

## High Voltage AC Power Capacitors 1-Phase Units



### FEATURES

- Latest technology
- High quality materials
- Low losses design
- Dielectric liquid biodegradable

### APPLICATIONS

- Power factor correction
- Harmonic filtering
- Motor compensation
- Industrial converter
- Thermal power station
- Solar
- Wind

### LINKS TO ADDITIONAL RESOURCES



| QUICK REFERENCE DATA |                                                    |
|----------------------|----------------------------------------------------|
| Series               | Pha... HVAC 1-phase                                |
| Description          | High voltage AC power capacitors, indoor / outdoor |
| Type                 | High voltage AC 1-phase                            |
| Technology           | All-film polypropylene / aluminum foil             |
| Voltage min. (V)     | 1000                                               |
| Voltage max. (V)     | 24 000                                             |
| Frequency min. (Hz)  | 50                                                 |
| Frequency max. (Hz)  | 60                                                 |
| Output min. (kvar)   | 25                                                 |
| Output max. (kvar)   | 1000                                               |

| TECHNICAL DATA        |                                                |
|-----------------------|------------------------------------------------|
| Rated frequency       | 50 Hz or 60 Hz (other frequencies on request)  |
| Insulation class      | 3.6 kV to 36 kV                                |
| Internal connection   | 1-phase (live or dead case)                    |
| Average losses        | < 0.15 W/kvar                                  |
| Discharge resistors   | Internal (75 V/10 min) or (50 V/5 min)         |
| Temperature category  | -50 °C to +55 °C                               |
| Capacitance tolerance | -5 % / +10 %                                   |
| Internal connection   | Single phase (live or dead case)               |
| Dielectric            | All-film polypropylene / aluminum foil         |
| Impregnating agent    | Synthetic oil (non-PCB)                        |
| Protection            | Internal fuses / pressure monitoring device    |
| Inrush current        | 100 x I <sub>N</sub> max.                      |
| Standards             | IEC 60871, ANSI/IEEE 18, CSA C22.2 No. 190     |
| Bushings              | Porcelain, screw or welded type, M12 / M16     |
| Casing                | Stainless steel                                |
| Standard color        | RAL 7033 / other colors available upon request |

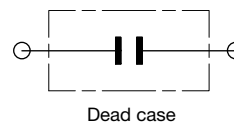
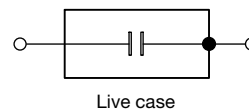
## FORMS OF CONSTRUCTION



Mechanically suitable for horizontal arrangement

Mechanically suitable for vertical arrangement

## CONNECTION



## CORROSION PROTECTION

Case material: stainless steel case AISI 409 (AISI 304 as option)

Thickness of material 1.5 mm, top cover and bottom 2.0 mm

Standard case dimensions: 345 mm x 110 mm / 135 mm / 175 mm x H mm

Special dimensions on request (replacement market)



## DIMENSION AND WEIGHT

## 1-PHASE CAPACITORS UP TO 7.2 kV, IP00

| RATED VOLTAGE<br>$U_N$<br>(kV) | OUTPUT<br>$Q_n$ AT 50 Hz<br>(kvar) | OUTPUT<br>$Q_n$ AT 60 Hz<br>(kvar) | IMPULSE<br>(kVp) | CURRENT<br>AT 50 Hz<br>(A) | CURRENT<br>AT 60 Hz<br>(A) | CASING DIMENSIONS<br>L x W x H<br>(mm) | CASING DIMENSIONS<br>L x W x H<br>(mm) |
|--------------------------------|------------------------------------|------------------------------------|------------------|----------------------------|----------------------------|----------------------------------------|----------------------------------------|
|                                |                                    |                                    |                  |                            |                            |                                        | WITH INTERNAL FUSES                    |
| 4.15                           | 25                                 | 30                                 | 60               | 6                          | 7                          | 345 x 110 x 130                        | n/a                                    |
| 4.15                           | 50                                 | 60                                 | 60               | 12                         | 14                         | 345 x 110 x 180                        | n/a                                    |
| 4.15                           | 75                                 | 90                                 | 60               | 18                         | 22                         | 345 x 110 x 230                        | n/a                                    |
| 4.15                           | 100                                | 120                                | 60               | 24                         | 29                         | 345 x 110 x 285                        | n/a                                    |
| 4.15                           | 150                                | 180                                | 60               | 36                         | 43                         | 345 x 135 x 320                        | 345 x 135 x 395                        |
| 4.15                           | 200                                | 240                                | 60               | 48                         | 58                         | 345 x 135 x 405                        | 345 x 135 x 420                        |
| 4.15                           | 300                                | 360                                | 60               | 72                         | 87                         | 345 x 175 x 440                        | 345 x 135 x 595                        |
| 4.15                           | 400                                | 480                                | 60               | 96                         | 116                        | 345 x 175 x 560                        | 345 x 175 x 590                        |
| 4.15                           | 550                                | 660                                | 60               | 133                        | 159                        | 345 x 175 x 735                        | 345 x 175 x 775                        |
| 4.15                           | 700                                | 840                                | 60               | 169                        | 202                        | 345 x 175 x 915                        | 345 x 175 x 965                        |
| 4.15                           | 900                                | 1080                               | 60               | 217                        | 260                        | 345 x 175 x 1160                       | 345 x 175 x 1200                       |

