporated designs and manufacturers all types of belt conveyor furnaces, batch-type retort equipment, combustion tube, laboratory and crystal growing furnaces, alloy hearth atmosphere furnaces and tungsten rod heating element units to 2200° C. Although many are of standard design and construction, we welcome your inquiries regarding special applications.