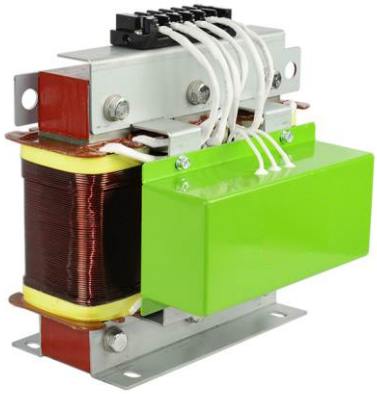
DATASHEET | Harmonic Filters 10%

VEIKONG



# Passive Harmonic Filters

## Descriptions

Modern electrical equipment imposes stringent demands on voltage stability and power quality. The power network has to be free from harmonics and other electrical disturbances. This is why passive harmonic filter has come into being.

Harmonic filters have been specially designed to eliminate the harmonics from the current absorbed by 6-pulse power converters, such as frequency inverter for motors, UPS, etc.

These are essentially passive filters based on a series-parallel combination of inductances and capacitors, adapted to filter the input of power converters.

## Functions:

- Reduction of the current wave's distortion towards the network and the rest of the installation;
- Compliance with the IEC 61000-3-4, IEC 61000-3-12, IEC 61800-3 and IEEE-519;
- Energy savings with the reduction of the root mean square current (RMS), thus reducing the kV•A demand;
- Less strain on equipment and Increase of the working life of units above this location with the corresponding reduction of thermal losses generated;
- Limits current transients, preventing damages caused to the converter and overvoltage trips that affect production processes;
- Lower maintenance costs and saving cost for replacing worn-out machines.

## Technical Standards

- Capacitors: CEI EN 60831-1/2, IEC 831-1/2
- Industrial network affected by harmonics: CEI EN 61642
- Equipment: CEI EN 60439-1, IEC 439-1
- Systems: IEEE-519,EN 60439, EN 60831, EN 50081-1, EN 50081-2, clase A

## Applications:

- DC fast chargers
- HVAC installations
- Fan and pump
- Industrial automation
- Robotic equipment
- AC/DC Motor drives
- Frequency inverters



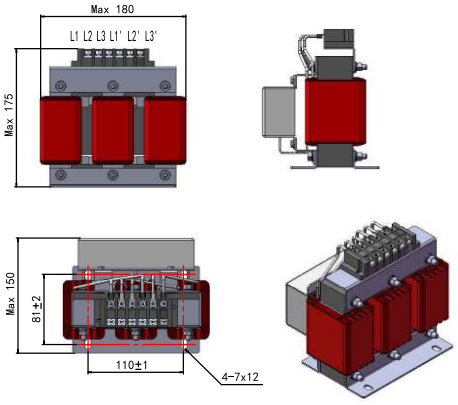



## Features:

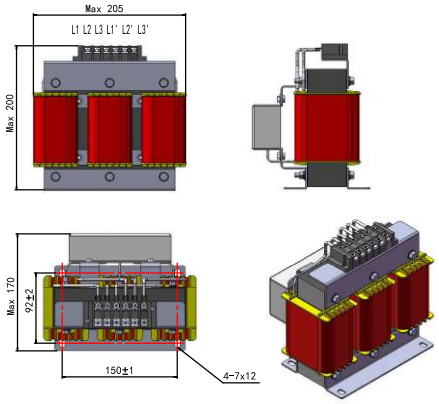
| Main Characteristics | |
|---|---|
| Nominal system voltage (ph-ph) | 3x 380 to 500 Vac. (Others on request) |
| Frecuency | 50 Hz (60Hz on request) |
| Ratedload power(P) | See table |
| Overload | 1,5 times rated current @50Hz 1min |
| Rated load current (I) | See table |
| Residual THD | ⩽10 % at full load(5% on request) |
| Voltage drop at rated current | < 2 % |

| Design features | |
|---|---|
| Degree of protection | IP00 indoor(IP20/IP54 on request) |
| Ventilation | Natural |
| Mounting | On the floor |
| Installation | Indoor standards |
| Operating temperature | Ambient : -25°C to +50°C |
| Relative humidity | 80 % |

