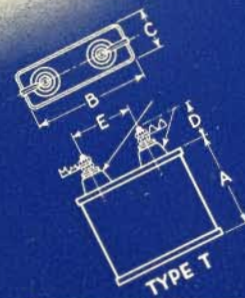
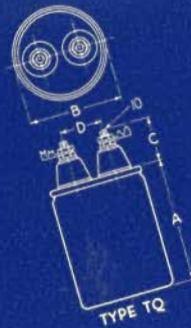
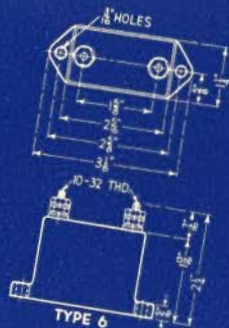
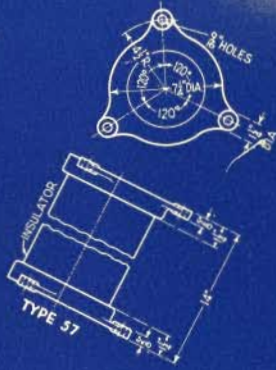
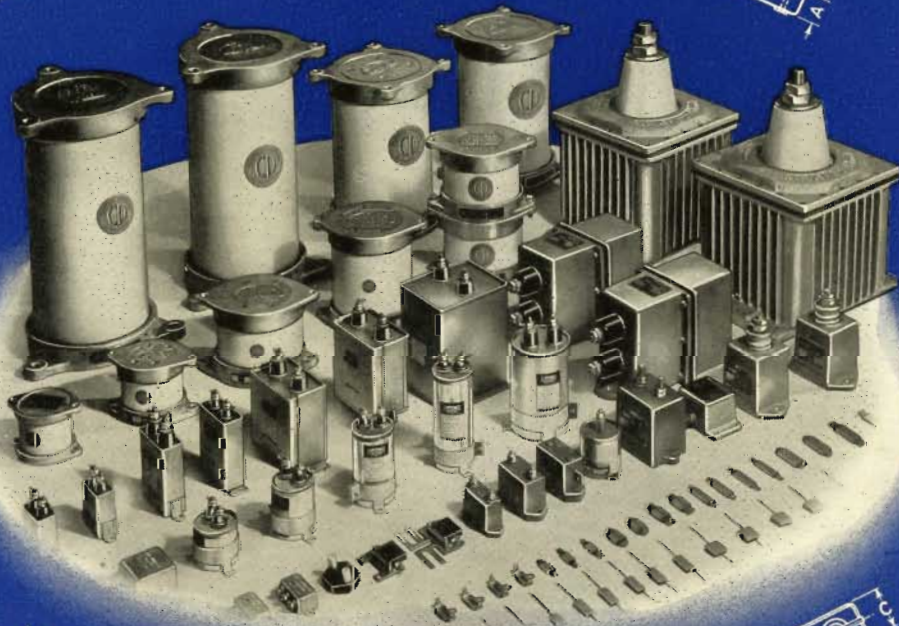
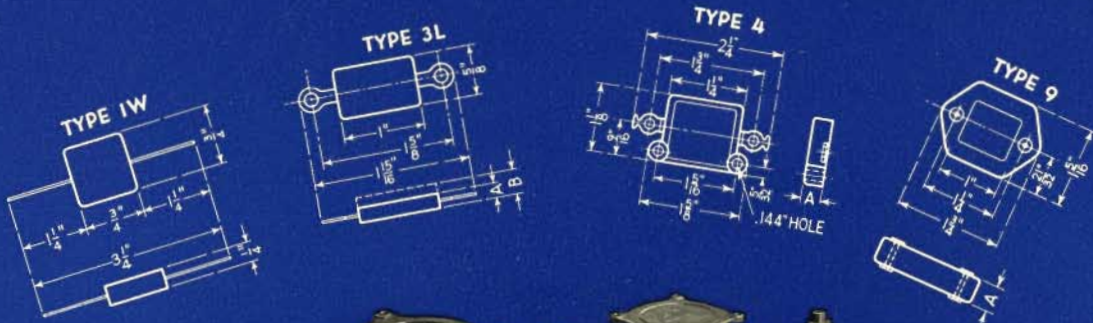




WILLIAM DUBILIER  
339 GARDEN ROAD  
SOUTH BEACH, FLORIDA

# RADIO TRANSMITTER CAPACITORS



CATALOG

No. 160-T

1939-40

CORNELL-DUBILIER ELECTRIC CORPORATION





**E**ach land has its own word for Dependability. It's a big word — in any language. There is, in fact, only one other word great enough to match it . . . Experience. For three decades Cornell-Dubilier has specialized in the manufacture of capacitors exclusively. This combination of experience and dependability is the reason why Industry the world over turns to Cornell-Dubilier for capacitors. A few applications in which C-D capacitors are used in the radio, electronic and electrical fields are illustrated above.

CORNELL-DUBILIER CAPACITORS



# CORNELL



# DUBILIER

**CORNELL-DUBILIER LEADERSHIP** in the capacitor industry has been won as the result of three decades of specialized experience in manufacturing the finest quality capacitors for every conceivable radio, electronic and electrical application.

The sound policy of the CORNELL-DUBILIER organization is best attested to by the continued growth and leadership in meeting the ever increasing demands of advanced radio and industrial developments with products of outstanding engineering achievement, dependable service and long-lasting satisfaction.

The CORNELL-DUBILIER plant, now located in the heart of the industrial East, affords most convenient transportation facilities to all parts of the country. Every possible facility is at command with modern equipment, ranging from huge batteries of automatic machinery, moulding presses, and the largest radio capacitor impregnating system in the world to ultra precision laboratory capacitor standards, test equipment, including the highest power oscillators for overload tests at any frequency.

The CORNELL-DUBILIER engineering and executive personnel includes men with up to 30 years experience in capacitor research, design and application practice — men who know, and are qualified to solve, with the proper factor of safety, the most difficult capacitor problem. Whether it be sparking contacts, television, or a 500 kilowatt transmitter, our engineers are at your service to study your problem and circuit requirements. Very often they are in a position to recommend a more efficient and effective solution to your problem at considerable saving in cost.

## INDEX TO CATALOG NO. 160-T

### Mica Capacitors

	TYPES	PAGES
Moulded Midget Types	1W, 3L, 3W, 5W	2- 3
Metal-Clad "Tooth Pick" Types	702, 704, 734, 735, 742, 743	4- 5
Silvered Mica Types	1R, 2R, 5R	6- 7
Low Power Transmitter Types	4, 9	8- 9
Medium Power Transmitter Types	6, 15L, 30B	10-11
High Power Transmitter Types	50, 51, 52, 56, 57, 59	12-13
Commercial Transmitter Types	75A, 40	14-15
Special Transmitter Types	21, 62, 135, 130A	16-17
Guide to Selection and Use of Mica Capacitors		28-29
General Information		32

### Dykanol Capacitors

Low Capacity By-Pass Type	DY	18-19
Inverted Filter Type	TLA	20-21
Cylindrical Filter Type	TQ	22-23
High Voltage Filter Types	T, TJ, TJH, TJL, TJU	24-25
High Voltage Transmitter Type	TK	26-27
Guide to Selection and Use of Dykanol Capacitors		30-31
General Information		32

## CORNELL-DUBILIER ELECTRIC CORPORATION

1000 HAMILTON BOULEVARD

SOUTH PLAINFIELD, N. J., U.S.A.

Cable Address : CORDU

PRINTED IN U.S.A. Recorder Press, Plainfield, N. J.

Copyrighted 1939 by Cornell-Dubilier Electric Corp.







# MICA CAPACITORS

## MOULDED MIDGET TYPES 1W, 3L, 3W AND 5W

- ◆ INDIA RUBY MICA DIELECTRIC — High Q — Long Life.
- ◆ RIGIDLY TESTED MICA — Uniform product — High factor of safety.
- ◆ SPECIAL WAX-TREATED STACK — Affords higher voltage breakdown.
- ◆ NO MAGNETIC MATERIAL USED — No wave form distortion — reduces losses.
- ◆ STANDARD UNITS MOULDED IN BROWN BAKELITE (\*) — Strong and Neat.
- ◆ SPECIAL UNITS MOULDED IN LOW-LOSS BAKELITE — Maximum Resistivity.
- ◆ POSITIVE TERMINAL CONNECTIONS — Insure good anchorage — low contact resistance.
- ◆ TINNED BRASS WIRE LEADS (TYPES 1W, 3W AND 5W) — Prevent breakage.
- ◆ STANDARD R.M.A. COLOR CODING — Quickly indicates capacity.

TYPE 1W 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.	TYPE 3L 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.	† TYPE 3W 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.	TYPE 5W 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.
.000001	.000001	.000001	.000001
.000005	.000005	.000005	.000005
.00001	.00001	.00001	.00001
.00002	.00002	.00002	.00002
.000025	.000025	.000025	.000025
.00003	.00003	.00003	.00003
.00004	.00004	.00004	.00004
.00005	.00005	.00005	.00005
.00007	.00007	.00007	.00007
.0001	.0001	.0001	.0001
.00015	.00015	.00015	.00015
.0002	.0002	.0002	.0002
.00025	.00025	.00025	.00025
.0003	.0003	.0003	.0003
.0004	.0004	.0004	.0004
.0005	.0005	.0005	.0005
.0007	.0007	.0007	
.0008	.0008	.0008	
.0009	.0009	.0009	
.001	.001	.001	
.0015	.0015	.0015	
.002	.002	.002	
.0025	.0025	.0025	
.003	.003	.003	
<hr/>			
600 V.D.C. Test 300 V.D.C. Working	600 V.D.C. Test 300 V.D.C. Working	600 V.D.C. Test 300 V.D.C. Working	600 V.D.C. Test 300 V.D.C. Working
.004	.004	.004	.0007
.005	.005	.005	.0008
.006	.006	.006	.0009
.007	.007	.007	.001
.008	.008	.008	
.009	.009	.009	
.01	.01	.01	

**NOTES:** The above gives range of capacities available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Type No.  
Suffix

To order any particular unit, simply specify Type and Capacity desired.

(†) TYPE 3W CAPACITORS are exactly the same units as Type 3L except they are provided with No. 18 tinned brass wire leads 1½" long, instead of lugs.

STANDARD CAPACITY TOLERANCE is plus or minus 20%. Also available, on order, in plus or minus 10%, 5%, 3% and 2% tolerance ratings (or within 0.5 mmfd. — whichever is greater).

"L" (\*) MOULDED IN LOW-LOSS BAKELITE available on order — add "L" to Cat. No. (examples: 5WL; 3LL; 3WL; 1WL).

"T" HEAT AGEING TREATMENT (for stabilizing capacity) on special order, add "T" to Cat. No. (examples: 5WT; 1WLT).

"S" SPECIAL SALT WATER IMMERSION SEAL AGAINST HUMIDITY — to order add "S" to Cat. No. (examples: 5WS; 3LS; 3WS; 1WS).

"P" HIGHER VOLTAGE RATINGS — for 2,000 volt d.c. test rating — 800 volt d.c. operating rating, add "P" to Cat. No. (examples: 5WP; 1WP). Special note: the maximum capacities available in this higher voltage rating are .003 mfd. for Type 1W, .005 mfd. for Type 3L and .0005 mfd. for Type 5W. Types 3LP and 3WP high voltage units are ⅝" thick.

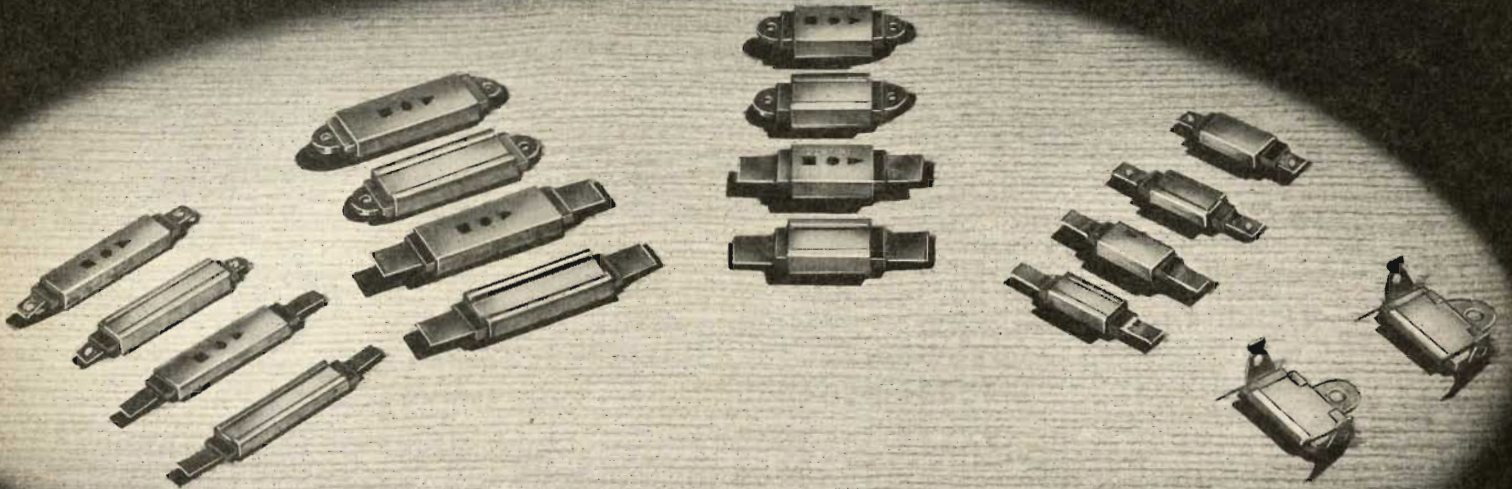
GUIDE TO SELECTION AND USE — See pages 28-29 for further explanatory data with regard to ratings of mica capacitors.



# CORNELL



# DUBILIER



Above photo shows, (left to right), two back rows, Types 702A, 704A, 734A, 735A, and 742. Two front rows, Types 702, 704, 734, 735, and 743.

TYPE	A	B	C	D	E
735	5/8"	7/8"	1 1/8"	3/16"	3/8"
702	1 1/4"	1 1/2"	2 1/4"	3/16"	3/8"
734	3/4"	1"	1 3/4"	3/8"	9/16"
704	1 1/4"	1 1/2"	2 1/4"	3/8"	9/16"

**TYPES**  
702, 704, 734, 735

TYPE	A	B	C	D	E
735 A	5/8"	7/8"	1 3/8"	3/16"	3/8"
702 A	1 1/4"	1 1/2"	2"	3/16"	3/8"
734 A	3/4"	1"	1 1/2"	3/8"	9/16"
704 A	1 1/4"	1 1/2"	2"	3/8"	9/16"

**TYPES**  
702A, 704A, 734A, 735A

**TYPE 742**

**TYPE 743**

**CORNELL-DUBILIER**

TYPES 702, 704, 734, 735, 742 and 743 METAL-CLAD "TOOTH-PICK" MICA CAPACITORS have excellent capacity stability, being better than moulded mica units Types 1W, 3L, 3W and 5W for temperature coefficient and retrace of capacity value. Their short, wide terminals afford excellent by-pass action due to the low inductance inherent in their construction. They are available with either wax or varnish impregnation, the latter allowing operation at high (up to 250° F.) temperatures. They can be furnished with either cadmium-plated steel clamps or at slightly higher prices with brass clamps. The brass clamps are far superior for ultra-high-frequency use from the standpoint of minimizing radio frequency losses due to the reduction of magnetic material in the field.



# MICA CAPACITORS

## METAL-CLAD "TOOTHPICK" TYPES 702, 704, 734, 735, 742 AND 743

- ◆ RIGID METAL CLAMP — Constant capacity.
- ◆ SHORT, WIDE-PATH TERMINALS — Extremely low inductance.
- ◆ ACTUAL FOIL ENDS SOLDERED TOGETHER, ACT AS TERMINALS — Low resistance terminal connections.
- ◆ HIGH CAPACITY; SMALL SIZE — For use in restricted spaces.
- ◆ VACUUM DRIED STACK — Wax or varnish impregnation.
- ◆ RIGIDLY TESTED INDIA RUBY MICA — High Q — Uniform product — Long life.

<p><b>TYPE 735</b> 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.</p> <p>.000005 .00001 .00002 .00003 .00004 .00005 .0001 .00015 .0002 .00025 .0003 .0004 .0005</p> <hr/> <p><b>TYPE 702</b> 1,000 V.D.C. Test 500 V.D.C. Working</p> <p>.001 .0015 .002</p>	<p><b>TYPE 734</b> 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.</p> <p>.0025 .003 .004 .005 .006</p> <hr/> <p><b>TYPE 704</b> 1,000 V.D.C. Test 500 V.D.C. Working</p> <p>.007 .008 .01 .015 .02 .025 .03</p>	<p><b>TYPE 742</b> 600 V.D.C. Test 300 V.D.C. Working Capacities — Mfd.</p> <p>.0001 .00015 .0002 .00025 .0003</p> <hr/> <p><b>TYPE 743</b> Dual Units 600 V.D.C. Test 300 V.D.C. Working</p> <p>2x.00005 2x.0001 2x.00015 2x.0002 2x.00025 2x.0003</p>
--	---	---

**NOTES:** The above gives range of capacities available from stock. Lower or intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Type No.  
Suffix

To order any particular unit, simply specify type and capacity desired.

"A" **ROUNDED TAB TERMINALS** with punched hole for wire connections are available in Types 702, 704, 734 and 735 (see drawing on opposite page). To order, add "A" to Cat. No. (example: 702A, 704A, 734A, 735A).

**STANDARD TOLERANCE** is plus or minus 10%. Also available on order in plus or minus 5%, 3% and 2% capacity tolerance (or within 0.5 mmfd. — whichever is greater).

"V" **VARNISH IMPREGNATION** — Standard units are wax-impregnated. For varnish impregnation, add "V" to Cat. No. (example: 702V).

**STABILITY** — within 2% capacity variation over temperature range from  $-20^{\circ}$  C. to  $+85^{\circ}$  C.

**VOLTAGE RATING** — Types 702, 704, 734 and 735 tested at 1,000 v.d.c. with working voltage of 500 v.d.c.; Types 742 and 743 tested at 600 v.d.c. with a working voltage of 300 v.d.c.

"B" **BRASS CLAMP MATERIAL** — Standard clamp material is cadmium-plated steel. If brass clamps are required, add "B" to Cat. No. (example: 734B).

