

# Product Overview

For maximum safety and reliability, all Universal capacitors come with built-in bleed resistors (patented by Universal) and approved by CSA (CSA file #LR51331, metal cases only). Environmental safety is assured by use of biodegradable, nontoxic (no PCBs) dielectric fluid (soybean oil), patented by Universal for use in capacitors. Dry-film capacitors do not include protective devices. Since they can fail in a hazardous manner, it is the responsibility of the purchaser to take appropriate precautions.

## Capacitors

Universal has a comprehensive line of capacitors in metal cases (up to 525V ratings) and plastic cases (up to 400V ratings). All Universal capacitors are designed for 60,000 hours of continuous life. They're exceptionally reliable because we put them through accelerated life testing at 125% rated voltage and rated temperature +10°C.

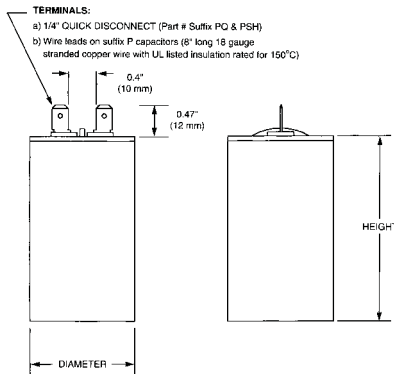
Universal capacitors are normally packaged with ballasts. They may also be ordered separately, bulk packaged, or individually boxed with the suffix "BH" (metal cases only). Capacitor weights vary from 1/4 lb. to 1 lb. each.

## Dry Capacitors

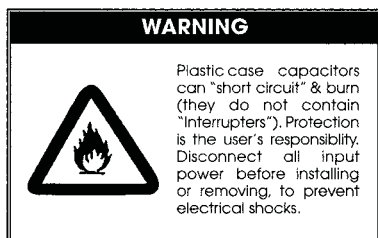
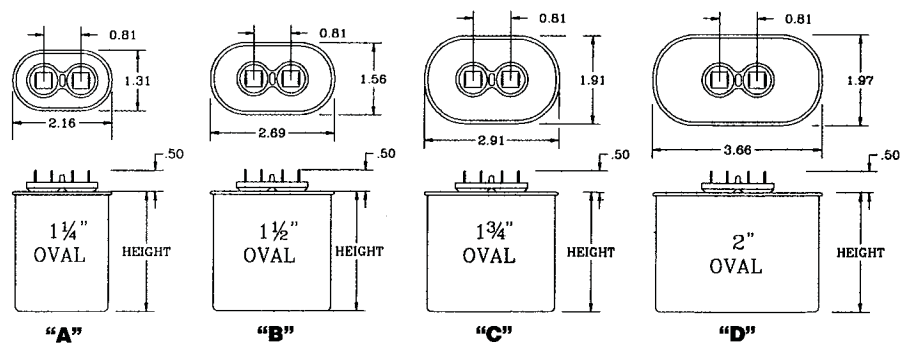
Type "P" plastic case capacitors described in this section are dry and do NOT contain safety interrupters (or oil). Plastic cases are UL rated "94V-0" (for use up to 100°C maximum). Type "P" capacitors are supplied with stranded copper wire leads 8 inches long (18 awg, with 150°C rated insulation). Capacitor rolls are sealed inside plastic cases using epoxy. Design and testing of Universal capacitors follow specifications in Electronic Industries Association (EIA) Standard 456-A, titled "Metalized Film Dielectric Capacitors for Alternating Current Application."

"P" capacitors are designed and rated for continuous duty AC voltages below 400VAC @ 50 or 60 Hz. Capacitors used with HID ballasts at voltages above 400VAC should contain interrupters (available from Universal in oval "MF" and round "RMF" oil-filled metal cases).