## Mechanical data




Pic 1

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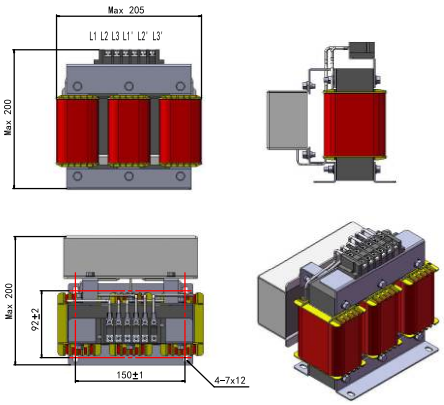


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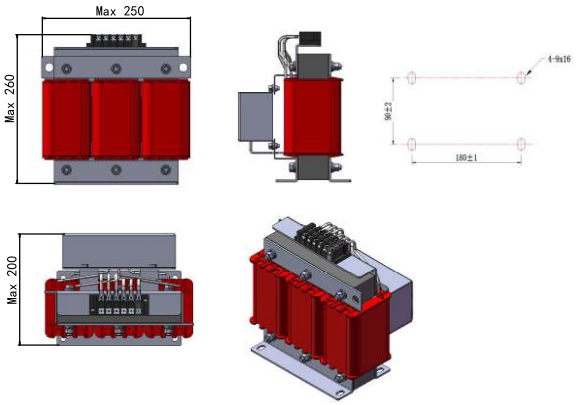
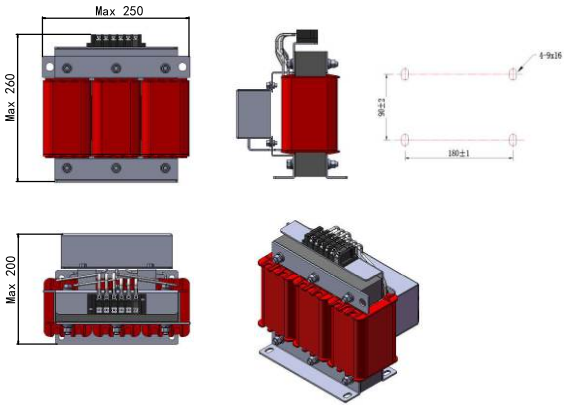



Pic 4

## Mechanical data

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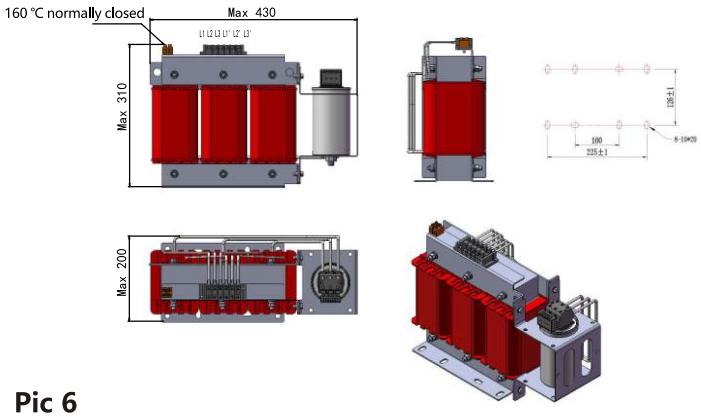