"P" **SPECIAL HIGHER VOLTAGE RATINGS** — On special order, 2000-volt d.c. test units can be supplied; for 2000-volt test, 800-volt d.c. operating, add "P" to Cat. No. (example: 702P). The maximum capacity available in this higher rating is half the maximum capacity available in standard units of each type (example: maximum 2000-volt test in Type 702 is .001 mfd.).

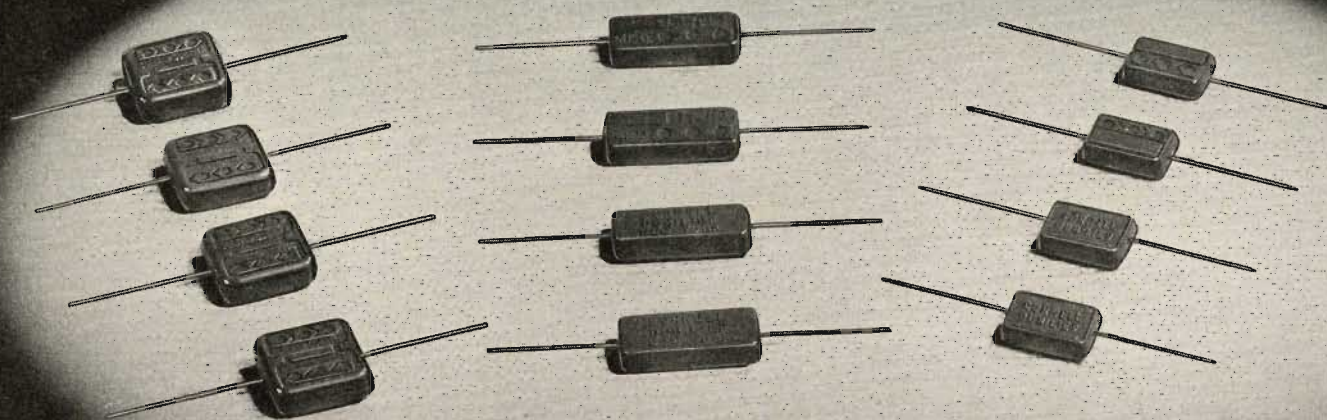
**GUIDE TO SELECTION AND USE** — See pages 28-29 for further explanatory data with regard to ratings of mica capacitors.



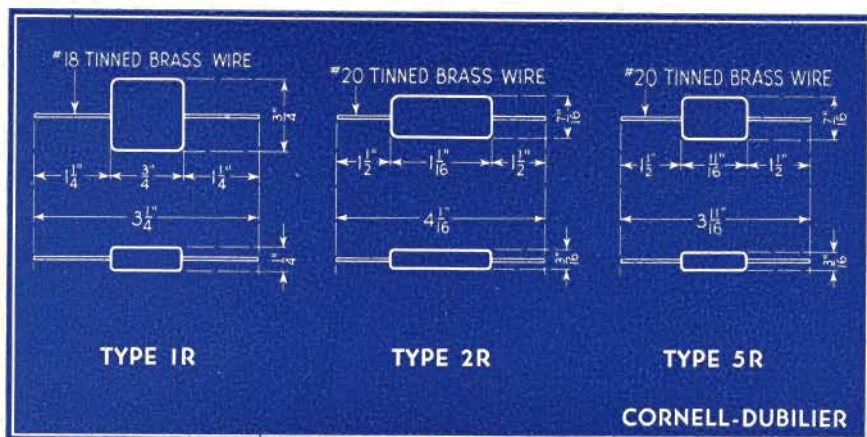
# CORNELL



# DUBILIER



Above photo shows, (left to right),  
Types 1R, 2R and 5R.



TYPES 1R, 2R AND 5R "SILVER-MIKE" SILVERED MICA CAPACITORS are designed for use in electronic circuits where frequency stability must be maintained. They are ideally suited for use in circuits where the LC product must be maintained constant, and particularly adapted for use in tuning IF transformers, push-button tuning circuits and other similar applications.

These units represent one of the outstanding developments of the C-D research laboratory in recent years. The growing demand for them has increased since their introduction due to their inimitable characteristics tending to improve the performance of equipment in which they are used.



# MICA CAPACITORS

## SILVERED MICA TYPES 1R, 2R AND 5R

- ◆ **SILVER COATING THOROUGHLY BONDED TO MICA** — Uniform and low capacity-temperature coefficient (+.002% per degree C.) — excellent retrace characteristics.
- ◆ **EXTRA-HEAVY SILVER COATING** — Practically no capacity drift with time.
- ◆ **STANDARD UNITS MOULDED IN LOW-LOSS RED BAKELITE** — Protection against physical damage and change of electrical characteristics — exceptionally high Q (3000 to 5000).
- ◆ **TINNED BRASS WIRE LEADS** — Prevent breakage — easily bent in any direction without affecting characteristics of unit.
- ◆ **COMPLETELY WAX-IMPREGNATED** — Assures excellent humidity characteristics.

TYPE 1R 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.	TYPE 2R 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.	TYPE 5R 1,000 V.D.C. Test 500 V.D.C. Working Capacities — Mfd.
.000001	.000001	.000001
.000005	.000005	.000005
.00001	.00001	.00001
.00002	.00002	.00002
.000025	.000025	.000025
.00003	.00003	.00003
.00004	.00004	.00004
.00005	.00005	.00005
.00007	.00007	.00007
.0001	.0001	.0001
.00015	.00015	.00015
.0002	.0002	.0002
.00025	.00025	.00025
.0003	.0003	.0003
.0004	.0004	.0004
.0005	.0005	.0005
.0007	.0007	
.0008	.0008	
.0009	.0009	
.001	.001	
.0015		
.002		
.0025		
<hr/>		
600 V.D.C. Test 300 V.D.C. Working		
.003		
.004		
.005		

**NOTES:** The above gives range of capacities which are available from stock. Intermediate capacities, not exceeding the maximum as listed for each type, can also be furnished upon request.

Type No.  
Suffix

To order any particular unit, simply specify type and capacity desired.

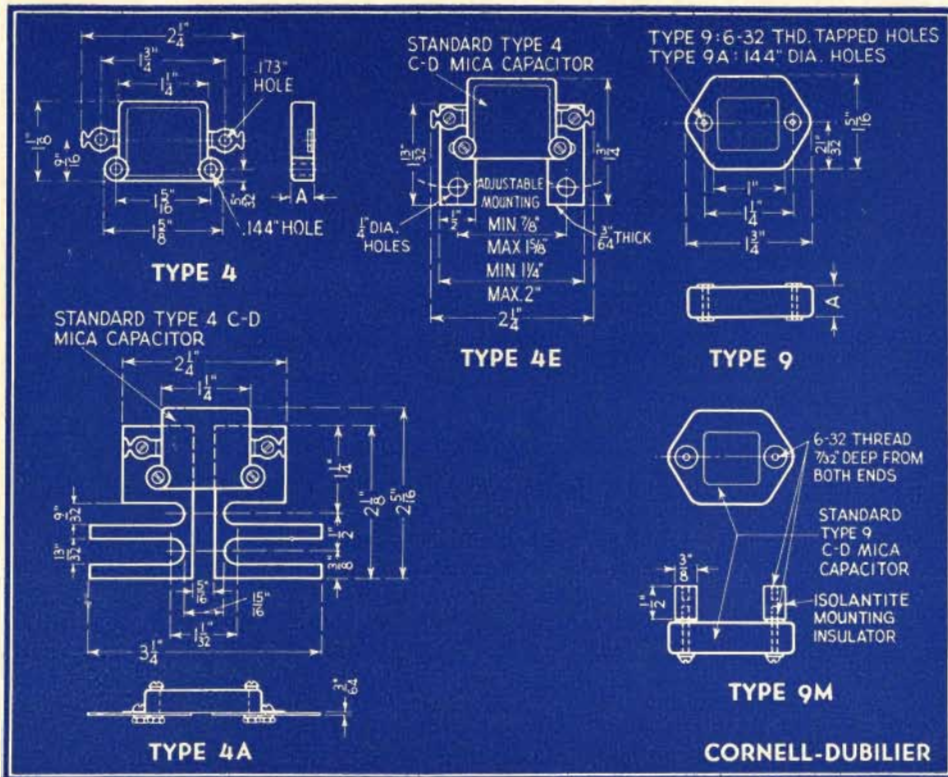
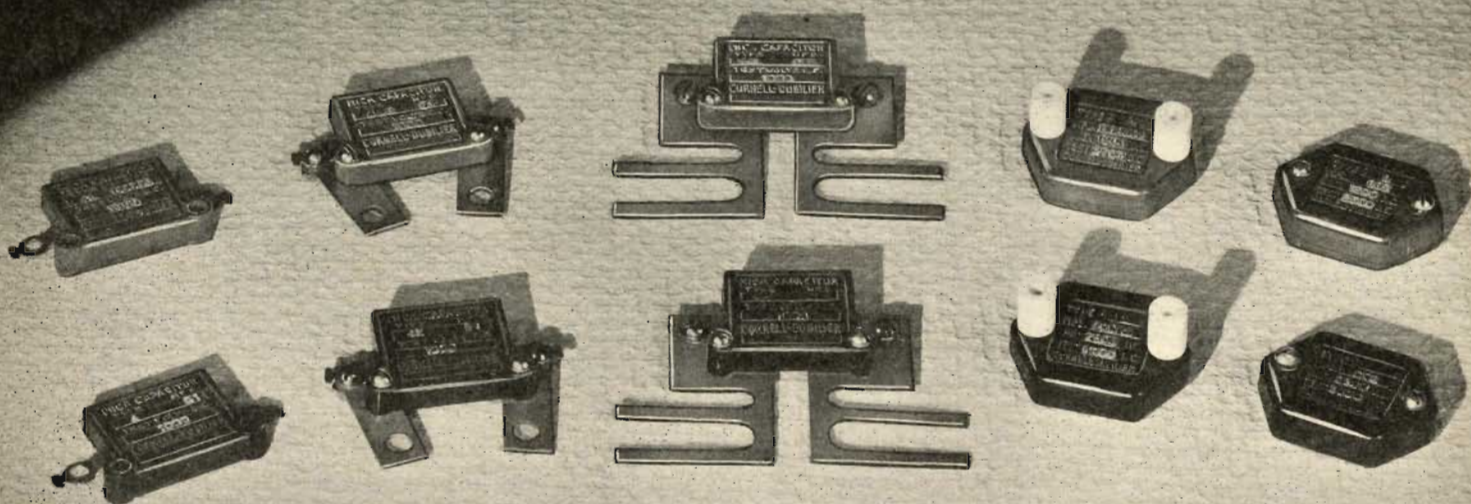
**STANDARD CAPACITY TOLERANCE** is 5%. Also available, on special order, in tolerance ratings of plus or minus 3%, 2% and 1% (or within 0.5 mmfd. — whichever is greater). All types can also be supplied in plus or minus 10% and 20% tolerances at lower prices.

**TEST VOLTAGE** — All Types 5R and 2R are tested at 1000 volts d.c. — 500 volts d.c. working, including Type 1R up to .0015 mfd. Higher capacities in the latter are tested at 600 volts d.c. — 300 volts d.c. working.

**"B"** MOULDED IN BROWN BAKELITE — (Q of 1500 to 2500) available on special order for use where higher Q is not required. To order, add "B" to Type No. (example: 1RB; 2RB; and 5RB).

**GUIDE TO SELECTION AND USE** — See pages 28-29 for further explanatory data with regard to ratings of mica capacitors.





Above photo shows, (left to right) back row, Types 4L, 4EL, 4AL, 9ML, and 9L. Front row, Types 4, 4E, 4A, 9M, and 9.

**TYPES 4 AND 9 MOULDED MICA CAPACITORS** are designed to meet the requirements of power amplifiers and low-power transmitters. They are used principally for grid and plate blocking purposes and for r.f. by-pass functions. These popular units are available in a wide range of capacities in three important voltage ratings.



# MICA CAPACITORS

## LOW POWER TRANSMITTER TYPES 4 AND 9

- ◆ **SPECIAL IMPREGNATION**—Provides units which resist changes in capacity under wide variations of atmospheric pressures and temperatures up to 70° C.—High insulation resistance.
- ◆ **INDIA MICA OF GAUGED THICKNESS**—Provides higher voltage breakdown—Low Power factor.
- ◆ **NO MAGNETIC MATERIAL**—Reduces losses at all frequencies.
- ◆ **MOULDED IN BAKELITE**—Strong Mechanically—well insulated— aids moisture-proofing.
- ◆ **SHORT, HEAVY TERMINALS**—Minimum R.F. and contact resistance.

**NOTES:** STANDARD TOLERANCE is plus or minus 10%.  
Type No. Also available on order in plus or minus 5%  
Suffix and 2%.

- "L" MOULDED IN LOW-LOSS BAKELITE available on order. Add "L" to Cat. No. (example: 4L-22060; 9L-11010).
  - "S" SPECIAL SALT WATER IMMERSION SEAL AGAINST HUMIDITY. To order, add "S" to Cat. No. (example: 4S-53010; 9S-12050).
  - "T" HEAT AGEING TREATMENT for stabilizing capacity over extremely wide temperature changes, minus 40° C. to plus 70° C., furnished on special order. Add "T" to Cat. No. (example: 4T-12010; 9T-21020).
  - "LST" TO ORDER A COMBINATION OF ABOVE FEATURES, add letters specified to Cat. No. (example: 4LST-12040; 9LST-13020).
- INSULATION RESISTANCE—Brown Bakelite, 20,000 megohms per unit—Low-Loss Bakelite, 40,000 megohms per unit. Low-Loss Bakelite provides higher Q and lowers the power factor.

### Special notes on type 4 capacitors

- "4A" METER BRACKETS designed to mount Type 4 units across terminals of wide variety of standard meters to by-pass r.f. currents. To order, add "A" to Cat. No. (example: 4A-52020).
- "4E" SMALL METER BRACKETS adapted for Weston Model 301 meters, add "E" to Cat. No. (example: 4E-22050).

### Special notes on type 9 capacitors

- "9A" UNTAPPED MOUNTING HOLES. Standard units are tapped for 6-32 and furnished with round head screws. For untapped mounting hole, .144" diameter (No. 6 clearance), add "A" to Cat. No. (example: 9A-11030).
- "9F" HIGHER VOLTAGE CONSTRUCTION, rated 6,000 v.d.c. test, 3,000 v.d.c.—1500 v.a.c. operating. Capacity range limited. Moulded in low-loss Bakelite, BM 262. The thickness of these units, or "A" dimension, is  $\frac{7}{16}$ " for capacities up to .002 mfd. and  $\frac{3}{4}$ " for capacities from .0022 to .005 mfd. max. To order, add "F" to Cat. No. (example: 9F-63050, the numeral "6" designating 6,000 volts test).
- "9H" HIGH STABILITY UNITS—Special high stability units, comprising low-loss Bakelite, BM 262, temperature aged and sealed construction for use as low power master oscillator tank capacitors or accessory positions. These units are fixed and permanent in characteristics, having a capacity-temperature coefficient of approximately plus .004% per C. To order, add "H" to Cat. No. (example: 9H-52020). The thickness or "A" dimension of all Type 9H units is  $\frac{3}{4}$ ". Maximum capacity of Type 9H—.02 mfd. in 1,000 v.d.c. test;—.01 mfd. in 2,500 v.d.c. test; .005 mfd. in 5,000 v.d.c. test.
- "9M" SMALL ISOLANTITE MOUNTING INSULATORS for Type 9 units. To order, add "M" to Cat. No. (example: 9M-14050).

### TYPE 4

#### 1,000 V.D.C. TEST — 600 V.D.C. WORKING

Cap. Mfd.	Cat. No.	Dimension "A"
.00005	4-14050	$\frac{1}{16}$
.0001	4-13010	$\frac{1}{16}$
.0002	4-13020	$\frac{1}{16}$
.00025	4-13025	$\frac{1}{16}$
.0003	4-13030	$\frac{1}{16}$
.0004	4-13040	$\frac{1}{16}$
.0005	4-13050	$\frac{1}{16}$
.001	4-12010	$\frac{1}{16}$
.0015	4-12015	$\frac{1}{16}$
.002	4-12020	$\frac{1}{16}$
.0025	4-12025	$\frac{1}{16}$
.003	4-12030	$\frac{1}{16}$
.004	4-12040	$\frac{1}{16}$
.005	4-12050	$\frac{1}{16}$
.006	4-12060	$\frac{1}{16}$
.007	4-12070	$\frac{1}{16}$
.008	4-12080	$\frac{1}{16}$
.01	4-11010	$\frac{1}{16}$
.015	4-11015	$\frac{1}{16}$
.02	4-11020	$\frac{1}{16}$
.025	4-11025	$\frac{1}{16}$
.03	4-11030	$\frac{1}{16}$

#### 2,500 V.D.C. TEST — 1,200 V.D.C. WORKING

Cap. Mfd.	Cat. No.	Dimension "A"
.00005	4-24050	$\frac{1}{16}$
.0001	4-23010	$\frac{1}{16}$
.0002	4-23020	$\frac{1}{16}$
.00025	4-23025	$\frac{1}{16}$
.0003	4-23030	$\frac{1}{16}$
.0005	4-23050	$\frac{1}{16}$
.001	4-22010	$\frac{1}{16}$
.0015	4-22015	$\frac{1}{16}$
.002	4-22020	$\frac{1}{16}$
.0025	4-22025	$\frac{1}{16}$
.003	4-22030	$\frac{1}{16}$
.004	4-22040	$\frac{1}{16}$
.005	4-22050	$\frac{1}{16}$
.006	4-22060	$\frac{1}{16}$
.008	4-22080	$\frac{1}{16}$
.01	4-21010	$\frac{1}{16}$

#### 5,000 V.D.C. TEST — 2,500 V.D.C. WORKING

Cap. Mfd.	Cat. No.	Dimension "A"
.00005	4-54050	$\frac{1}{16}$
.0001	4-53010	$\frac{1}{16}$
.0002	4-53020	$\frac{1}{16}$
.00025	4-53025	$\frac{1}{16}$
.0003	4-53030	$\frac{1}{16}$
.0005	4-53050	$\frac{1}{16}$
.001	4-52010	$\frac{1}{16}$
.0015	4-52015	$\frac{1}{16}$
.002	4-52020	$\frac{1}{16}$
.0025	4-52025	$\frac{1}{16}$
.003	4-52030	$\frac{1}{16}$
.004	4-52040	$\frac{1}{16}$
.005	4-52050	$\frac{1}{16}$