## Plastic Dry Type Capacitors

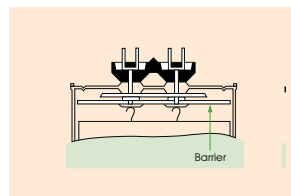


## Metal and Oil Filled Capacitors

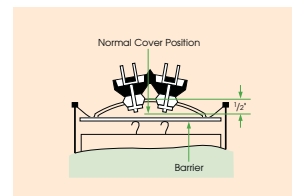


## Protective Device (Only in metal cases)

Protective device to prevent case rupture



Normal Position of Protective Device



Position of Protective Device After Activation

# Dry Capacitors

| --   |     | 90°C Rated  |         |       | 100°C Rated   |         |       | 105°C Rated  |         |       |
|------|-----|-------------|---------|-------|---------------|---------|-------|--------------|---------|-------|
| μF   | V   | Part #      | DIA (") | L (") | Part #        | DIA (") | L (") | Part #       | DIA (") | L (") |
| 5.0  | 280 | 005-4400-BH | 1.18    | 2.20  | R17058511-BH  | 1.26    | 2.36  |              |         |       |
| 5.0  | 280 | 005-4051-BH | 1.18    | 2.76  | R17058512-BH  | 1.26    | 2.83  |              |         |       |
| 5.0  | 330 |             |         |       | R17058539-BH  | 1.26    | 2.24  |              |         |       |
| 6.0  | 280 |             |         |       | R17058513-BH  | 1.26    | 2.36  |              |         |       |
| 6.0  | 280 | 005-4052-BH | 1.18    | 2.76  | R17058514-BH  | 1.26    | 2.83  |              |         |       |
| 7.0  | 280 | 005-4053-BH | 1.58    | 2.76  | R17058515-BH  | 1.65    | 2.83  |              |         |       |
| 8.0  | 300 | 005-4054-BH | 1.58    | 2.76  | R17058535-BH  | 1.65    | 2.83  |              |         |       |
| 8.0  | 330 |             |         |       | R17058541-BH  | 1.65    | 2.83  |              |         |       |
| 10.0 | 280 | 005-4407-BH | 1.18    | 2.76  | R17058517-BH  | 1.26    | 2.83  |              |         |       |
| 10.0 | 280 | 005-4056-BH | 1.58    | 2.76  | R17058519-BH  | 1.65    | 2.83  | R17058226-BH | 1.65    | 2.83  |
| 10.0 | 330 | 005-4408-BH | 1.58    | 2.76  | R17058578-BH  | 1.65    | 2.83  | R17058227-BH | 1.65    | 2.83  |
| 10.0 | 400 | 005-4409-BH | 1.58    | 2.76  | R17058555-BH  | 1.65    | 2.83  |              |         |       |
| 10.0 | 400 | 005-4025-BH | 1.58    | 3.74  | R17058557-BH  | 1.65    | 3.82  | R17058310-BH | 1.65    | 3.82  |
| 11.0 | 400 | 005-4485-BH | 1.58    | 2.76  | R17058558-BH  | 1.65    | 2.83  |              |         |       |
| 12.0 | 300 | 005-4099-BH | 1.58    | 2.76  | R17058536-BH  | 1.65    | 2.83  |              |         |       |
| 12.0 | 330 | 005-4411-BH | 1.58    | 2.76  | R17058543-BH  | 1.65    | 2.83  |              |         |       |
| 12.0 | 400 | 005-4412-BH | 1.58    | 3.74  | R17058580-BH  | 1.65    | 3.82  |              |         |       |
| 13.0 | 330 | 005-4044-BH | 1.58    | 3.74  |               |         |       |              |         |       |
| 14.0 | 170 |             |         |       | R17058500-BH  | 1.26    | 2.83  |              |         |       |
| 14.0 | 280 | 005-4060-BH | 1.58    | 2.76  | R17058520-BH  | 1.65    | 2.83  |              |         |       |
| 14.0 | 280 | 005-4416-BH | 1.58    | 2.76  | R17058520-BH  | 1.65    | 2.83  | R17058232-BH | 1.65    | 2.83  |
| 14.0 | 400 | 005-4164-BH | 1.58    | 3.74  | R17058560-BH  | 1.65    | 3.82  |              |         |       |
| 15.0 | 400 |             |         |       | R17058562-BH  | 1.65    | 3.82  |              |         |       |
| 15.0 | 400 | 005-4026-BH | 1.77    | 3.74  | R17058563-BH  | 1.85    | 3.82  | R17058320-BH | 1.85    | 3.82  |
| 16.0 | 280 | 005-4062-BH | 1.58    | 2.76  | R17058522-BH  | 1.65    | 2.83  |              |         |       |
| 16.0 | 280 | 005-4420-BH | 1.58    | 2.76  | R17058522-BH  | 1.65    | 2.83  |              |         |       |
| 16.0 | 330 |             |         |       | R17058547-BH  | 1.65    | 2.83  |              |         |       |
| 17.0 | 400 |             |         |       | R17058588-BH  | 1.65    | 3.82  |              |         |       |
| 17.5 | 280 |             |         |       | R17058523-BH  | 1.65    | 3.82  |              |         |       |
| 20.0 | 170 | 005-4065-BH | 1.58    | 2.76  | R17058501-BH  | 1.65    | 2.83  |              |         |       |
| 20.0 | 280 | 005-4066-BH | 1.58    | 3.74  | R17058526-BH  | 1.65    | 3.82  |              |         |       |
| 20.0 | 330 |             |         |       |               |         |       |              |         |       |
| 20.0 | 400 |             |         |       | R17058564-BH  | 1.85    | 3.82  |              |         |       |
| 20.5 | 400 | 005-4432-BH | 1.77    | 3.74  | R17058565-BH  | 1.85    | 3.82  |              |         |       |
| 21.0 | 400 | 005-4128-BH | 1.77    | 3.74  | R17058567-BH  | 1.85    | 3.82  |              |         |       |
| 22.0 | 400 | 005-4483-BH | 1.77    | 3.74  | R17058569-BH  | 1.85    | 3.82  |              |         |       |
| 22.5 | 280 |             |         |       | R17058527-BH  | 1.65    | 3.15  |              |         |       |
| 22.5 | 280 |             |         |       | R17058528-BH  | 1.65    | 3.82  |              |         |       |
| 24.0 | 280 |             |         |       | R17058529-BH  | 1.65    | 3.82  |              |         |       |
| 24.0 | 400 | 005-4438-BH | 1.85    | 3.74  | R17058571-BH  | 1.85    | 3.82  | R17058342-BH | 1.85    | 5.31  |
| 24.0 | 400 | 005-4027-BH | 1.77    | 4.61  |               |         |       |              |         |       |
| 24.5 | 330 | 005-4047-BH | 1.58    | 4.61  | R17058552-BH  | 1.65    | 4.76  |              |         |       |
| 26.0 | 300 | 005-4048-BH | 1.58    | 4.61  | R17058537-BH  | 1.65    | 4.76  |              |         |       |
| 26.5 | 400 | 005-4484-BH | 1.77    | 4.61  | R17058574-BH  | 1.85    | 4.76  |              |         |       |
| 28.0 | 170 | 005-4071-BH | 1.58    | 2.76  | R17058502-BH  | 1.65    | 2.83  |              |         |       |
| 28.0 | 280 | 005-4072-BH | 1.58    | 4.61  | R17058530-BH  | 1.65    | 4.76  |              |         |       |
| 28.0 | 330 | 005-4447-BH | 1.77    | 3.74  | 8R17058553-BH | 1.85    | 3.82  |              |         |       |