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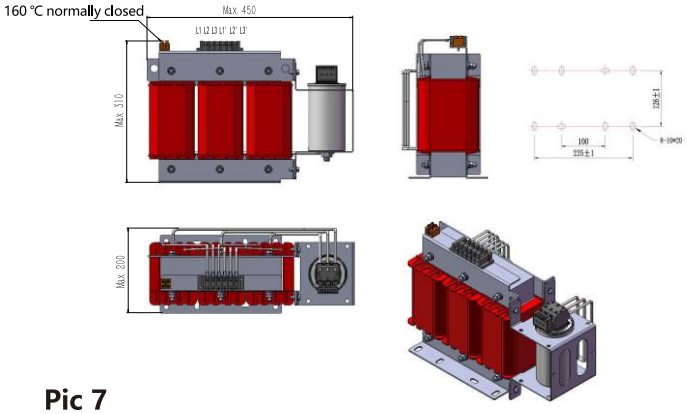
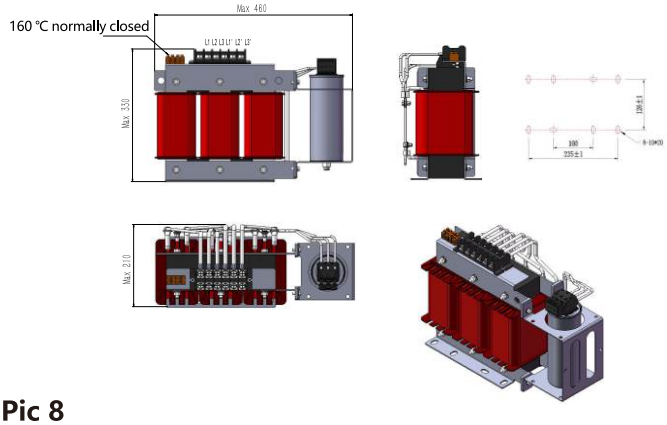



Pic 7

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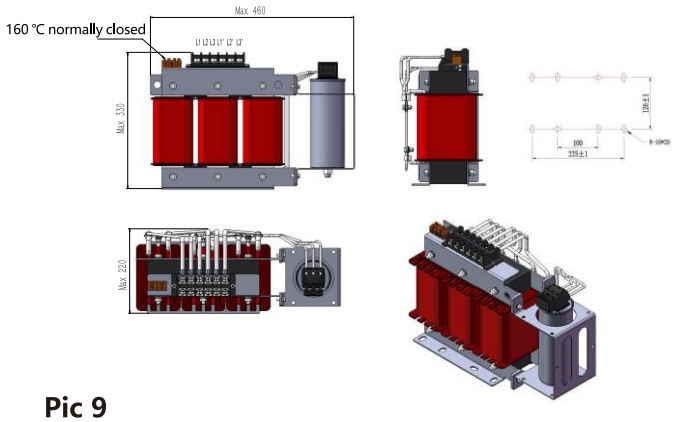


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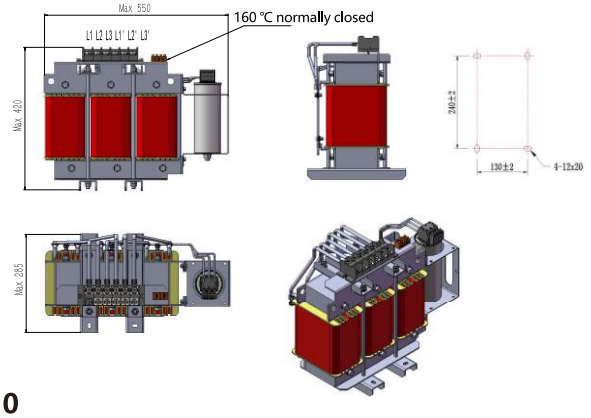


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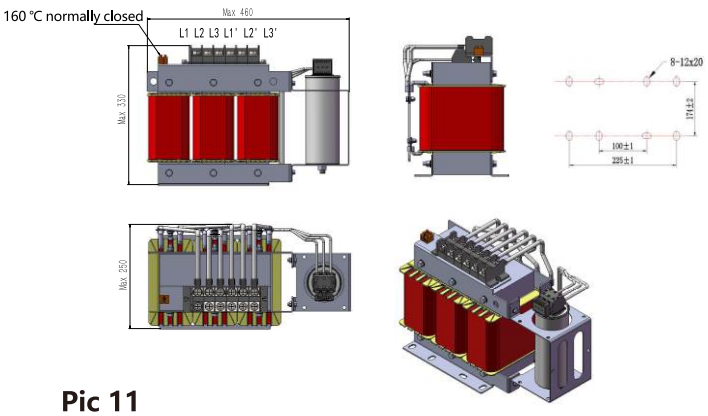