### TYPE 9

#### 1,000 V.D.C. TEST — 600 V.D.C. WORKING

Cap. Mfd.	Cat. No.	Dimension "A"
.00005	9-14050	$\frac{7}{16}$
.0001	9-13010	$\frac{7}{16}$
.00025	9-13025	$\frac{7}{16}$
.0005	9-13050	$\frac{7}{16}$
.001	9-12010	$\frac{7}{16}$
.002	9-12020	$\frac{7}{16}$
.0025	9-12025	$\frac{7}{16}$
.003	9-12030	$\frac{7}{16}$
.004	9-12040	$\frac{7}{16}$
.005	9-12050	$\frac{7}{16}$
.006	9-12060	$\frac{7}{16}$
.008	9-12080	$\frac{7}{16}$
.01	9-11010	$\frac{7}{16}$
.015	9-11015	$\frac{7}{16}$
.02	9-11020	$\frac{7}{16}$
.025	9-11025	$\frac{7}{16}$
.03	9-11030	$\frac{7}{16}$
.04	9-11040	$\frac{3}{4}$
.05	9-11050	$\frac{3}{4}$
.06	9-11060	$\frac{3}{4}$

#### 2,500 V.D.C. TEST — 1,200 V.D.C. WORKING

Cap. Mfd.	Cat. No.	Dimension "A"
.00005	9-24050	$\frac{7}{16}$
.0001	9-23010	$\frac{7}{16}$
.00025	9-23025	$\frac{7}{16}$
.0005	9-23050	$\frac{7}{16}$
.001	9-22010	$\frac{7}{16}$
.002	9-22020	$\frac{7}{16}$
.0025	9-22025	$\frac{7}{16}$
.003	9-22030	$\frac{7}{16}$
.004	9-22040	$\frac{7}{16}$
.005	9-22050	$\frac{7}{16}$
.006	9-22060	$\frac{7}{16}$
.008	9-22080	$\frac{7}{16}$
.01	9-21010	$\frac{7}{16}$
.015	9-21015	$\frac{7}{16}$
.02	9-21020	$\frac{3}{4}$
.025	9-21025	$\frac{3}{4}$
.03	9-21030	$\frac{3}{4}$

#### 5,000 V.D.C. TEST — 2,500 V.D.C. WORKING

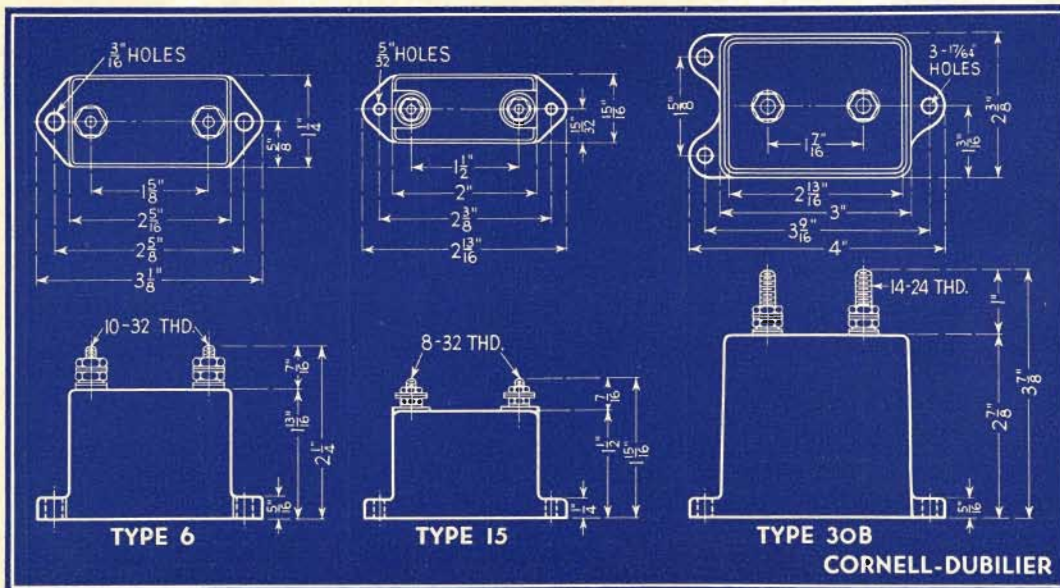
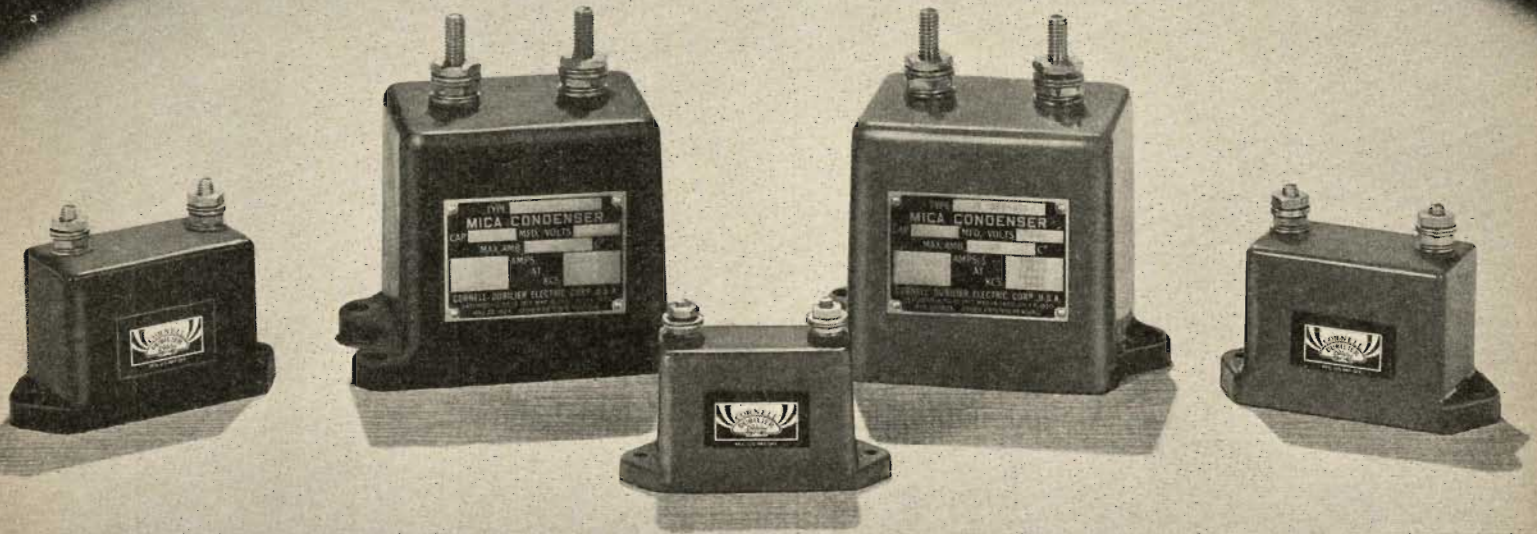
Cap. Mfd.	Cat. No.	Dimension "A"
.00005	9-54050	$\frac{7}{16}$
.0001	9-53010	$\frac{7}{16}$
.00025	9-53025	$\frac{7}{16}$
.0005	9-53050	$\frac{7}{16}$
.001	9-52010	$\frac{7}{16}$
.002	9-52020	$\frac{7}{16}$
.0025	9-52025	$\frac{7}{16}$
.003	9-52030	$\frac{7}{16}$
.004	9-52040	$\frac{7}{16}$
.005	9-52050	$\frac{7}{16}$
.006	9-52060	$\frac{7}{16}$
.008	9-52080	$\frac{7}{16}$
.01	9-51010	$\frac{3}{4}$
.015	9-51015	$\frac{3}{4}$



# CORNELL



# DUBILIER



Above photo shows (left to right), Types 6, 30B, (front) 15L, 30BL and 6L.

TYPES 6, 15L AND 30B MICA CAPACITORS IN MOULDED CASES are designed for a wide variety of radio frequency applications where size and weight are at a premium, such as in aircraft, portable equipment, low-power transmitters and the earlier stages of high-power transmitters. They are specially suited for use as grid, plate, coupling, tank and by-pass functions. These units are among the smallest types employing the patented series-stack construction permitting their use on higher r.f. voltages.



# MICA CAPACITORS

## MEDIUM POWER TRANSMITTER TYPES 6, 15L AND 30B

- ◆ PATENTED SERIES MICA STACK — Eliminates Corona losses.
- ◆ PERMANENTLY CLAMPED NON-MAGNETIC MATERIAL — Resists changes in characteristics.
- ◆ SOLDERED FOILS — Afford high current rating.
- ◆ NON-TURNABLE, PLATED,\* BRASS STUD TERMINALS — Low resistance connection.
- ◆ INDIA RUBY MICA DIELECTRIC — Low power factor — High Q.
- ◆ VACUUM-IMPREGNATED ASSEMBLY — Low Loss — high insulation — no air voids.
- ◆ SPECIAL LOW-LOSS FILLER — Reduces stray losses.
- ◆ BAKELITE CASES (See Note †) — Low R.F. Losses.

TYPE 15L							TYPE 30B						
Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. 3000 kc.	Current in Amps. 1000 kc.	300 kc.	100 kc.	Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. 3000 kc.	Current in Amps. 1000 kc.	300 kc.	100 kc.
.00005	639-15L	3,000	1.2	.6	.15	.05	.0001	533-30B	4,000 (20 Amps. at 60 mc.)	(3 A. at 4 mc.)			
.0001	583-15L	3,000	2.2	.8	.3	.1	.00025	958-30B	8,000	7	4.5	1.5	.5
.00015	657-15L	3,000	2.3	1	.45	.15	.0005	959-30B	8,000	8.5	6	3	1
.0002	582-15L	3,000	3	1.2	.6	.2	.001	960-30B	8,000	10	8.5	4.5	1.5
.00025	805-15L	3,000	3	2.5	1	.4	.002	961-30B	8,000	11	11	7.5	2.5
.0003	640-15L	3,000	3.5	2	.8	.4	.003	759-30B	8,000	12	14	10	5
.0004	641-15L	3,000	4	2	.9	.45	.004	757-30B	8,000	12	14	10	6
.0005	642-15L	3,000	4	2	1	.55	.005	758-30B	8,000	13	15	11	6
.0006	643-15L	3,000	4.5	2	1.2	.6	.006	756-30B	6,000	15	15	11	6
.0008	727-15L	3,000	4.5	2.5	1.5	.7	.01	962-30B	5,000	16	20	15	8
.001	581-15L	3,000	5	3	1.6	.8	.01	915-30B	8,000	16	20	15	8
.0015	679-15L	3,000	6	3.5	2	1	.02	963-30B	5,000	18	20	17	10
.002	726-15L	3,000	6.5	4	2.5	1.5	.03	741-30B	4,000	20	20	18	12
.003	645-15L	2,000	7.5	5	3	1.5	.05	771-30B	2,000	18	25	22	12
.004	699-15L	2,000	8	6	3.5	1.6	.05	964-30B	4,000	18	25	22	12
.005	725-15L	2,000	8.5	6.5	4	2	.1	113-30B	2,000	18	25	22	12
.006	580-15L	2,000	9	7.5	4.5	2.2	.2	603-30B	600	18	25	22	12
.008	724-15L	1,500	10	8	5	2.3	.25	750-30B	600	18	25	22	12
.01	677-15L	1,000	10	8	5	2.5	.3	933-30B	600	18	25	22	12
.02	723-15L	1,000	11	10	7	3	.5	604-30B	600	18	25	22	12
.05	722-15L	500	11	10	8	5	1.0	898-30B	600	18	25	22	12
.1	721-15L	250	11	12	10	6							

TYPE 6													
Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. 3000 kc.	Current in Amps. 1000 kc.	300 kc.	100 kc.	Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. 3000 kc.	Current in Amps. 1000 kc.	300 kc.	100 kc.
.00005	390-6	5,000	1.5	.8	.2	.07	.004	184-6	3,000	8	6	5	2
.0000625	362-6	5,000	1.8	.8	.2	.07	.005	173-6	2,000	8	5	3	1.5
.0001	321-6	5,000	2	1	.3	.1	.005	474-6	3,000	9	6.5	4	2
.00015	395-6	5,000	3	1.5	.5	.16	.0075	565-6	2,000	10	8	5	3
.0002	307-6	5,000	3.5	1.7	.7	.18	.008	476-6	2,000	11	9	7	3
.00025	364-6	5,000	5	2.5	1	.3	.008	162-6	3,000	10	8	5	3
.0003	294A-6	5,000	3.5	2	.8	.4	.01	151-6	2,000	10	8	5	3.5
.0004	283-6	5,000	4	2.5	1	.5	.015	140-6	1,500	12	10	7	4
.0005	272-6	5,000	4	2	1.4	.8	.015	784-6	2,000	12	12	8	4
.0006	266-6	5,000	5	3	1.6	.8	.02	131-6	2,000	12	11	10	7
.00075	654-6	5,000	5	3.5	2	1	.03	479-6	2,000	14	20	15	7
.0008	599-6	5,000	6	4	2	1	.04	480-6	1,500	12	13	11	6
.001	246-6	5,000	7	4	2	1	.05	118-6	1,500	13	15	12	7
.0015	234-6	5,000	9	5	3	1.5	.1	111-6	500	17	20	15	8
.002	215-6	3,000	6	3	1.5	.8	.1	406-6	1,000	18	20	15	8
.002	217-6	6,000	9	6	4	2	.1-1	110-6	250	20	20	15	10
.0025	473-6	5,000	9	6	4	2	.2	105-6	250	18	20	16	12
.003	197-6	3,000	8	6	4	2	.25	885-6	250	18	20	16	12

- NOTES:** Note \* — Cadmium plating is standard — special plating on order.  
 Type No. Note † — Type 15L units are available only in low-loss Bakelite (BM-262 or equivalent) cases. Types 6 and 30B may be had in either standard (brown) or low-loss (yellow) Bakelite cases. When ordering low-loss units, add "L" to Cat. No. (example: 217-6L; 604-30BL).  
 SUFFIX "L"  
**STANDARD CAPACITY TOLERANCES** — Plus or minus 5%. Tolerance of 2% can be furnished on special order.  
**OPERATING AMBIENT TEMPERATURE** — Up to 60° C. maximum.  
 "S" SALT WATER IMMERSION SEAL — To order, add "S" to Cat. No. (example: 246-6S; 726-15LS; 113-30BS).  
 "H" "H" TYPE — These units have been developed for use where excellent retrace and low temperature coefficient are required. Over a range of -40° C. to +70° C. the capacity temperature coefficient is approximately +.003% per degree C. A limited range of capacity and voltage ratings is available. Made only in low-loss Bakelite and sealed for immersion test. To order, add "H" to Cat. No. (example: 6H, 15H, 30BH).  
 "6K" TYPE 6K — This unit is a still further refinement being a compensated unit which can be made with a positive, zero or negative coefficient within the limits of +.003% to -.005% per degree C. over a temperature range of from -40° C. to +70° C. Type 6K is available in a limited range of low capacities and voltage ratings. "K" Type includes low-loss Bakelite and immersion seal. When ordering Type 6K, temperature coefficient must be specified.  
**GUIDE TO SELECTION AND USE** — See pages 28-29 for further explanatory data with regard to ratings.



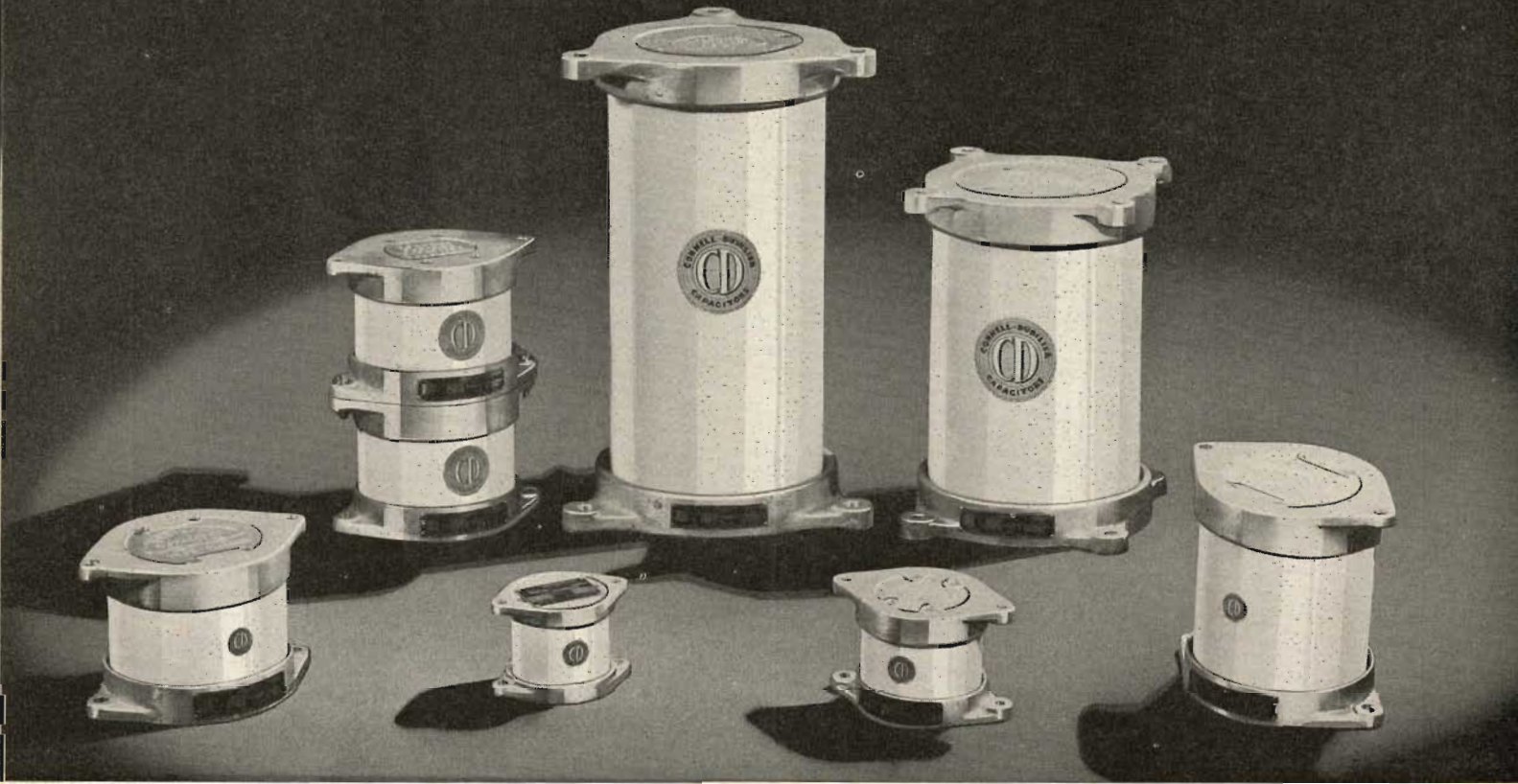
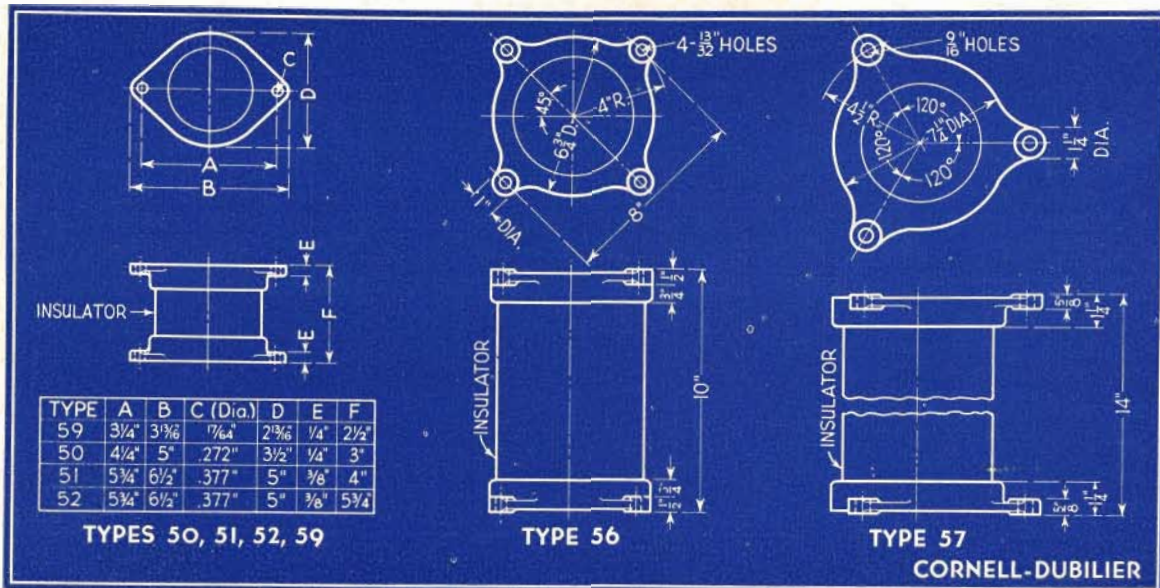