## 1-PHASE CAPACITORS UP TO 12 kV, IP00

| RATED VOLTAGE<br>$U_N$<br>(kV) | OUTPUT<br>$Q_n$ AT 50 Hz<br>(kvar) | OUTPUT<br>$Q_n$ AT 60 Hz<br>(kvar) | IMPULSE<br>(kVp) | CURRENT<br>AT 50 Hz<br>(A) | CURRENT<br>AT 60 Hz<br>(A) | CASING DIMENSIONS<br>L x W x H<br>(mm) | CASING DIMENSIONS<br>L x W x H<br>(mm) |
|--------------------------------|------------------------------------|------------------------------------|------------------|----------------------------|----------------------------|----------------------------------------|----------------------------------------|
|                                |                                    |                                    |                  |                            |                            |                                        | WITH INTERNAL FUSES                    |
| 6.92                           | 25                                 | 30                                 | 75               | 4                          | 4                          | 345 x 110 x 140                        | n/a                                    |
| 6.92                           | 50                                 | 60                                 | 75               | 7                          | 9                          | 345 x 110 x 190                        | n/a                                    |
| 6.92                           | 75                                 | 90                                 | 75               | 11                         | 13                         | 345 x 110 x 245                        | n/a                                    |
| 6.92                           | 100                                | 120                                | 75               | 14                         | 17                         | 345 x 110 x 305                        | n/a                                    |
| 6.92                           | 150                                | 180                                | 75               | 22                         | 26                         | 345 x 135 x 345                        | n/a                                    |
| 6.92                           | 200                                | 240                                | 75               | 29                         | 35                         | 345 x 135 x 430                        | 345 x 135 x 495                        |
| 6.92                           | 300                                | 360                                | 75               | 43                         | 52                         | 345 x 135 x 615                        | 345 x 135 x 620                        |
| 6.92                           | 400                                | 480                                | 75               | 58                         | 69                         | 345 x 135 x 775                        | 345 x 135 x 790                        |
| 6.92                           | 550                                | 660                                | 75               | 79                         | 95                         | 345 x 175 x 780                        | 345 x 175 x 815                        |
| 6.92                           | 700                                | 840                                | 75               | 101                        | 121                        | 345 x 175 x 965                        | 345 x 175 x 1015                       |
| 6.92                           | 900                                | 1080                               | 75               | 130                        | 156                        | 345 x 175 x 1200                       | n/a                                    |

## 1-PHASE CAPACITORS UP TO 17.5 kV, IP00

| RATED VOLTAGE<br>$U_N$<br>(kV) | OUTPUT<br>$Q_n$ AT 50 Hz<br>(kvar) | OUTPUT<br>$Q_n$ AT 60 Hz<br>(kvar) | IMPULSE<br>(kVp) | CURRENT<br>AT 50 Hz<br>(A) | CURRENT<br>AT 60 Hz<br>(A) | CASING DIMENSIONS<br>L x W x H<br>(mm) | CASING DIMENSIONS<br>L x W x H<br>(mm) |
|--------------------------------|------------------------------------|------------------------------------|------------------|----------------------------|----------------------------|----------------------------------------|----------------------------------------|
|                                |                                    |                                    |                  |                            |                            |                                        | WITH INTERNAL FUSES                    |
| 10.1                           | 25                                 | 30                                 | 95               | 2                          | 3                          | 345 x 110 x 145                        | n/a                                    |
| 10.1                           | 50                                 | 60                                 | 95               | 5                          | 6                          | 345 x 110 x 205                        | n/a                                    |
| 10.1                           | 75                                 | 90                                 | 95               | 7                          | 9                          | 345 x 110 x 265                        | n/a                                    |
| 10.1                           | 100                                | 120                                | 95               | 10                         | 12                         | 345 x 110 x 325                        | n/a                                    |
| 10.1                           | 150                                | 180                                | 95               | 15                         | 18                         | 345 x 135 x 375                        | n/a                                    |
| 10.1                           | 200                                | 240                                | 95               | 20                         | 24                         | 345 x 135 x 465                        | n/a                                    |
| 10.1                           | 300                                | 360                                | 95               | 30                         | 36                         | 345 x 135 x 645                        | 345 x 135 x 680                        |
| 10.1                           | 400                                | 480                                | 95               | 40                         | 48                         | 345 x 175 x 655                        | 345 x 175 x 685                        |
| 10.1                           | 550                                | 660                                | 95               | 54                         | 65                         | 345 x 175 x 855                        | 345 x 175 x 830                        |
| 10.1                           | 700                                | 840                                | 95               | 69                         | 83                         | 345 x 175 x 1050                       | 345 x 175 x 1055                       |
| 10.1                           | 900                                | 1080                               | 95               | 89                         | 107                        | 345 x 175 x 1190                       | 345 x 175 x 1200                       |