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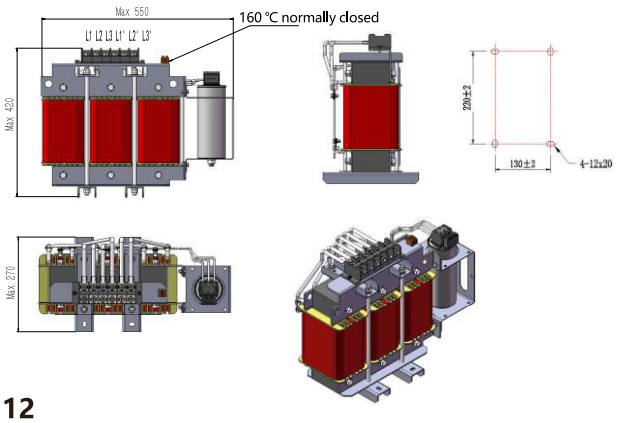
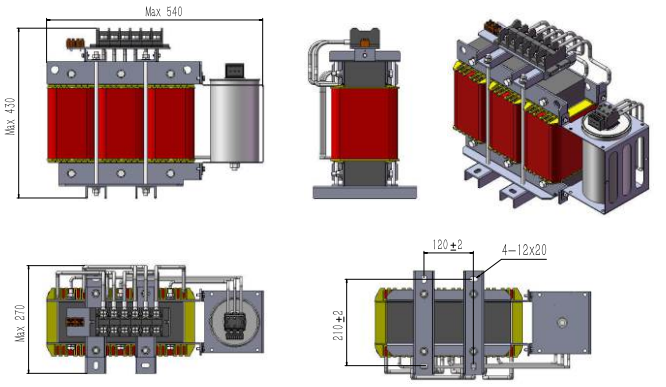



Pic 12

## Mechanical data

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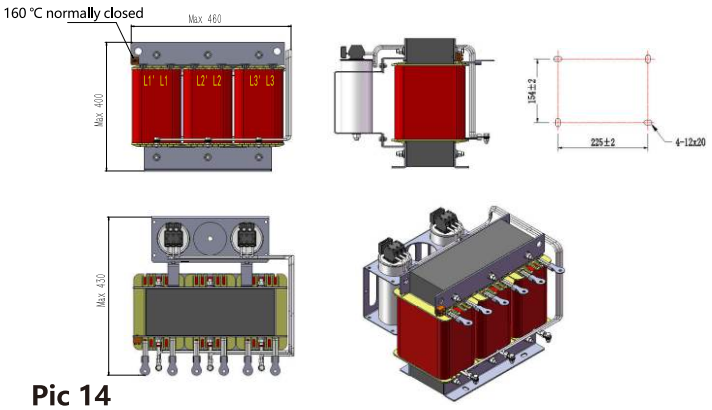


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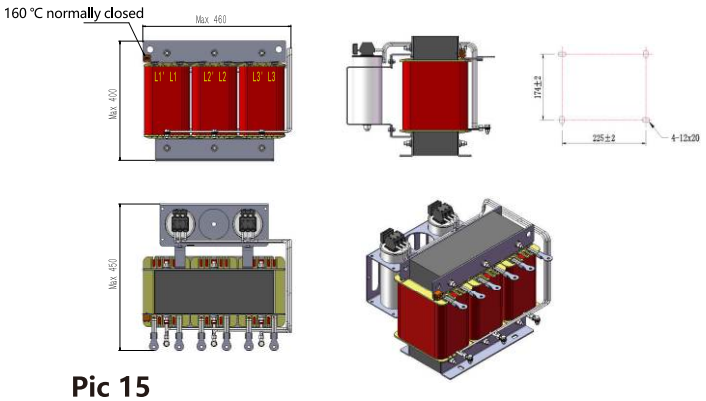