Photo above shows (left to right), back row two Type 51 units stacked, Types 57 and 56. Front row, Types 51, 59, 50 and 52.



TYPES 50, 51, 52, 56, 57 AND 59 CAPACITORS are of improved design, adaptable and dependable for use as grid, plate blocking, coupling, tank and by-pass applications in high power transmitters. They are enclosed in ceramic tubes with cast aluminum end terminals and can be mounted in any position. Series or parallel combinations can be readily obtained by bolting terminal ends together. Dummy containers are available for supporting and insulating active capacitors from chassis. Such units are known as Types 50D, 51D, 52D, 56D, 57D and 59D, and are tested at their respective potential ratings.



# MICA CAPACITORS

## HIGH POWER TRANSMITTER TYPES 50, 51, 52, 56, 57 AND 59

- ◆ **LOW-LOSS, WHITE GLAZED CERAMIC CYLINDRICAL CASE** — Provides long creepage path between terminals — minimum physical size for safe rating — eliminates bushings and corona troubles — impervious to climatic changes — uniform voltage gradient distribution.
- ◆ **CAST ALUMINUM END-CAP TERMINALS** — Low resistance, wide-path, positive contact — permit space-saving mounting for series, parallel and series-parallel connection.
- ◆ **INDIA RUBY MICA TESTED ELECTRICALLY AND GAUGED FOR UNIFORM THICKNESS** — Assures low power factor, high voltage breakdown and equalized loading.
- ◆ **INDIVIDUAL SECTIONS TESTED FOR VOLTAGE AND CAPACITY** — Assure uniform loading.
- ◆ **PATENTED SERIES MICA STACK** — Eliminates corona and affords uniform voltage gradient.
- ◆ **VACUUM IMPREGNATED ASSEMBLY** — Provides high insulation — low losses — no air voids.
- ◆ **SPECIAL LOW-LOSS FILLER** — Reduces stray field losses and protects against humidity.

TYPE 59							TYPE 50								
Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.	Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.
.00005	573-59	6,000	1.8	.6	.2	.1		.0001	325-50	10,000	6	3.5	1.5	.5	
.0001	542-59	6,000	3	2	.9	.3		.00015	315A-50	10,000	6	3.8	1.7	.6	
.00015	587A-59	6,000	4	3	1.5	.35		.0002	308-50	10,000	6.5	4.6	2	.8	
.0002	543-59	6,000	5	4	1.5	.4		.00025	302-50	10,000	7	5.5	2	1	
.00025	586-59	6,000	6	5	2	.6		.0005	278-50	10,000	9	8	4	1.3	
.0003	620-59	6,000	6	5	2	.6		.0006	499A-50	10,000	10	8	4	1.5	
.0004	748-59	6,000	6.5	5	2.8	.9		.0008	259-50	10,000	11	8	5	1.6	
.0005	544-59	6,000	7	5	3	1		.001	250-50	10,000	12	10	6	2.5	
.0006	664-59	6,000	8	6	3	1		.0012	242-50	10,000	13	10	6	3	
.001	545-59	6,000	10	7	4	1.7		.0015	238-50	10,000	14	10	6	3.5	
.0015	660-59	6,000	11	8	6	3		.002	223-50	10,000	16	14	8	4	
.002	572-59	6,000	12	12	8	4		.003	201-50	8,000	20	15	11	6	
.0025	546-59	6,000	13	11	8	4		.004	191-50	8,000	20	18	12	7	
.003	595-59	6,000	14	15	11	6		.005	178-50	5,000	20	18	12	7	
.004	606-59	6,000	16	16	11	6		.006	169-50	5,000	20	22	14	8	
.005	547-59	5,000	16	17	13	7		.01	155-50	5,000	20	22	15	8.5	
.01	548-59	5,000	16	20	15	8		.015	142-50	4,000	20	23	16	10	
.02	889-59	3,000	20	22	18	12		.02	136-50	3,000	20	30	22	15	

TYPE 51							TYPE 52								
Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.	Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.
.00005	335-51	20,000	4.5	1.5	.5	.16		.00003	339-52	20,000	3	1	.3	.1	
.0001	323-51	25,000	8	4	1.2	.4		.00005	609-52	10,000	4	1	.3	.1	
.00015	316-51	20,000	(10 Amps. at 6000 kc.)					.0001	326-52	35,000	9	5	1.8	.5	
.0002	310-51	20,000	8	6	2.3	.7		.00015	492-52	8,000 (30 Amps. at 20 mc; 18 A. at 6 mc.)					
.00025	303-51	20,000	8.5	5	2	.7		.00025	516-52	30,000	14	10	4	1.5	
.0003	297-51	20,000	9	7	4	1.5		.0003	298-52	30,000	12	10	5.5	3	
.0004	285-51	20,000	12	8	4.5	2		.00032	290-52	30,000	12	10	5.5	3	
.0005	280-51	20,000	12	10	6	3		.0004	286-52	30,000	13	12	6	3	
.0006	267-51	20,000	12	10	7	3		.0005	281-52	30,000	13	12	8	4	
.0008	260-51	20,000	14	12	7	4		.0006	268-52	35,000	13	12	8	4	
.001	252-51	20,000	15	16	9	3		.0008	261.52	30,000	14	13	8	4	
.0012	243-51	20,000	16	14	7	2.5		.001	253-52	25,000	16	17	10	4.5	
.0015	239-51	20,000	17	13	9	4.5		.0015	607-52	25,000	22	20	12	6	
.0016	232-51	15,000	18	18	12	5		.002	227-52	20,000	22	22	15	9	
.002	225-51	12,000	21	20	12	7		.0025	469-52	20,000	22	22	15	9	
.0025	212-51	12,000	20	20	15	8		.0027	206-52	20,000	23	25	16	9	
.003	204-51	15,000	21	25	16	9		.004	462-52	20,000	25	30	20	14	
.004	193-51	12,000	20	24	17	8		.005	485-52	20,000	25	30	20	15	
.005	181-51	10,000	22	30	20	10		.006	172-52	15,000	25	30	20	15	
.007	167-51	10,000	25	25	18	9		.008	164-52	12,000	25	40	25	16	
.01	158-51	10,000	30	37	25	15		.01	430-52	15,000	30	40	27	17	
.02	138-51	3,000	25	65	35	22		.02	133-52	10,000	30	60	35	22	
.05	119-51	3,000	25	50	40	25		.04	523-52	5,000	30	60	40	30	

TYPE 56							TYPE 57								
Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.	Cap. Mfd.	Cat. No.	Test. Volt. Effective	Max. Oper. Current in Amps.	3000 kc.	1000 kc.	300 kc.	100 kc.
.0001	951-56	35,000	9.5	6	2	.6		.0006	402-57	30,000	30	20	12	4	
.0002	803-56	35,000	15	12	4	1.5		.002	676-57	40,000	30	40	27	13	
.0004	409-56	30,000	22	16	8	2.7		.004	776-57	25,000	35	45	32	20	
.0006	412-56	30,000	25	22	11	4.5									
.001	421-56	30,000	30	26	14	8									
.002	559-56	30,000	35	38	21	12									
.003	955-56	25,000	35	40	22	12									

**NOTES:** STANDARD CAPACITY TOLERANCE is plus or minus 5%. Tolerance rating of 2% on special order.  
 OPERATING AMBIENT TEMPERATURE up to 60° C. maximum  
 GUIDE TO SELECTION AND USE — See pages 28-29 for further explanatory data with regard to ratings.



# CORNELL DUBILIER

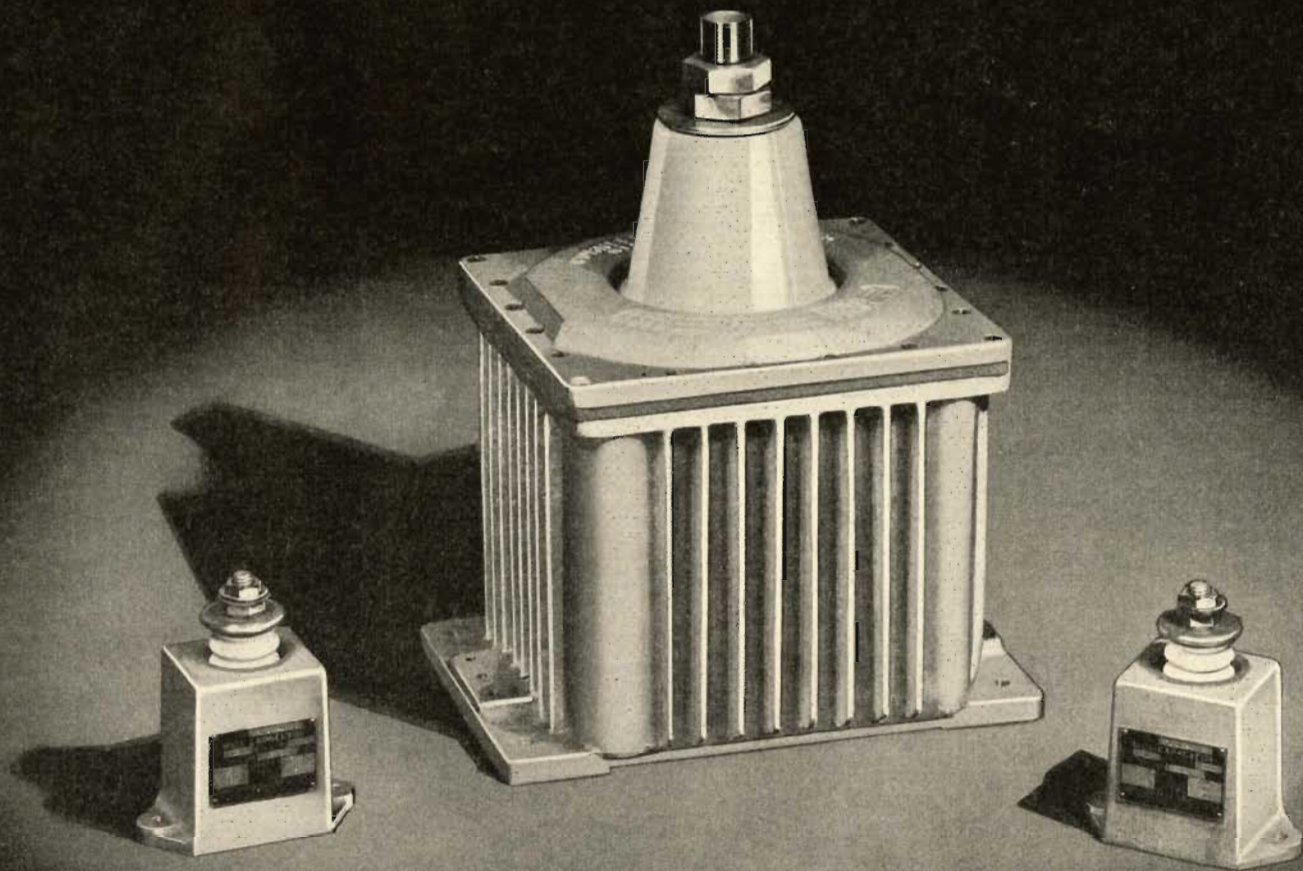
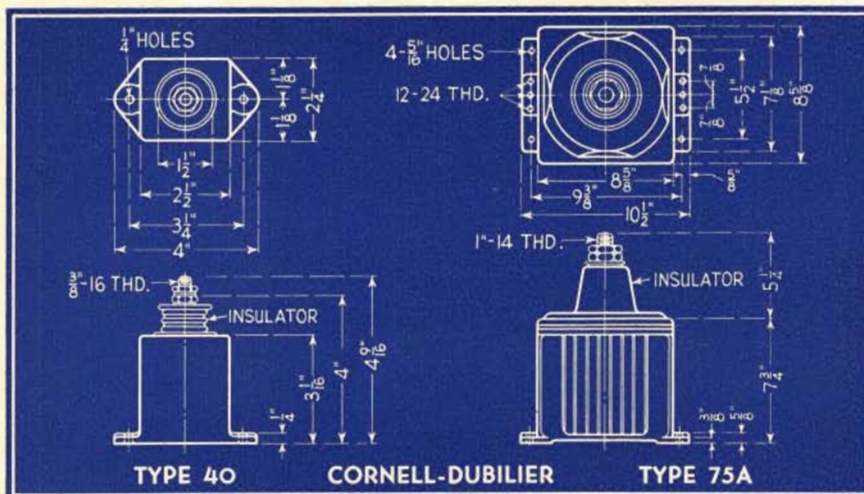


Photo above shows Type 75A unit in center with Type 40 at either side.



**TYPE 75A MICA CAPACITORS** are designed and widely used for heavy-duty commercial service such as high frequency C.W. furnaces or bombardiers. They are not recommended for use in spark or damped wave oscillator applications. Type 75A units are designed to operate at currents up to 125 amperes for long periods of continuous duty.

**TYPE 40 MICA CAPACITORS**, originally introduced in the early days of C.W. transmitting, are still popular where space is at a premium. Type 40 is wax-filled (suitable for use at ambient temperatures up to 60° C.) and is encased in a cast aluminum container fitted with corrugated glazed ceramic terminal insulator.



# MICA CAPACITORS

## COMMERCIAL TRANSMITTER TYPES 75A AND 40

### Features of Type 75A Capacitors

- ◆ ENCLOSED IN HEAVY ALUMINUM CASTING—Rugged construction for commercial use.
- ◆ RIBBED SIDE WALLS ON CASTING—For efficient heat radiation.
- ◆ OIL-FILLED (DYKANOL "E")—Better cooling.
- ◆ HEAVY, CADMIUM-PLATED BRASS TERMINAL—Mechanically rugged.
- ◆ CONICAL, WHITE GLAZED CERAMIC INSULATOR—Excellent insulation and mechanical strength.
- ◆ HERMETICALLY SEALED WITH GLYPTALED CORK GASKET—Assures moisture-proof construction.
- ◆ HIGH GRADE INDIA RUBY MICA—Low losses.
- ◆ SPECIAL SERIES STACK CONSTRUCTION—Eliminates corona effects and power losses.
- ◆ PATENTED RADIAL TYPE STACK ASSEMBLY—Provides extremely compact unit.

TYPE 75A						
Cap. Mfd.	Cat. No.	Test Voltage Effective	Max. Operating Current in Amps. 3000 kc.	1000 kc.	300 kc.	100 kc.
.001	926-75A	25,000	45	40	20	7
.002	966-75A	25,000	60	55	25	9
.0032	967-75A	25,000	60	58	45	18
.004	698-75A	25,000	60	60	50	25
.005	612-75A	20,000	60	70	55	30
.0066	575-75A	15,000	65	83	66	42
.007	617-75A	15,000	65	85	70	43
.0075	777-75A	15,000	70	90	70	45
.008	622-75A	15,000	70	90	70	45
.01	578-75A	12,000	70	100	75	50
.015	738-75A	12,000	75	110	90	60
.02	647-75A	12,000	75	120	110	60
.03	683-75A	10,000	75	125	120	65
.04	739-75A	8,000	80	125	125	100
.05	687-75A	7,500	80	125	125	100

TYPE 40						
Cap. Mfd.	Cat. No.	Test Voltage Effective	Max. Operating Current in Amps. 3000 kc.	1000 kc.	300 kc.	100 kc.
.00003	338-40	4,000	1.3	.5	.17	.06
.00005	336-40	3,000	1	.3	.1	.03
.000075	331-40	5,000	2.5	2.1	.7	.25
.0001	322-40	5,000	3	2	.8	.2
.000125	319-40	5,000	5	1.6	.5	.16
.00015	312-40	5,000	4	1.4	.5	.2
.0002	309-40	6,000	4	3	1.2	.4
.0003	296-40	5,000	3	2	1	.4
.0004	284-40	5,000	6	5	2	.5
.0005	275-40	5,000	7	4	2	.8
.001	247-40	6,000	10	7	4	1.7
.0015	236-40	5,000	11	8	4	2
.002	219-40	6,000	12	8	6	3
.0025	210-40	5,000	10	8	5	2.5
.003	198-40	5,000	15	14	10	5
.004	185-40	5,000	16	10	7	4
.005	176-40	5,000	15	17	13	7
.01	154-40	5,000	16	20	15	8
.02	134-40	3,000	16	21	16	8

**NOTES:** STANDARD CAPACITY TOLERANCE is plus or minus 5% — also available in plus or minus 2% tolerance rating on special order.