## 1-PHASE CAPACITORS UP TO 24 kV, IP00

| RATED VOLTAGE<br>$U_N$<br>(kV) | OUTPUT<br>$Q_n$ AT 50 Hz<br>(kvar) | OUTPUT<br>$Q_n$ AT 60 Hz<br>(kvar) | IMPULSE<br>(kVp) | CURRENT<br>AT 50 Hz<br>(A) | CURRENT<br>AT 60 Hz<br>(A) | CASING DIMENSIONS<br>L x W x H<br>(mm) | CASING DIMENSIONS<br>L x W x H<br>(mm) |
|--------------------------------|------------------------------------|------------------------------------|------------------|----------------------------|----------------------------|----------------------------------------|----------------------------------------|
|                                |                                    |                                    |                  |                            |                            |                                        | WITH INTERNAL FUSES                    |
| 13.85                          | 25                                 | 30                                 | 95               | 2                          | 2                          | 345 x 110 x 175                        | n/a                                    |
| 13.85                          | 50                                 | 60                                 | 95               | 4                          | 4                          | 345 x 110 x 190                        | n/a                                    |
| 13.85                          | 75                                 | 90                                 | 95               | 5                          | 6                          | 345 x 135 x 225                        | n/a                                    |
| 13.85                          | 100                                | 120                                | 95               | 7                          | 9                          | 345 x 135 x 270                        | n/a                                    |
| 13.85                          | 150                                | 180                                | 95               | 11                         | 13                         | 345 x 135 x 360                        | n/a                                    |
| 13.85                          | 200                                | 240                                | 95               | 14                         | 17                         | 345 x 135 x 435                        | n/a                                    |
| 13.85                          | 300                                | 360                                | 95               | 22                         | 26                         | 345 x 135 x 575                        | 345 x 135 x 925                        |
| 13.85                          | 400                                | 480                                | 95               | 29                         | 35                         | 345 x 175 x 590                        | 345 x 135 x 945                        |
| 13.85                          | 550                                | 660                                | 95               | 40                         | 48                         | 345 x 175 x 770                        | 345 x 175 x 870                        |
| 13.85                          | 700                                | 840                                | 95               | 51                         | 61                         | 345 x 175 x 950                        | 345 x 175 x 1040                       |
| 13.85                          | 900                                | 1080                               | 95               | 65                         | 78                         | 345 x 175 x 1190                       | 345 x 175 x 1200                       |

## TYPE NOMENCLATURE

|                     |                         |                             |                                      |                               |                    |                                               |                                                    |                          |          |          |          |
|---------------------|-------------------------|-----------------------------|--------------------------------------|-------------------------------|--------------------|-----------------------------------------------|----------------------------------------------------|--------------------------|----------|----------|----------|
| <b>P</b>            | <b>h</b>                | <b>a</b>                    | <b>f</b>                             | <b>s</b>                      | <b>o</b>           | <b>6.3</b>                                    | <b>/</b>                                           | <b>200</b>               | <b>/</b> | <b>1</b> | <b>D</b> |
| 1                   | 2                       | 3                           | 4                                    | 5                             | 6                  | 7                                             | 8                                                  | 9                        |          |          |          |
| 1                   | 2                       | 3                           | 4                                    | 5                             | 6                  | 7                                             | 8                                                  | 9                        |          |          |          |
| Ph: power capacitor | a = all film dielectric | f: outdoor<br>n. E.: indoor | s: live casing<br>n. E.: dead casing | o: non PCB impregnating agent | Rated voltage (kV) | Rated output (kvar)<br>Rated capacitance (μF) | 1 = 1-phase capacitor<br>n. E. = 3-phase capacitor | D = over pressure device |          |          |          |

### Note

- n. E. = no entry



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