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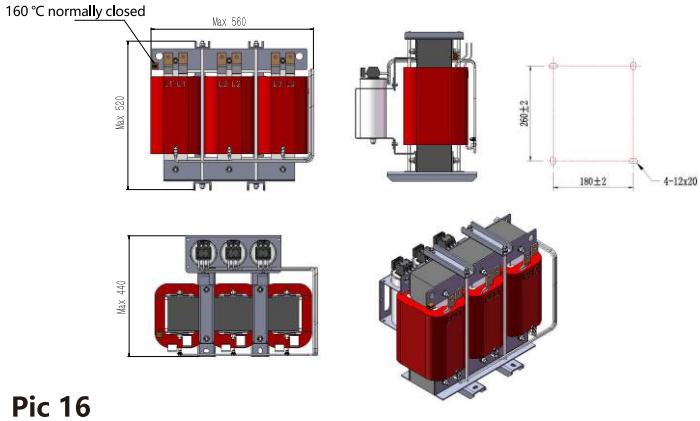


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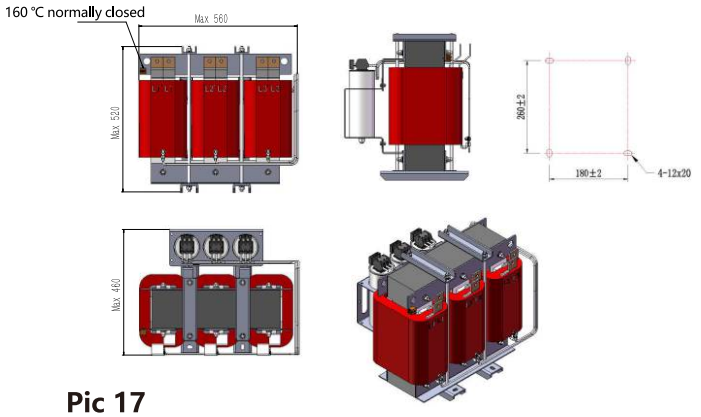


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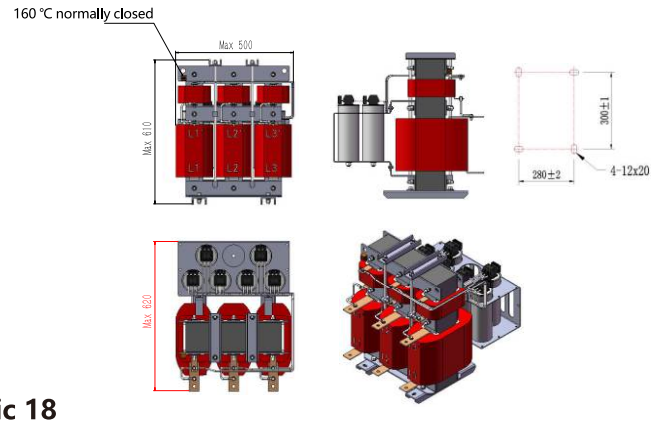


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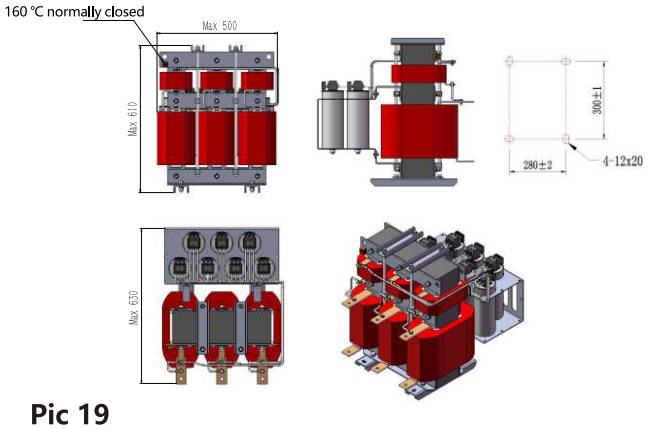