OPERATING AMBIENT TEMPERATURE up to 60° C. maximum.

GUIDE TO SELECTION AND USE — See pages 28-29 for further explanatory data with regard to ratings of mica capacitors.







# MICA CAPACITORS

## SPECIAL TRANSMITTER TYPES 21, 62, 135 AND 130A

TYPE 62 SULFINITE DIELECTRIC CAPACITORS are specially designed and accurately built for use in ultra-high-frequency circuits. They are particularly adapted for use on frequencies above 10 Mc., as neutralizing and padding capacitors. These units make excellent series antenna capacitors, being compact and well protected. They are often employed to replace or supplement air tank capacitors in multi-band transmitters where rapid frequency change-over is necessary. Type 62 capacitors are encased in round aluminum containers which lend themselves readily for mounting in any position. A special low-loss sulfinite dielectric, patented low-loss, large-surface-area mica terminal insulator with a substantial brass terminal stud provides a novel construction.

TYPE 135 CAPACITORS embody a new design developed for by-passing ultra-high-frequency currents of approximately 5 amperes at frequencies of the order of 100 Mc. They are available in capacities of approximately 200 mmfd. for use in circuits up to 3,000 volts d.c. In this unit, the d.c. or low-frequency load current is carried through the main bus (capable of carrying 75 amperes). The r.f. component is drained off through the capacitor within the low-loss Bakelite casing. This construction provides a very short, wide path of low inductance to the metal base plate which acts as the other terminal of the capacitor. These units are unexcelled for short wave filament by-pass functions.

TYPE 62						
Cap. Mfd.	Cat. No.	A.C. Test Volts Effective	Max. Operating Current in Amps.			
			3000 kc.	1000 kc.	300 kc.	100 kc.
.00001	342-62	10,000	1.2	.4	.15	.05
.000025	341-62	10,000	3	1	.3	.1
TYPE 21						
.02 — .02	744-21	500	15	15	10	5
.1 — .1	109-21	500	20	20	15	10
TYPE 135						
.0001	1039-135L	3,000	2 amps. at 60 mc.			
.0002	1035-135L	3,000	4 amps. at 60 mc.			
TYPE 130A						
Tapped						
.008	890-130A	2,500	8	7	6	4.6
.016			9	9	8	7.5
.02			9	10	9	8
.024			10	11	12	11
.0022	998-130A	2,500	6	5.5	3.8	1.2
.0044			7	7	5	2.5
.0088			8	8	7	4.5
.0176			9	11	9	6
.0352			10	12	10	9

TYPE 130A TRAP CAPACITOR is normally used connected across an inductance which is suspended in series with the power line to act as a tuned rejector trap circuit in carrier current communication systems and remote control relaying. For further information and listings on carrier current coupling capacitors, write for special "Carrier Current Capacitor Bulletin No. 170."



# CORNELL



# DUBILIER

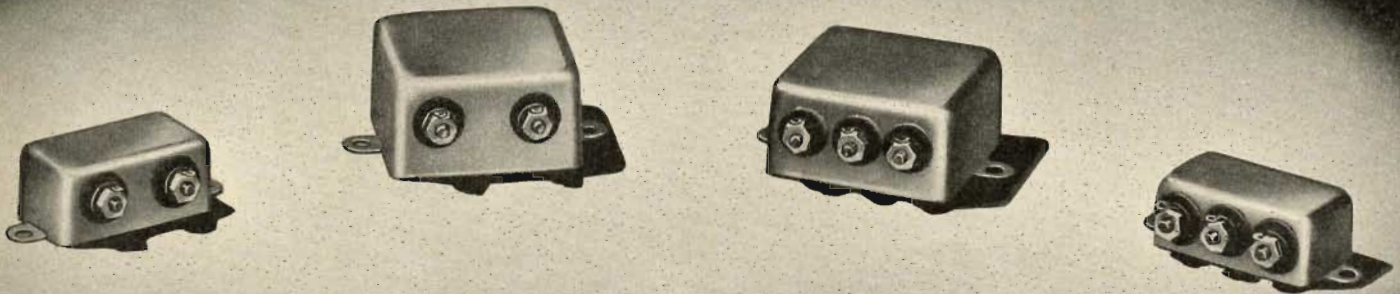
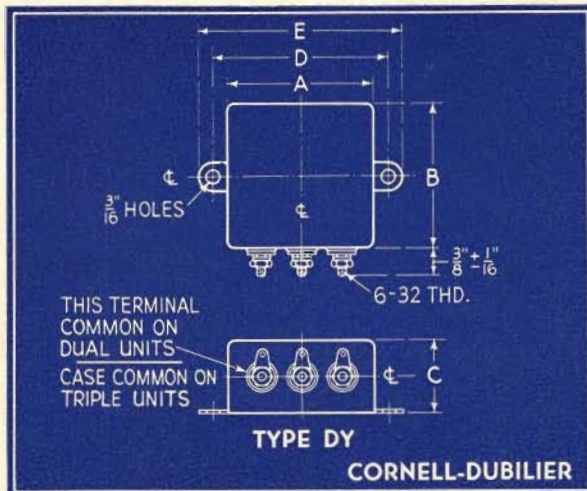


Photo above shows (left to right), Types DY-6025, DY-6200, single section units; and Types DY-10222 and DY-6011, triple and double section units respectively.



**TYPE DY DYKANOL BYPASS CAPACITORS** are non-inductively wound and fill the need for dependable capacitors of fractional capacities that will operate efficiently in r.f. and a.f. bypass, audio frequency coupling and a.c. circuits under all humidity conditions and at temperatures up to approximately 80° C. (180° F.). They are built to stand an immersion test in hot salt water and have been specially designed to fill the severe requirements of aircraft, submarine, marine and tropical applications for maximum capacity and voltage in minimum space, where quality and reliability are of paramount importance. They are impregnated and filled with Dykanol "A" and sealed in non-corrosive cases with leakproof terminals.



# DYKANOL CAPACITORS

## LOW CAPACITY BYPASS TYPE DY

- ◆ DYKANOL "A" (CHLORINATED DIPHENYL) IMPREGNATED AND FILLED — Non-inflammable — fire-proof — long life — small size — lower power-factor.
- ◆ HIGH PURITY FOIL — Lower R.F. resistance — light weight.
- ◆ HIGH GRADE MULTI-LAMINATED KRAFT TISSUE — Higher voltage breakdown — maximum safety — high insulation resistance.
- ◆ DRIED AND IMPREGNATED UNDER VACUUM — Lower equivalent series resistance, particularly at higher temperatures — 5,000 megohms per microfarad insulation resistance — longer life.
- ◆ HERMETICALLY METAL SEALED — Not affected by moisture, time or temperature up to 85° C. (185° F.)
- ◆ SPECIAL PRESSURE-SEALED TERMINALS — Leak-proof joints — Bakelite insulated.
- ◆ SPECIALLY-TREATED DRAWN METAL CONTAINERS — Non-corrosive (non-ferrous) — strong.
- ◆ MOUNTING FEET INTEGRAL WITH CASE — Convenient — Rigid.
- ◆ SAFE D.C. RATING — Triple testing assures dependable service — terminal-to-case tested at over twice voltage rating.
- ◆ CONSERVATIVE VOLTAGE RATING — Can be safely operated continuously at 10% above rated voltage.

### TYPE DY

600 V.D.C. WORKING							1,000 V.D.C. WORKING						
Cap. Mfd.	Cat. No.	Dimensions — Inches					Cap. Mfd.	Cat. No.	Dimensions — Inches				
		A	B	C	D	E			A	B	C	D	E
.05	DY-6005	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.05	DY-10005	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.1	DY-6010	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.1	DY-10010	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.25	DY-6025	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.25	DY-10025	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.5	DY-6050	1 $\frac{1}{8}$	1	$\frac{7}{8}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.5	DY-10050	2	1 $\frac{3}{4}$	$\frac{1}{2}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$
1	DY-6100	2	1 $\frac{3}{4}$	$\frac{1}{2}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$	1	DY-10100	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$
2	DY-6200	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$	.05—.05	DY-100055	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.05—.05	DY-60055	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.1—.1	DY-10011	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.1—.1	DY-6011	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.25—.25	DY-10022	2	1 $\frac{3}{4}$	$\frac{1}{2}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$
.25—.25	DY-6022	1 $\frac{1}{8}$	1 $\frac{1}{4}$	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$	.5—.5	DY-10055	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$
.5—.5	DY-6055	2	1 $\frac{3}{4}$	$\frac{7}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$	.1—.1—.1	DY-10111	1 $\frac{1}{8}$	1 $\frac{1}{4}$	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$
.1—.1	DY-6110	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$	.25—.25—.25	DY-10222	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$
.1—.1—.1	DY-6111	1 $\frac{1}{8}$	1	$\frac{3}{4}$	2 $\frac{1}{8}$	2 $\frac{1}{2}$							
.25—.25—.25	DY-6222	2	1 $\frac{3}{4}$	$\frac{1}{2}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$							
.5—.5—.5	DY-6555	2	2	1 $\frac{1}{8}$	2 $\frac{3}{8}$	2 $\frac{3}{4}$							

**NOTES:** STANDARD CAPACITY TOLERANCE is plus 20% minus 10%. Closer tolerances can also be supplied on special order at slightly higher prices.

Type No. Suffix RATING DATA — Rubber stamped on cases in small quantities and metal stamped on cases in larger quantities for industrial users.

STANDARD TERMINAL ARRANGEMENT — Standard construction employs well-insulated, hermetically sealed, screw-lug terminals on side of container. Dual units are furnished with three terminals, the common terminal as indicated on the accompanying drawing. Triple units are furnished with three terminals with case common (grounded).

"T" TERMINALS ON TOP — Most units can be furnished in this construction on special order. In ordering, add "T" to Cat. No. (Example: DYT-6055).

"B" TERMINALS ON BOTTOM — Most units can be furnished in this construction on special order. In ordering, add "B" to Cat. No. (Example: DYB-6010).

"E" TERMINALS AT END — Can be furnished on special order. In ordering, add "E" to Cat. No. (Example: DYE-10005).

"R" RIVETED TERMINALS — If riveted instead of screw terminals are required, order by adding "R" to Cat. No. (Example: DYR-6011).



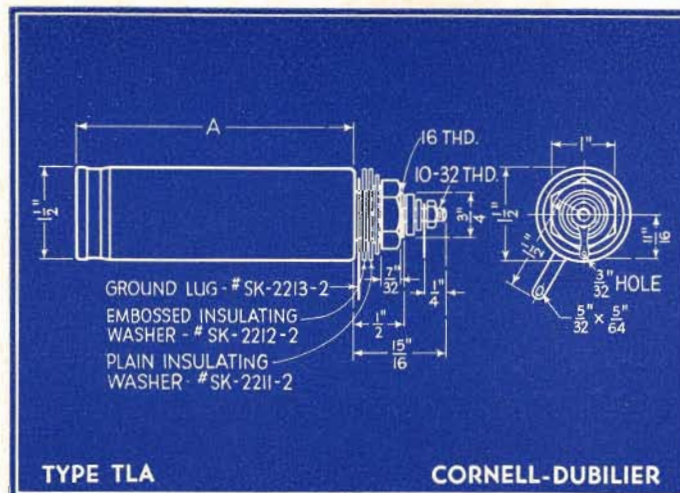
# CORNELL



# DUBILIER



Photo above shows (center), two Type TLA-10020 units with two Type TLA-6020 at the right and left.



TYPE TLA DYKANOL FILTER UNITS are encased in cylindrical aluminum containers with inverted mounting for subpanel assembly. They meet universal requirements for compact, high voltage filter capacitors for use in high-fidelity public address amplifiers, power supplies and portable transmitters. They are compact, ruggedly constructed and present a neat appearance in any apparatus assembly. One terminal is insulated, the other terminal being provided by the metal container itself. All units are substantially designed to withstand transient voltages as well as high peak voltage surges and will operate on continuous, full-load duty.



# DYKANOL CAPACITORS

## INVERTED FILTER TYPE TLA

- ◆ **DYKANOL "A" (CHLORINATED DIPHENYL) IMPREGNATED AND FILLED** — Non-inflammable — fire-proof — long life — small size — lower power-factor.
- ◆ **HIGH PURITY ALUMINUM FOIL** — Lower R.F. resistance — light weight.
- ◆ **HIGH QUALITY MULTI-LAMINATED KRAFT TISSUE** — Higher voltage breakdown — minimum leakage — high insulation resistance.
- ◆ **DRIED AND IMPREGNATED UNDER VACUUM** — Lower equivalent series resistance, particularly at higher temperatures — 8,000 megohms per microfarad insulation resistance — longer life.
- ◆ **HERMETICALLY METAL SEALED** — Not affected by moisture, time or temperature up to approximately 85° C. (185° F.)
- ◆ **ADEQUATE TERMINAL INSULATOR** — No leakage of current of Dykanol.
- ◆ **STURDY ALUMINUM CONTAINER** — Strong — non-corrosive.
- ◆ **INVERTED MOUNTING** — Simple to install — mechanically strong.
- ◆ **RIGIDLY TESTED** — Uniform product.
- ◆ **CONSERVATIVE D.C. RATING** — Triple testing assures dependable service.
- ◆ **CONSERVATIVE VOLTAGE RATING** — Can be safely operated continuously at 10% above rating.

TYPE TLA		
600 V. D. C. WORKING		
Cap. Mfd.	Cat. No.	Dimension "A"
2	TLA-6020	2 <sup>7</sup> / <sub>8</sub>
3	TLA-6030	4 <sup>1</sup> / <sub>2</sub>
4	TLA-6040	4 <sup>1</sup> / <sub>2</sub>
1000 V. D. C. WORKING		
1	TLA-10010	2 <sup>7</sup> / <sub>8</sub>
2	TLA-10020	4 <sup>1</sup> / <sub>2</sub>
1500 V. D. C. WORKING		
.5	TLA-15005	2 <sup>7</sup> / <sub>8</sub>
1	TLA-15010	4 <sup>1</sup> / <sub>2</sub>

**NOTES:** STANDARD CAPACITY TOLERANCE is plus or minus 10%.

**TERMINAL ARRANGEMENT** — These units are supplied only in single sections with one insulated terminal and the metal container serving as the other terminal. Insulating washers as well as a large spade lug are provided so that the metal container may be insulated from the chassis.

**SMALL SIZE FEATURE** — No other inverted type capacitor combines so high insulation resistance, low power factor in so small size units.

**SPECIAL TREATED INSULATING SHIELD** — Made to fit over container available at slightly additional cost.



# CORNELL



# DUBILIER

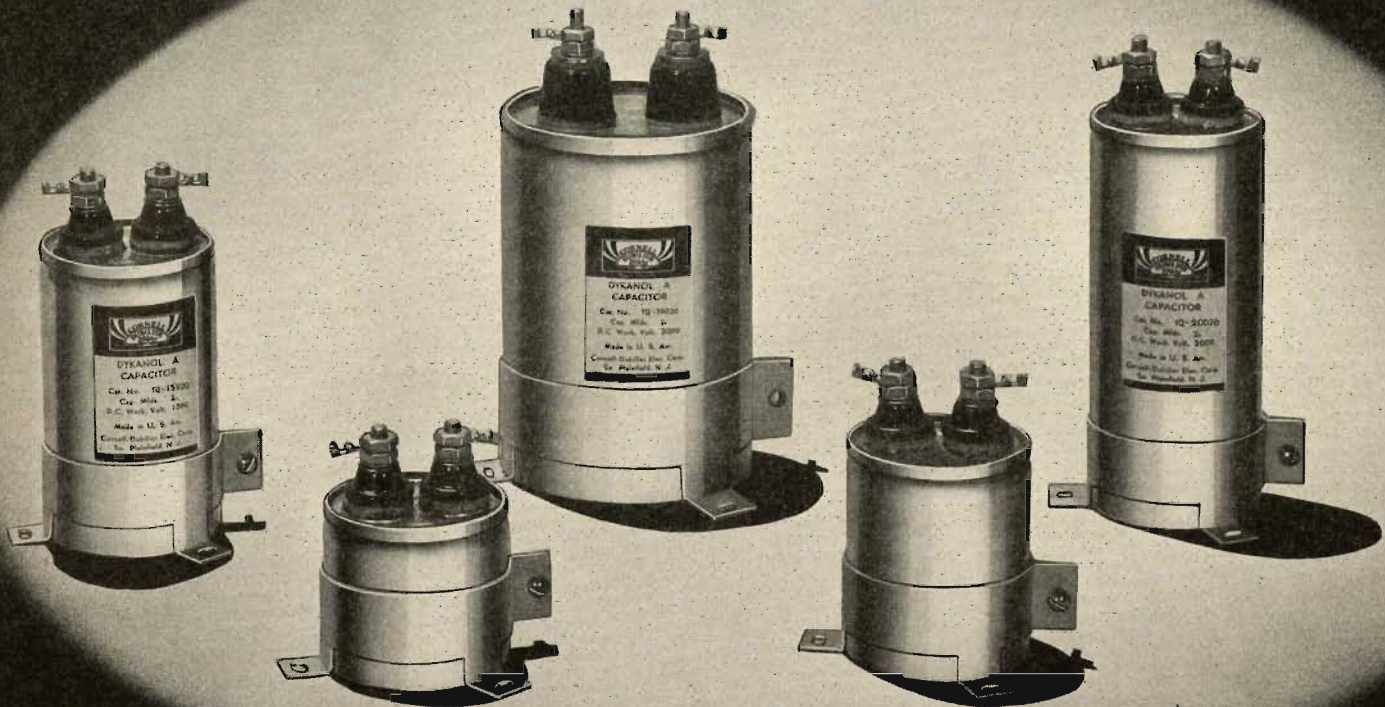
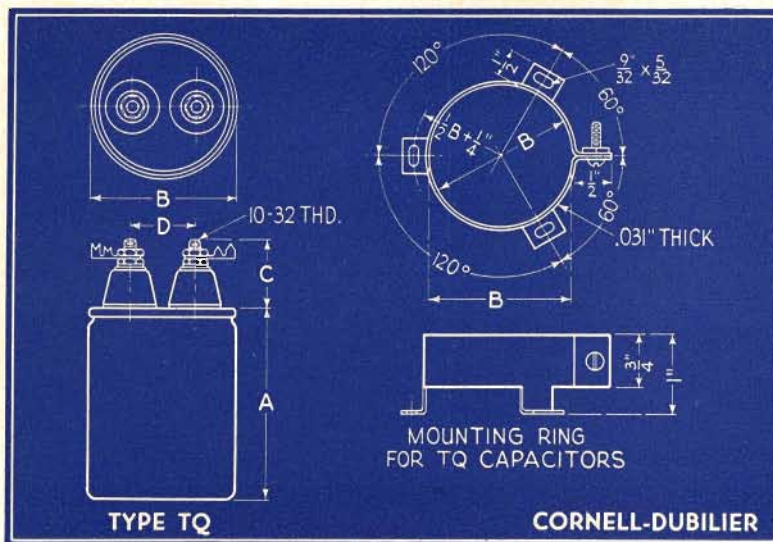


Photo above shows (left to right), back row, Types TQ-15020, TQ-30020 and TQ-20020. Front row, Types TQ-10020 and 10040.