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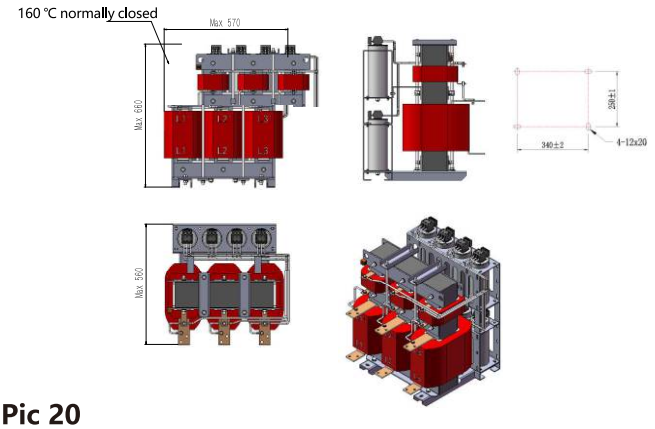
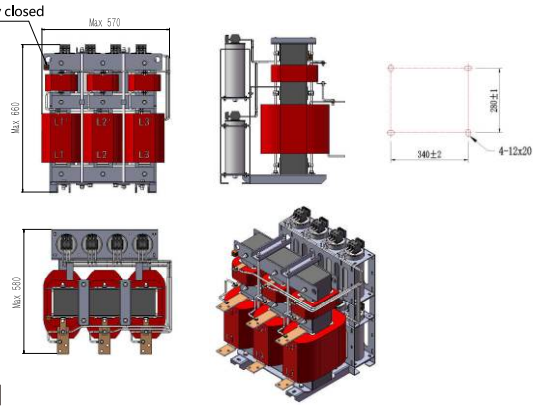