**TYPE TQ DYKANOL FILTER CAPACITORS** in cylindrical aluminum containers are provided with **TWO INSULATED** terminals and universal mounting bracket for mounting the unit in any position with terminals either above or below a subpanel assembly. These units are designed primarily for amateur, low-power broadcast and commercial transmitters. They are also adapted for high-power, high-fidelity public address systems and portable power amplifiers. All units are designed and built to stand up under conditions of severe transient voltages and line surges in continuous duty operation.



# DYKANOL CAPACITORS

## CYLINDRICAL FILTER TYPE TQ

- ◆ DYKANOL "A" (CHLORINATED DIPHENYL) IMPREGNATED AND FILLED — Non-inflammable — fire-proof — long life — small size — lower power-factor.
- ◆ HIGH PURITY ALUMINUM FOIL — Lower R.F. resistance — light weight.
- ◆ HIGH GRADE MULTI-LAMINATED KRAFT TISSUE — Higher voltage breakdown — minimum leakage — high insulation resistance.
- ◆ DRIED, IMPREGNATED AND FILLED UNDER CONTINUOUS VACUUM — Lower equivalent series resistance, particularly at higher temperatures — 5,000 megohms per microfarad insulation resistance — longer life.
- ◆ HERMETICALLY METAL SEALED — Not affected by moisture, time or temperature up to approximately 93° C. (200° F.)
- ◆ ADEQUATE TERMINAL INSULATORS — Glazed porcelain or Bakelite according to rating — safe for high potentials.
- ◆ STURDY ALUMINUM CONTAINER — Strong — non-corrosive.
- ◆ STRONG UNIVERSAL MOUNTING BRACKET — Provided with 3 feet — permits mounting of unit in any position with terminals above or below subpanel.
- ◆ RIGIDLY TESTED — Uniform product.
- ◆ CONSERVATIVE D.C. RATING — Triple testing assures dependable service.
- ◆ CONSERVATIVE VOLTAGE RATING — Can be safely operated continuously at 10% above rated voltage.

TYPE TQ					
600 V.D.C. WORKING					
Cap. Mfd.	Cat. No.	Dimensions — Inches			
		A	B	C	D
2	TQ-6020	2 <sup>1</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
4	TQ-6040	2 <sup>3</sup> / <sub>4</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
1,000 V.D.C. WORKING					
1	TQ-10010	1 <sup>7</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
2	TQ-10020	2 <sup>1</sup> / <sub>2</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
4	TQ-10040	3 <sup>7</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
1,500 V.D.C. WORKING					
1	TQ-15010	2 <sup>3</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
2	TQ-15020	3 <sup>5</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
2,000 V.D.C. WORKING					
1	TQ-20010	3 <sup>1</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
2	TQ-20020	4 <sup>7</sup> / <sub>8</sub>	2	1	1 <sup>3</sup> / <sub>8</sub>
4	TQ-20040	4 <sup>3</sup> / <sub>8</sub>	3	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>
3,000 V.D.C. WORKING					
1	TQ-30010	3 <sup>1</sup> / <sub>4</sub>	3	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>
2	TQ-30020	5 <sup>1</sup> / <sub>4</sub>	3	1 <sup>1</sup> / <sub>4</sub>	1 <sup>1</sup> / <sub>4</sub>

**NOTE:** STANDARD CAPACITY TOLERANCE is plus or minus 10%. Closer tolerances are available on special order at slightly higher prices.



# CORNELL



# DUBILIER

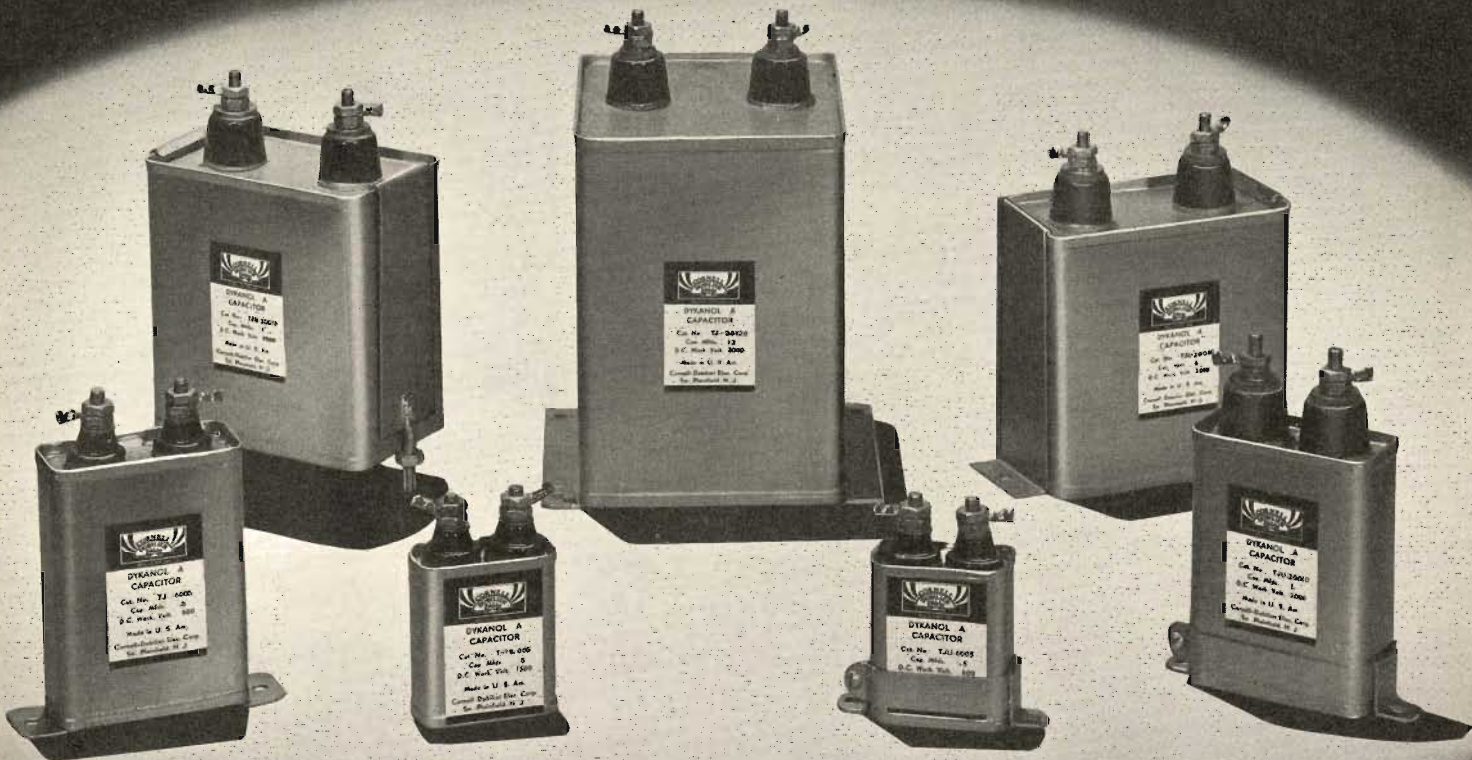
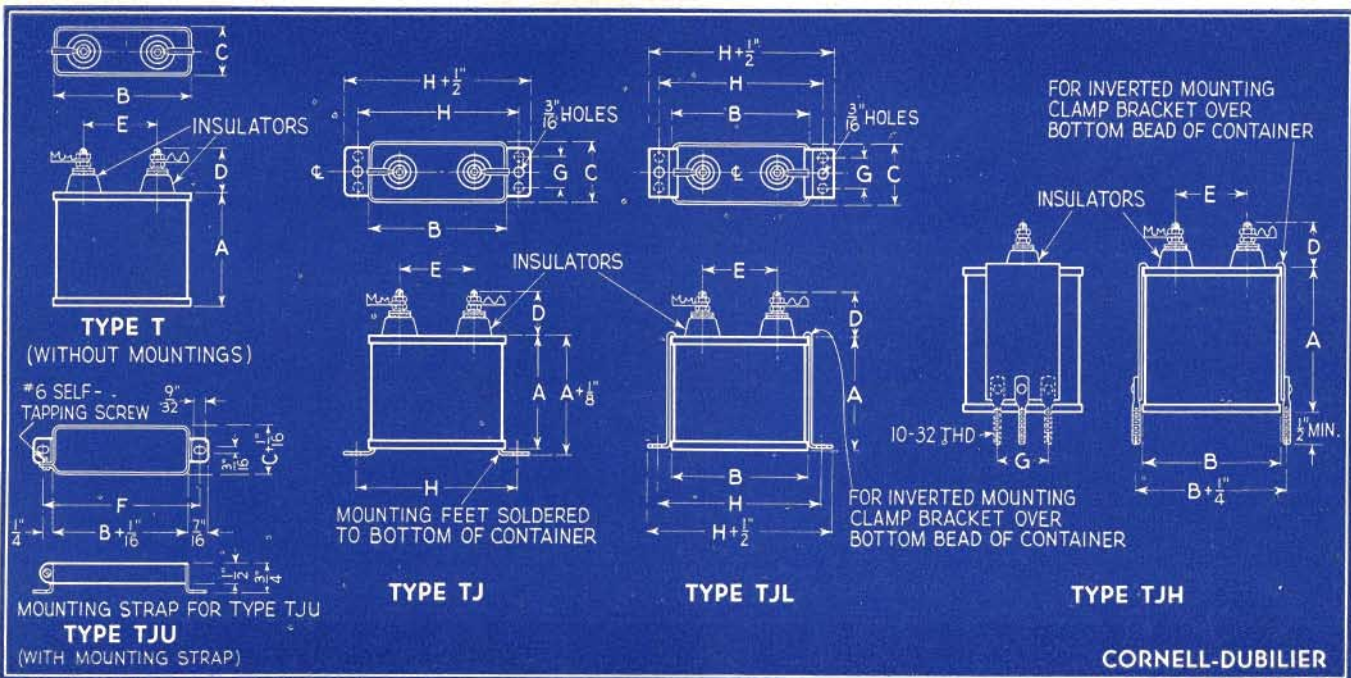


Photo above shows (left to right), back row Types TJH, TJ and TJL. Front row Types TJ, T, and two Type TJU.



C-D DYKANOL TRANSMITTING FILTER CAPACITORS, TYPES T, TJ, TJH, TJL and TJU are the most dependable units for use in all transmitters and power supply equipment. They are compact, light-weight, safely-rated, fire-proof and available in a wide variety of convenient mounting arrangements.



# DYKANOL CAPACITORS

## HIGH VOLTAGE FILTER TYPES T, TJ, TJH, TJL AND TJU

- ◆ **DYKANOL "A" (CHLORINATED DIPHENYL) IMPREGNATED AND FILLED**— Non-inflammable — fire-proof — long life — small size — lower power-factor — non-oxidizable.
- ◆ **HIGH PURITY ALUMINUM FOIL**— Lower R.F. resistance — light weight.
- ◆ **HIGH GRADE MULTI-LAMINATED KRAFT TISSUE**— Higher voltage breakdown — minimum leakage — high insulation resistance.
- ◆ **DRIED, IMPREGNATED AND FILLED UNDER CONTINUOUS VACUUM**— Lower losses, particularly at higher temperatures — 8,000 megohms per microfarad insulation resistance — longer life.
- ◆ **HERMETICALLY METAL SEALED**— Not affected by moisture, time or temperature up to 93° C.
- ◆ **ADEQUATE TERMINAL INSULATORS**— Glazed Porcelain or Bakelite according to rating.
- ◆ **SPECIAL GASKET, PRESSURE SEALED TERMINALS**— Leak-proof joints — high dielectric strength.
- ◆ **STURDY LEAD PLATED STEEL CONTAINER**— Aluminum painted — non-corrosive — strong.
- ◆ **WIDE VARIETY OF MOUNTING DEVICES**— Allows mounting unit in any position.
- ◆ **RIGIDLY TESTED**— Uniform Product.
- ◆ **CONSERVATIVE D.C. RATING**— Triple testing assures dependable service.
- ◆ **CONSERVATIVE VOLTAGE RATING**— Can be safely operated at 10% above rated voltage.

TYPE DESIGNATIONS — Type T (basic units) are without mountings. To order Types TJ, TJH, TJL or TJU with mountings as shown on the opposite page, add letter symbols of type mountings desired to Cat. No. as follows:

TYPE T — (Basic unit) without mountings.  
 TYPE TJ — Mounting feet soldered to bottom of container.  
 TYPE TJH — With screw spade-lug brackets.  
 TYPE TJL — With mounting foot brackets.  
 TYPE TJU — With universal mounting strap.

600 V.D.C. WORKING									2,000 V.D.C. WORKING										
Cap. Mfd.	Cat. No.	A	B	Dimensions — Inches			G*	H		Cap. Mfd.	Cat. No.	A	B	Dimensions — Inches			G*	H	
				C	D	E	F							C	D	E	F		
.5	T-6005	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.1	T-20001	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4
1	T-6010	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.25	T-200025	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4
2	T-6020	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.5	T-20005	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4
3	T-6030	3 7/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	1	T-20010	3 3/8	2 1/2	1 1/8	1 1/4	1 1/8	3	—	3
4	T-6040	3 3/8	2 1/2	1 1/8	7/8	1 1/8	3	—	3	2	T-20020	4	3 3/4	1 1/4	1 1/4	2	4 3/8	—	4 3/8
5	T-6050	4 3/4	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	3	T-20030	4 3/4	3 3/4	1 1/4	1 1/4	2	4 3/8	—	4 3/8
6	T-6060	4 5/8	2 1/2	1 1/8	7/8	1 1/8	3	—	3	4	T-20040	3 1/2	3 3/4	2 1/4	1 1/4	2	4 3/8	—	4 3/8
8	T-6080	3 1/2	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	5	T-20050	4 3/4	3 3/4	2 1/4	1 1/4	2	4 3/8	—	4 3/8
10	T-6100	4 3/8	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	6	T-20060	4 3/4	3 3/4	3 1/8	1 1/4	2	†	—	4 3/8
										8	T-20080	4 3/4	3 3/4	3 1/8	1 1/4	2	†	—	4 3/8
										10	T-20100	4 3/4	3 3/4	4 1/8	1 1/4	2	†	3 3/8	4 3/8
										12	T-20120	5 3/8	3 3/4	4 1/8	1 1/4	2	†	3 3/8	4 3/8
1,000 V.D.C. WORKING									2,500 V.D.C. WORKING										
.1	T-10001	2	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.5	T-25005	3 1/2	3 3/4	1 1/4	1 1/4	2	4 3/8	—	4 3/8
.25	T-100025	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	1	T-25010	3 1/4	3 3/4	1 3/4	1 1/4	2	4 3/8	—	4 3/8
.5	T-10005	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	2	T-25020	4 3/4	3 3/4	1 3/4	1 1/4	2	4 3/8	—	4 3/8
1	T-10010	2 1/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	4	T-25040	4	3 3/4	4 1/8	1 1/4	2	†	3 3/8	4 3/8
2	T-10020	4	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	10	T-25100A	6 3/8	3 3/4	4 1/8	1 1/4	2	†	3 3/8	4 3/8
3	T-10030	3 1/2	2 1/2	1 1/8	7/8	1 1/8	3	—	3										
4	T-10040	4 3/8	2 1/2	1 1/8	7/8	1 1/8	3	—	3	3,000 V.D.C. WORKING									
5	T-10050	3 1/2	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	.1	T-30001	2	2 1/2	1 1/8	1 1/4	1 1/8	3	—	3
6	T-10060	4 3/4	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	.25	T-300025	2 1/2	2 1/2	1 1/8	1 1/4	1 1/8	3	—	3
8	T-10080	4 3/4	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	.5	T-30005	3 7/8	2 1/2	1 1/8	1 1/4	1 1/8	3	—	3
10	T-10100	4 5/8	3 3/4	1 3/4	7/8	2	4 3/8	—	4 3/8	1	T-30010	3 1/2	3 3/4	2 1/4	1 1/4	2	4 3/8	—	4 3/8
12	T-10120	3 1/2	3 3/4	2 1/4	7/8	2	4 3/8	—	4 3/8	2	T-30020	4 1/8	3 3/4	3 1/8	1 1/4	2	†	—	4 3/8
15	T-10150	4 3/4	3 3/4	2 1/2	7/8	2	4 3/8	—	4 3/8	4	T-30040	4 3/4	3 3/4	4 1/8	1 1/4	2	†	3 3/8	4 3/8
1,500 V.D.C. WORKING									4,000 V.D.C. WORKING										
.5	T-15005	2 7/8	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.1	T-40001	2 3/4	3 3/4	2 1/4	2	2	4 3/8	—	4 3/8
1	T-15010	4	1 1/2	1 1/8	7/8	1 1/8	2 1/4	—	2 1/4	.25	T-400025	2 3/4	3 3/4	2 1/4	2	2	4 3/8	—	4 3/8
2	T-15020	4 1/8	2 1/2	1 1/8	7/8	1 1/8	3	—	3	.5	T-40005	4	3 3/4	2 1/4	2	2	4 3/8	—	4 3/8
3	T-15030	4 3/4	2 1/2	1 1/8	7/8	1 1/8	3	—	3	1	T-40010	5	3 3/4	2 1/4	2	2	4 3/8	—	4 3/8
4	T-15040	4 5/8	3 3/4	1 1/4	7/8	2	4 3/8	—	4 3/8	2	T-40020	5	3 3/4	4 3/8	2	2	†	3 3/8	4 3/8
5	T-15050	4 3/4	3 3/4	1 3/4	7/8	2	4 3/8	—	4 3/8	4	T-40040A	8	3 3/4	4 1/8	2	2	†	3 3/8	4 3/8
6	T-15060	4 3/4	3 3/4	1 3/4	7/8	2	4 3/8	—	4 3/8										
8	T-15080	4 3/4	3 3/4	2 1/2	7/8	2	4 3/8	—	4 3/8	5,000 V.D.C. WORKING									
10	T-15100	4 3/4	3 3/4	3 1/8	7/8	2	†	—	4 3/8	.5	T-50005	4 1/4	3 3/4	2 1/4	2	2	4 3/8	—	4 3/8
12	T-15120	4 3/4	3 3/4	3 1/8	7/8	2	†	—	4 3/8	1	T-50010	4 1/4	3 3/4	4 1/8	2	2	†	3 3/8	4 3/8
15	T-15150	4 3/4	3 3/4	4 1/8	7/8	2	†	3 3/8	4 3/8	2	T-50020	6	3 3/4	4 1/8	2	2	†	3 3/8	4 3/8
									\$6,000 V.D.C. WORKING										
										1	T-60010A	8	3 3/4	4 1/8	2	2	†	3 3/8	4 3/8

\*NOTE: Where "G" dimension is given, two screw spade-lugs or holes are provided on each mounting bracket as indicated in dotted lines on accompanying drawing. Other mounting brackets have a single mounting hole or screw spade-lug in center of each bracket.