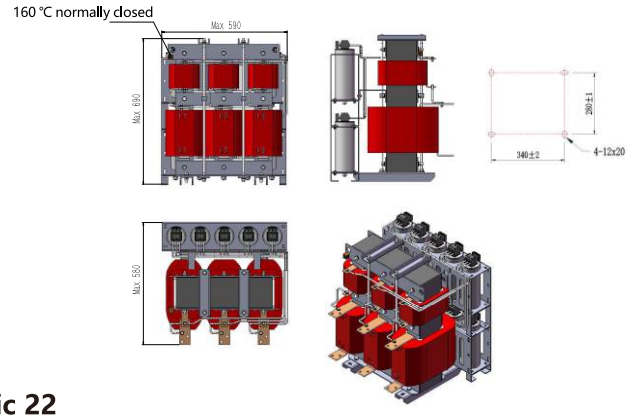

**Pic 20**

160 °C normally closed



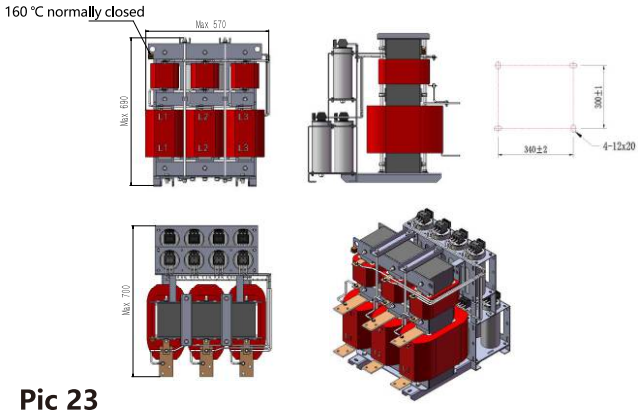

**Pic 21**

160 °C normally closed



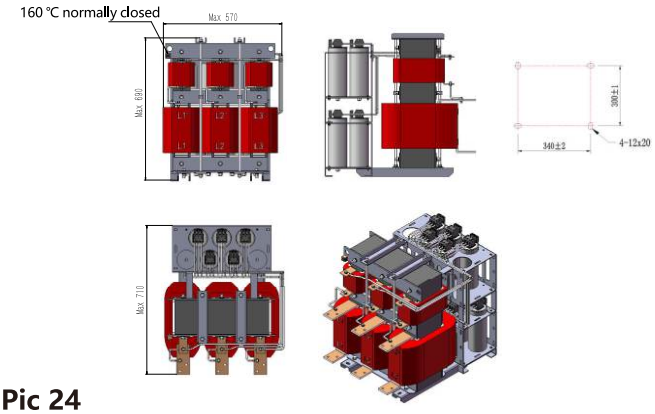

**Pic 22**

160 °C normally closed



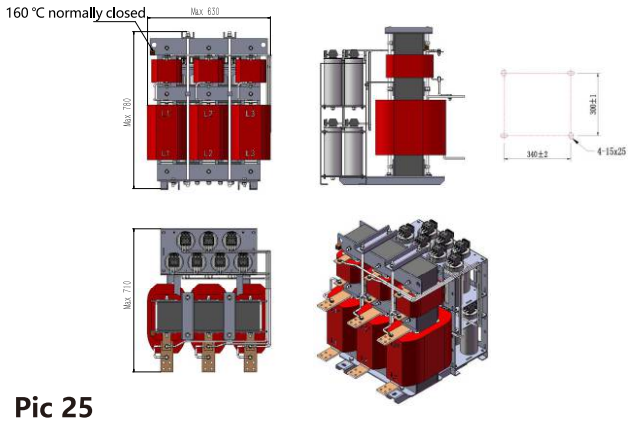

**Pic 23**

160 °C normally closed



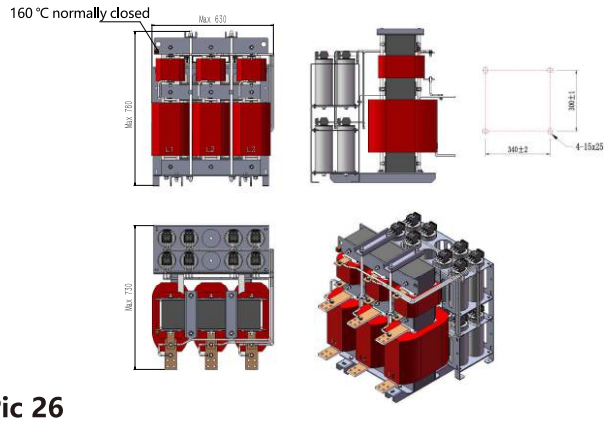

**Pic 24**

160 °C normally closed



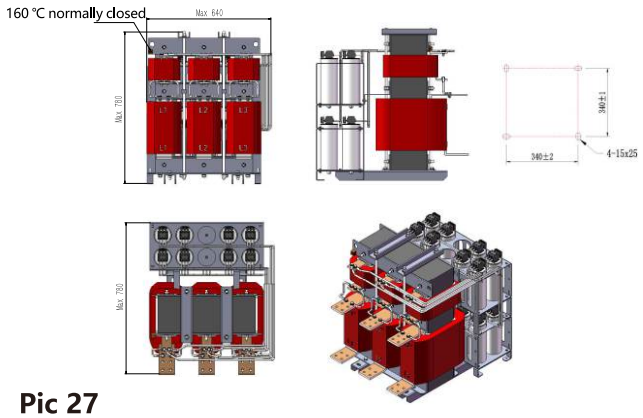

**Pic 25**

160 °C normally closed



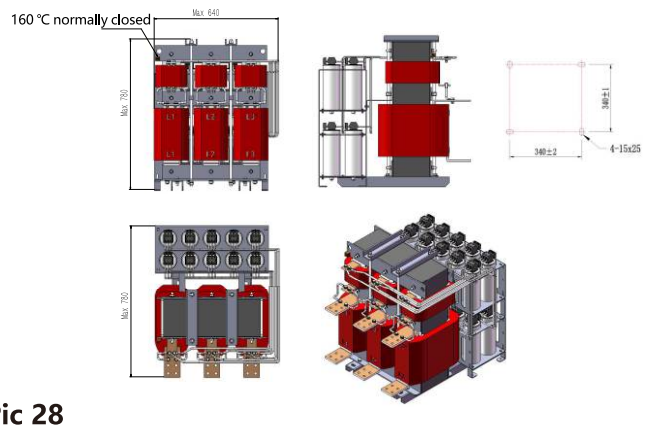

**Pic 26**

160 °C normally closed




**Pic 27**

160 °C normally closed




**Pic 28**

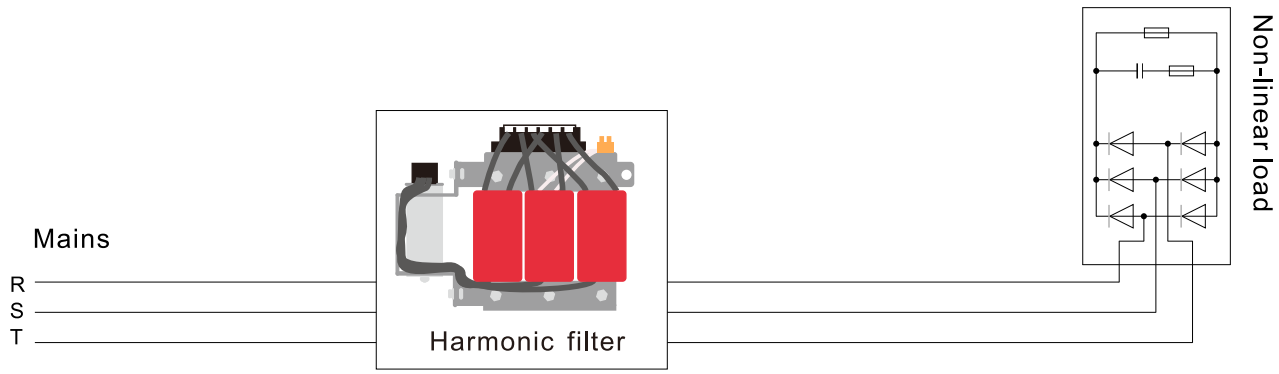
## Technical Data

| Filter Model | System Voltage | Rated Power @ 400VAC (kw) | Rated Current @400VAC (A) | Insulation Class (H on request) | Weight (kg) | Pic. | Connections | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | | |
| VKS-OSK-0003-4C5/10 | 3×380 to 500VAC | 1.5 | 3 | F/H | 6.75 | 1 | √ | |
| VKS-OSK-0005-4C5/10 | 3×380 to 500VAC | 2.2 | 5 | F/H | 7.50 | 2 | √ | |