†NOTE: Type TJU units not furnished in these larger sizes.

STANDARD CAPACITY TOLERANCE is plus or minus 10%. Total tolerances of less than 20% but more than 10% are also available. Closer tolerances can be supplied at slightly higher prices.

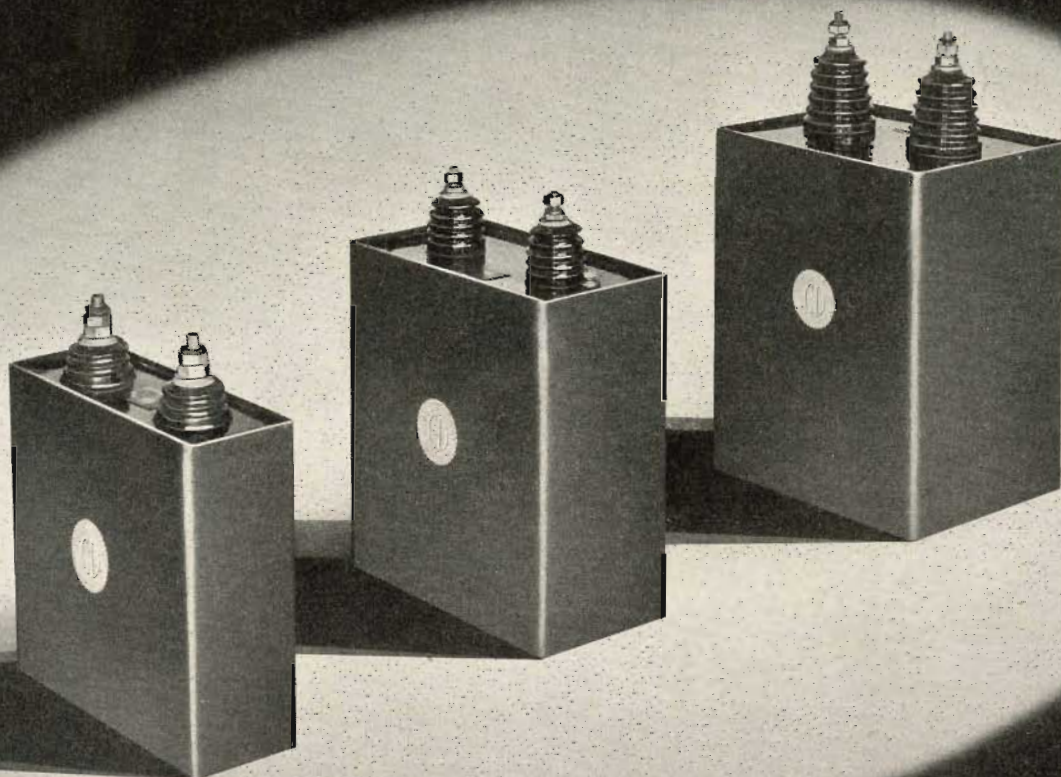
VOLTAGE RATINGS — Conservatively rated and may be safely operated continuously at 10% above their rated voltage.



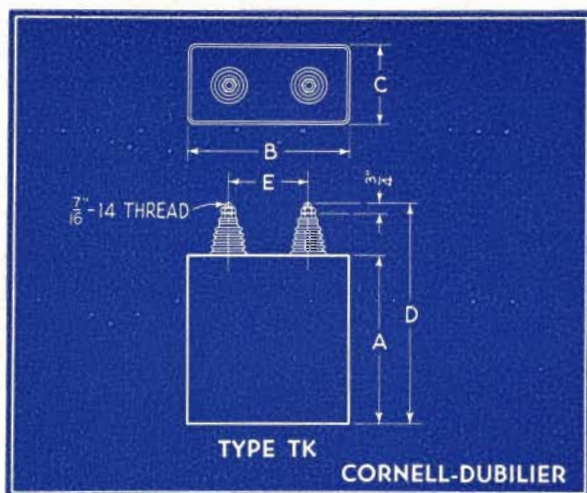
# CORNELL



# DUBILIER



Above photo shows, (left to right), Types TK-60040, TK-12020 and TK-20020.



TYPE TK DYKANOL CAPACITORS are universally accepted as the finest quality capacitors ever offered in larger capacity and higher voltages for filter service. Because of their new, compact construction, these units offer the design engineer an opportunity to meet the requirements of restricted space limitations. Their sturdy construction affords dependable operation for continuous heavy duty service without danger of breakdown interruption.



# DYKANOL CAPACITORS

## HIGH VOLTAGE TRANSMITTER TYPE TK

- ◆ **DYKANOL "A" (CHLORINATED DIPHENYL) IMPREGNATED AND FILLED** — Non-inflammable — fire-proof — long life — small size — lower power-factor.
- ◆ **HIGH PURITY ALUMINUM FOIL** — Lower R.F. resistance — High tensile strength.
- ◆ **HIGH GRADE MULTI-LAMINATED KRAFT TISSUE** — Higher voltage breakdown — maximum safety — high insulation resistance.
- ◆ **DRIED, IMPREGNATED AND FILLED UNDER CONTINUOUS VACUUM** — Lower equivalent series resistance, particularly at higher temperatures — 8,000 megohms per microfarad insulation resistance — longer life.
- ◆ **HERMETICALLY METAL SEALED** — Not affected by moisture, time or temperature up to 93° C. (200° F.)
- ◆ **HEAVY-DUTY WET-PROCESS GLAZED PORCELAIN INSULATOR** — High dielectric and mechanical strength.
- ◆ **SPECIAL CORK-GASKETED PRESSURE-SEALED TERMINALS** — Leakproof joints — high dielectric strength.
- ◆ **STURDY, ARC-WELDED STEEL CASE** — Leakproof — durable — strong.
- ◆ **SPECIAL BLUE-GRAY LACQUER PAINTED CASE** — Weatherproof — non-corrosive.
- ◆ **RIGIDLY TESTED** — Uniform product.
- ◆ **CONSERVATIVE D.C. RATING** — Will safely operate continuously at 10% above rated voltage.
- ◆ **FILLED WITH FIRE-PROOF DYKANOL** — Eliminates all fire hazard.

### TYPE TK

6,000 V.D.C. WORKING						12,500 V.D.C. WORKING							
Cap. Mfd.	Cat. No.	Dimensions — Inches				Cap. Mfd.	Cat. No.	Dimensions — Inches					
		A	B	C	D	E		A	B	C	D	E	
2	TK-60020	11	8	4	13 $\frac{5}{16}$	4 $\frac{1}{2}$	.5	TK-12005	11	8	4	14 $\frac{1}{8}$	4 $\frac{1}{2}$
4	TK-60040	11	12	4	13 $\frac{5}{16}$	6	1	TK-12010	11	12	4	14 $\frac{1}{8}$	6
5	TK-60050	11	12	4	13 $\frac{5}{16}$	6	2	TK-12020	13	12	6	16 $\frac{3}{8}$	6
6	TK-60060	13	12	4	15 $\frac{5}{16}$	6	5	TK-12050	15	12	9 $\frac{1}{2}$	18 $\frac{1}{8}$	6
10	TK-60100	13	12	6	15 $\frac{5}{16}$	6	<b>15,000 V.D.C. WORKING</b>						
<b>7,500 V.D.C. WORKING</b>						.25	TK-15002	11	8	4	14 $\frac{1}{8}$	4 $\frac{1}{2}$	
.5	TK-70005	11	8	4	13 $\frac{5}{16}$	4 $\frac{1}{2}$	.5	TK-15005	11	12	4	14 $\frac{1}{8}$	6
1	TK-70010	11	8	4	13 $\frac{5}{16}$	4 $\frac{1}{2}$	1	TK-15010	13	12	4	16 $\frac{1}{8}$	6
2	TK-70020	11	8	4	13 $\frac{5}{16}$	4 $\frac{1}{2}$	2	TK-15020	15	12	9 $\frac{1}{2}$	18 $\frac{1}{8}$	6
4	TK-70040	13	12	4	15 $\frac{5}{16}$	6	3	TK-15030	15	12	9 $\frac{1}{2}$	18 $\frac{1}{8}$	6
6	TK-70060	13	12	6	15 $\frac{5}{16}$	6	<b>20,000 V.D.C. WORKING</b>						
<b>10,000 V.D.C. WORKING</b>						.25	TK-20002	11	8	4	15 $\frac{9}{16}$	4 $\frac{1}{2}$	
1	TK-10010	11	8	4	14 $\frac{7}{16}$	4 $\frac{1}{2}$	.5	TK-20005	11	12	4	15 $\frac{9}{16}$	6
2	TK-10020	11	12	4	14 $\frac{7}{16}$	6	1	TK-20010	13	12	6	17 $\frac{9}{16}$	6
4	TK-10040	13	12	6	16 $\frac{7}{16}$	6	1.5	TK-20015	15	12	9 $\frac{1}{2}$	19 $\frac{9}{16}$	6
5	TK-10050	13	12	6	16 $\frac{7}{16}$	6	2	TK-20020	15	12	9 $\frac{1}{2}$	19 $\frac{9}{16}$	6
<b>25,000 V.D.C. WORKING</b>						.2	TK-25020	11	12	4	15 $\frac{9}{16}$	6	
						.25	TK-25025	11	12	4	15 $\frac{9}{16}$	6	
						.5	TK-25050	13	12	6	17 $\frac{9}{16}$	6	
						1	TK-25100	15	12	9 $\frac{1}{2}$	19 $\frac{9}{16}$	6	

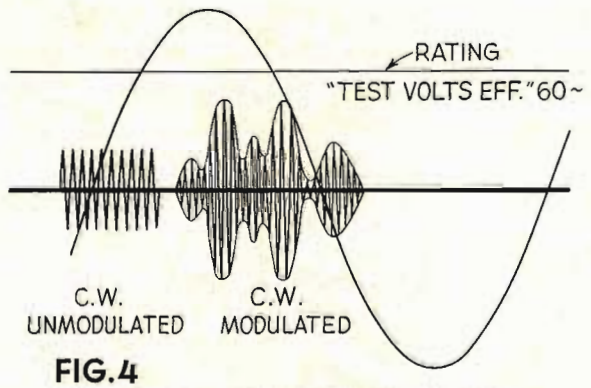
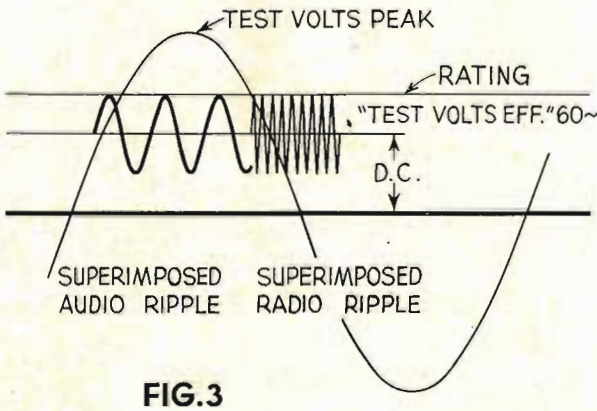
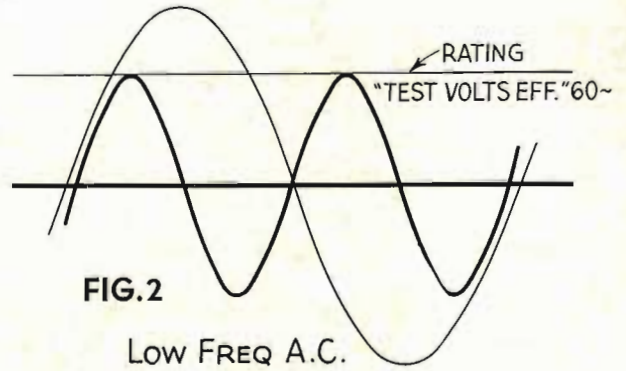
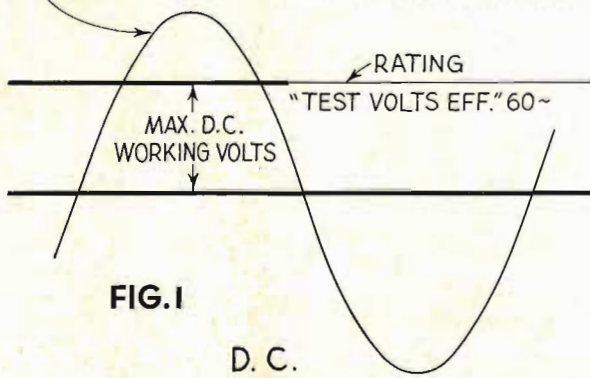
**NOTES:** STANDARD CAPACITY TOLERANCE is minus 5% plus 15%.

SUPERSEDE TYPE TB UNITS — These new, TK capacitors of improved design and construction supersede the similarly rated, though larger size Type TB units.

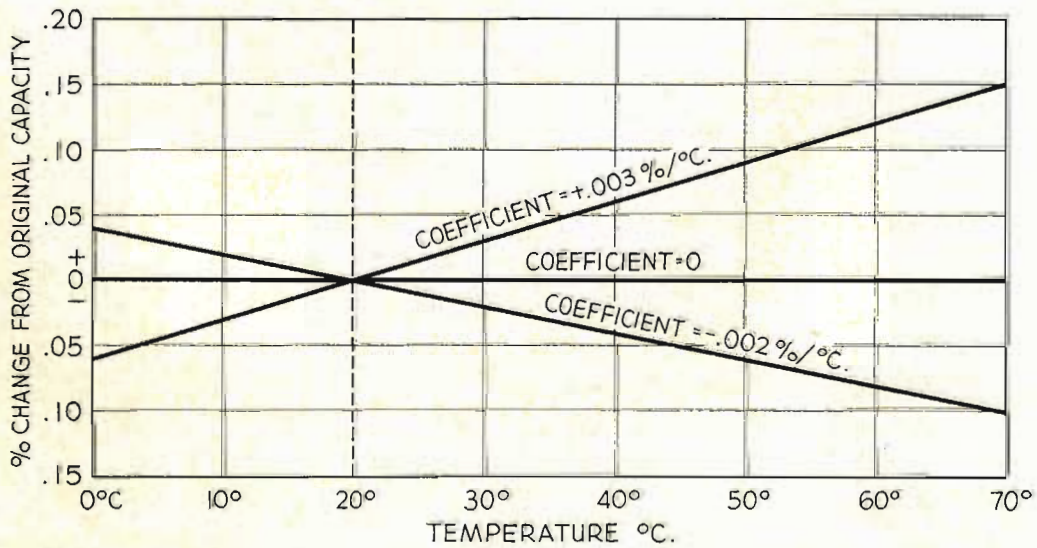


## PEAK OPERATING POTENTIALS IN RELATION TO "TEST VOLTS EFFECTIVE" RATING

TEST VOLTS PEAK = 1.41 X "TEST VOLTS EFF." FOR SINE WAVE



BEARS NO RELATION TO TEST VOLTAGE.  
POTENTIAL EQUALS CURRENT RATING  
MULTIPLIED BY REACTANCE





# MICA CAPACITORS

## GUIDE TO SELECTION AND USE OF MICA CAPACITORS

### RATINGS

**T**HE capacitors listed in this catalog are built to operate with long life expectancy. A great many units are still in continuous use after many years of service without any attention. They will withstand considerable abuse, but, to obtain successful operation, peak voltage conditions must be properly observed. This applies to any dielectric whether it be of the mica, paper, oil, or gaseous type.

It has been common practice for 20 years to rate the potential of transmitting capacitors on a "Test Volts Effective" basis. This provides one loading factor, namely, the maximum operating peak voltage limit, while the effective current limits the second or heating value. Otherwise, a voltage made up of a complex wave must be stated for each operating frequency.

### APPLICATION

Mica capacitors as shown on pages 11, 13, 15, and 17 are used in a great variety of circuits in which all sorts of wave forms and frequencies are met. The most common of these are shown graphically on page 28.

In figures 1, 2 and 3 it will be noted all the peak operating voltages use the effective or R. M.S. value of the test voltage as a maximum top value. It is important that this value should never be exceeded under the most severe conditions.

Where continuous wave, Fig. 4, is used, the peak r.f. voltage does not reach the effective test voltage value. This is due to the current  $\left(\frac{E}{X}\right)$  already reaching its maximum as shown in the table of current ratings. These values should not be exceeded.

Current values may be interpolated between the frequencies shown.

### AMBIENT TEMPERATURE

These capacitors are designed for operation at ambient temperatures up to 60 degrees C. Special capacitors can be supplied for higher temperature operation.

### CAPACITY TEMPERATURE COEFFICIENT

Circuits in which closer capacity stability tolerances are required to overcome frequency drift have stimulated a demand for high stability capacitors. Since such capacitors are available in various types of units (Types 1R, 2R, 5R, 6H, 6K, 9H, 15H) listed in preceding pages of this catalog, the curves as shown in Fig. 5 on page 28, are given in order to clarify terminology used in regard to temperature coefficients.

The curve marked "+.003% per degree C." is termed positive to indicate the increasing capacity with rising temperature. The other curve marked "-.002% per degree C." is termed as negative, since the capacity decreases with rising temperature.

The ordinate axis indicates the percent change of capacity from original. The point of zero change is shown at a temperature of 20° C. for convenience.

If, for example, a 500 mmfd. capacitor originally measured 500.00 mmfd. at 20 degrees C. and changed to 500.75 mmfd. at 70 degrees C., this capacitor would be said to have a coefficient of +.003% per degree C.

This capacitor in connection with a zero coefficient coil would cause the frequency to decrease with increasing temperature. The frequency would change inversely as the square root of the capacity or approximately .0015% per °C. which is .075% decrease for a 20° to 70° C. temperature change.

Special compensated capacitors can however be built to reduce the coefficient to zero or make it negative to correct for positive errors in the coil. This results in a practically constant LC ratio.

A capacitor having a good retrace characteristic will track the same points on cooling as on heating. This feature requires specially designed units such as Types 1R, 2R, 5R, 6H, 6K, 9H and 15H.

### SPECIAL UNITS

The Cornell-Dubilier engineering department should be consulted for ratings of capacitors to be used under unusual conditions. In order to aid in the proper design of such units the following data should be supplied if possible:

CAPACITY in microfarads, micromicrofarads or centimeters.

TOLERANCE if closer than plus or minus 5%.

EFFECTIVE R.F. CURRENT under the most severe operating condition.

PEAK VOLTAGE OR PERCENT MODULATION during maximum load.

FREQUENCY in cycles, kilocycles or megacycles.

USE OF CAPACITOR in circuit, such as tank, bypass, grid or plate blocking.

POWER RATING AND PLATE VOLTAGE of associated tubes.

C.W. OR SPARK EXCITATION such as tube oscillator or quenched gap.

D.C. OR OTHER BLOCKING VOLTAGE if any.

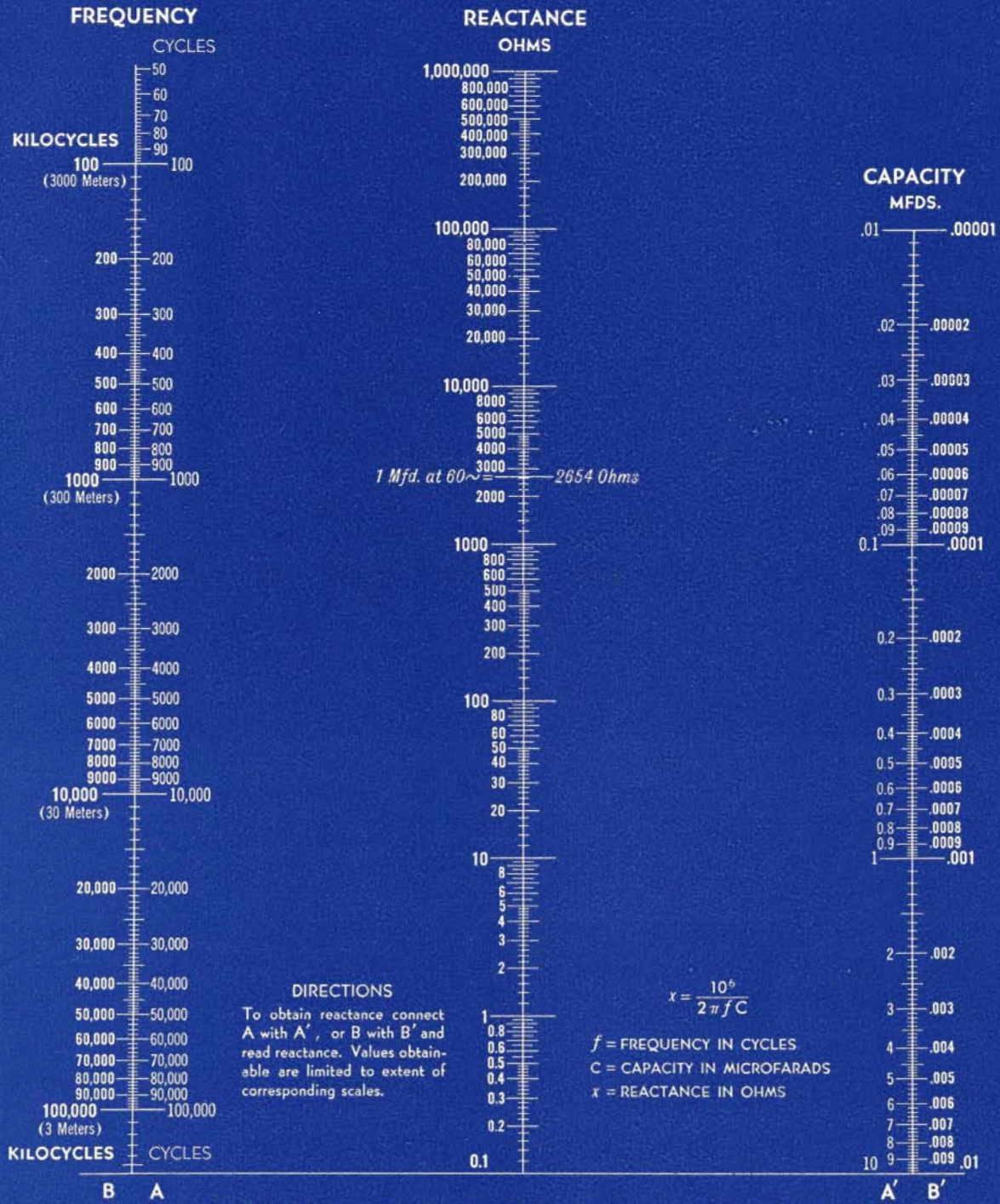
MAXIMUM AMBIENT TEMPERATURE if higher than + 60° C.

GENERAL TYPE DESIRED accordance with size and rating.

NEGATIVE OR POSITIVE CAPACITY TEMPERATURE COEFFICIENT in per cent per degree C. (only if required).

ANY ABNORMAL CONDITIONS OF OPERATION.





**CAPACITY - FREQUENCY - REACTANCE CHART**  
**CORNELL-DUBILIER ELECTRIC CORP.**  
 SO. PLAINFIELD, N. J., U.S.A.



# DYKANOL CAPACITORS

## GUIDE TO SELECTION AND USE OF DYKANOL CAPACITORS

**T**HE variety of dielectrics available for use in capacitors makes a completely satisfactory choice somewhat difficult for the design engineer to decide. As an aid to him, the following notes and suggestions will be helpful in selecting the proper capacitor to meet the requirements of many applications.

### CAPACITY VS. TEMPERATURE

Comparative tests showing the change of capacity with temperature for various impregnants indicate that the oils of lower dielectric constant show the least shift particularly when temperatures are much below normal room value. At higher temperatures, however, the change in capacitance for most impregnants is very slight. For high dielectric constant materials at -40 degrees C., a decrease of 25% in capacity is noted. These dielectrics regain their full capacitative values when the temperature returns to normal. This lack of capacity constancy is of special importance in tuned circuits operating under conditions of low temperatures. For this purpose Dykanol C is recommended which has a power factor (0.15%) and insulation resistance (8,000 megohms per microfarad). Because of its lower dielectric constant, the use of Dykanol C requires from 40-60% larger container for the same capacitor rating in Dykanol A.

### RIPPLE

Dykanol A capacitors as listed in this catalog are primarily designed for d.c. applications and built to withstand audio frequency ripples. They can handle from 3% ripple (voltage) at 10,000 cycles to 30% ripple at 50 cycles with safety. When r.f. current over several amperes is present special construction is required and all inquiries regarding units of this type should include such information. The summation of superimposed peak a.c. plus d.c. should not exceed the capacitor's rating.

### CAPACITORS ACROSS CONTACTS

When capacitors are used for absorbing energy from a collapsing magnetic field, care should be taken to note the peak voltage developed. This may be 5 to 20 or more times the circuit voltage with the capacitor in place.

### DYKANOL A

Dykanol A is an outstanding high dielectric constant impregnant providing low P.F. in capacitor units (0.3%) and high insulation resistance (8,000 megohms per microfarad). Most other high S.I.C. (specific inductive capacity) materials have higher P.F. (0.5-0.7%) and I.R. of 500 to 1,000 megohms per mfd. or lower if improperly treated before use and during impregnation. In addition to its superior P.F. and I.R. features Dykanol A is an inert, stable compound.

Being one of the aroclors, it is at present the only non-inflammable impregnating medium for capacitors, having no flash or fire point.

### PRODUCTION

To obtain the proper characteristics, the Cornell-Dubilier plant is equipped with adequate impregnation and treating facilities making it unnecessary to economize on impregnation time in order to meet quantity production. The C-D vacuum equipment, temperature control, and processing equipment are the most advanced in design for treatment of capacitors which develops the best qualities of impregnants used.

### TESTING

Many of the capacitors listed in this catalog are of high capacity and voltage and when charged should be treated with due respect.

### CAUTION!

It is Dangerous to touch the terminals of capacitors! They may be charged.

When testing capacitors, it is advisable in all cases to charge and discharge through a 10 inch tubular resistor of 10,000 ohms in order to reduce the oscillatory discharge. When discharging a capacitor, use properly insulated leads, and maintain positive contact with terminals for several seconds in order to assure that the unit has been completely discharged. **UNDER ALL CONDITIONS, THE SAME CAUTION SHOULD BE TAKEN IN HANDLING HIGH TENSION CAPACITORS AS WITH POWER LINES OF THE SAME VOLTAGE.**

In determining the resistance of a capacitor, it is standard practice to take readings after a three minute application of 250 volts d.c. at 25° C.

### TEMPERATURE LIMITATIONS

It is necessary also to observe the temperature limits to which the various impregnants may be safely exposed. Dykanol A can be used up to 200 degrees F. without danger and Dykanol C at 170 degrees F. The change which takes place because of the elevated temperatures has been greatly reduced by our pre-treatment and choice of materials but successful operation at extremely high temperatures has not yet been attained in any part of the electrical insulation field where organic materials are used.

In any event, regardless of the dielectric chosen as impregnant in the design of the capacitor for the problem, it is necessary to take into consideration the individual characteristics of each to determine the feasibility of its application. The experience and diversified application practice of Cornell-Dubilier engineers is at your command. Inquiries regarding your problems are always welcome.





## GENERAL INFORMATION

### Prices

List prices of all standard capacitors shown in this catalog are given in our latest supplementary price bulletin. Prices of special units, made to order according to specifications, will be furnished upon request.

To avoid any misunderstanding and expedite shipment of orders, specify type and catalog numbers of capacitors desired together with their capacity and voltage ratings. If catalog numbers are not given, specify type, capacity and voltage ratings. Where special construction, treatment, ratings, etc., are wanted, as described under notes below listings, be sure to add the proper suffix symbol or combination of suffix symbols given in the marginal notes.

In making inquiry regarding special mica capacitors, give all electrical requirements, specifications, including size limitations, and other pertinent data as outlined on page 29, being sure to advise what quantity of units will be ordered, as costs and quotations are affected by quantity.

### Shipments

Packing and transportation instructions should accompany all orders. On large quantity orders of standard catalog items where an order cannot be completed from stock, those available will be shipped immediately and the balance will follow as soon as possible thereafter.

Orders for special units built to specifications require a longer period for delivery than standard items which are usually available from stock.

Where part shipments of special units are to be made according to a definite production schedule, detailed particulars must be furnished with orders as to the quantities wanted in each shipment, with dates of shipments, etc. All shipments will be made according to instructions thus given, subject to limitations and influences beyond our control.

Where shipping instructions are not furnished with orders we reserve the privilege to use our own judgment as to the means of transportation which we consider the most economical and satisfactory.

All shipments are insured against non-delivery or loss unless otherwise instructed. Additional charges will of course be made at usual rates for such service.

Export shipments are F.A.S. steamer or F.O.B. warehouse, New York City, export packing included.

## CORNELL-DUBILIER PATENTS

CORNELL-DUBILIER PRODUCTS ARE MANUFACTURED UNDER ONE OR MORE OF THE FOLLOWING U. S. PATENTS:

Re.15.689	1.572.604	1.661.351	1.715.319	1.742.759	1.768.430	1.824.805	1.845.174	1.874.936	1.970.776
Re.19.370	1.575.044	1.662.548	1.715.560	1.743.727	1.768.439	1.824.806	1.848.215	1.891.080	1.990.819
Re.19.604	1.575.045	1.671.519	1.717.701	1.744.301	1.768.440	1.824.819	1.850.271	1.899.155	2.001.282
1.391.672	1.579.168	1.676.797	1.718.185	1.744.454	1.768.441	1.824.834	1.850.702	1.900.093	2.012.359
1.391.673	1.587.942	1.681.884	1.718.278	1.744.616	1.768.442	1.829.891	1.856.392	1.907.758	2.031.128
1.396.030	1.603.939	1.684.461	1.722.325	1.747.915	1.768.449	1.830.907	1.861.006	1.907.859	2.041.594
1.429.227	1.610.122	1.688.478	1.722.326	1.750.374	1.785.479	1.833.392	1.861.024	1.907.860	2.043.532
1.455.781	1.619.201	1.688.990	1.724.884	1.750.393	1.789.263	1.833.867	1.862.275	1.908.962	2.048.922
1.461.287	1.619.223	1.688.961	1.726.343	1.754.265	1.769.874	1.836.707	1.862.302	1.920.346	2.070.435
1.468.653	1.627.493	1.691.901	1.731.552	1.754.268	1.808.031	1.840.298	1.865.640	1.926.842	2.075.891
1.480.604	1.628.627	1.691.911	1.731.653	1.756.409	1.814.533	1.840.776	1.867.249	1.931.373	2.078.772
1.497.095	1.639.597	1.699.141	1.732.224	1.756.512	1.816.640	1.841.095	1.870.797	1.931.455	2.088.693
1.526.664	1.639.650	1.666.044	1.735.532	1.757.657	1.816.641	1.842.374	1.870.803	1.934.192	2.091.920
1.537.660	1.641.513	1.705.242	1.737.752	1.757.659	1.817.657	1.842.376	1.870.948	1.937.010	2.098.774
1.541.630	1.646.236	1.707.959	1.738.175	1.757.692	1.818.010	1.842.797	1.870.949	1.938.464	2.104.797
1.543.326	1.650.983	1.710.412	1.738.195	1.759.230	1.821.055	1.843.541	1.870.950	1.940.647	2.106.208
1.565.799	1.652.158	1.712.097	1.740.131	1.763.554	1.823.492	1.845.130	1.870.961	1.945.108	2.125.413
1.571.501	1.656.431	1.713.867	1.740.159	1.767.206	1.823.502	1.845.138	1.871.048	1.959.780	2.133.086
1.571.512	1.658.768	1.714.662	1.740.177	1.768.416	1.824.569	1.845.173	1.874.111	1.962.611	2.143.369



## CORNELL - DUBILIER ELECTRIC CORP.

1000 Hamilton Boulevard South Plainfield, N. J., U. S. A.

### CHICAGO, ILL.

605 W. Washington Street

DEERFIELD, ILL.  
707 Osterman Avenue  
DETROIT, MICH.  
1014 Francis Palms Bldg.

ST. PAUL, MINN.  
840 Tatum Avenue

PHILADELPHIA, PA.  
1343 Arch Street

PITTSBURGH, PA.  
600 Grant Street

BUFFALO, N. Y.  
487 Ellicott Square Bldg.

TAUNTON, MASS.  
211 Winthrop Street

WASHINGTON, D. C.  
220 Riggs Bank Bldg.

LOS ANGELES, CALIF.  
908 W. Venice Blvd.

SAN FRANCISCO, CALIF.  
234 Ninth Street

ST. LOUIS, MO.  
526 N. Vandeventer Avenue

GREELEY, COLO.  
1018 Eighth Avenue

CINCINNATI, OHIO  
2635 Garland Avenue

TOLEDO, OHIO  
1415 Addington Road

CLEVELAND HEIGHTS, OHIO  
2662 Shaker Road

DALLAS, TEXAS

137 So. Montclair Street

NEW ORLEANS, LA.  
918 Union Street

ATLANTA, GA.  
316 Ninth St., N. E.

SEATTLE, WASH.  
3218 Western Avenue

OTTAWA, ONT., CANADA  
472 Bank Street

TORONTO, ONT., CANADA  
71 Glencairn Avenue

WINNIPEG, CANADA  
312 Birks Bldg.

### MANUFACTURING LICENSEES:

Le Materiel Telephonique  
46 Quai de Boulogne  
BOULOGNE-BILLANCOURT  
(Seine), FRANCE

Bell Telephone Manufacturing Co.  
4 Rue Boudewyns  
ANTWERP, BELGIUM

Standard Telephon und Radio A. G.  
Seestrasse, 395  
ZURICH, SWITZERLAND

### REPRESENTATIVES IN THE FOLLOWING COUNTRIES:

SYDNEY, AUSTRALIA  
SHANGHAI, CHINA  
AMSTERDAM, HOLLAND  
BOMBAY, INDIA  
OSLO, NORWAY  
BUENOS AIRES, ARGENTINA  
SANTIAGO, CHILE  
ZURICH, SWITZERLAND  
BOGOTA, COLOMBIA  
JOHANNESBURG, SOUTH AFRICA  
BELGRADE, YUGOSLAVIA  
SAN JOSE, COSTA RICA  
LA PAZ, BOLIVIA

HAVANA, CUBA  
HELSINGFORS, FINLAND  
MEXICO, D. F.  
AUCKLAND, NEW ZEALAND  
LISBON, PORTUGAL  
SAO PAULO, BRAZIL  
LIMA, PERU  
BARCELONA, SPAIN  
TEL-AVIV, PALESTINE  
QUITO, ECUADOR  
STOCKHOLM, SWEDEN  
DUBLIN, EIRE  
SAN JUAN, PUERTO RICO



1910



1939