| VKS-OSK-0008-4C5/10 | 3×380 to 500VAC | 3.7 | 8 | F/H | 11.75 | 3 | √ | |
| VKS-OSK-0011-4C5/10 | 3×380 to 500VAC | 5.5 | 11 | F/H | 18.5 | 4 | √ | |
| VKS-OSK-0014-4C5/10 | 3×380 to 500VAC | 7.5 | 14 | F/H | 21.0 | 5 | √ | |
| VKS-OSK-0020-4A5/10 | 3×380 to 500VAC | 11 | 20 | F/H | 33 | 6 | √ | |
| VKS-OSK-0027-4A5/10 | 3×380 to 500VAC | 15 | 27 | F/H | 35.5 | 7 | √ | |
| VKS-OSK-0031-4A5/10 | 3×380 to 500VAC | 18.5 | 31 | F/H | 40.0 | 8 | √ | |
| VKS-OSK-0038-4A5/10 | 3×380 to 500VAC | 22 | 38 | F/H | 43.2 | 9 | √ | |
| VKS-OSK-0052-4A5/10 | 3×380 to 500VAC | 30 | 52 | F/H | 58.8 | 10 | √ | |
| VKS-OSK-0064-4A5/10 | 3×380 to 500VAC | 37 | 64 | F/H | 59.5 | 11 | √ | |
| VKS-OSK-0082-4A5/10 | 3×380 to 500VAC | 45 | 82 | F/H | 68.9 | 12 | √ | |
| VKS-OSK-0100-4A5/10 | 3×380 to 500VAC | 55 | 100 | F/H | 80.0 | 13 | √ | |
| VKS-OSK-0129-4A5/10 | 3×380 to 500VAC | 75 | 129 | F/H | 101.0 | 14 | √ | |
| VKS-OSK-0154-4A5/10 | 3×380 to 500VAC | 90 | 154 | F/H | 115.6 | 15 | √ | |
| VKS-OSK-0188-4A5/10 | 3×380 to 500VAC | 110 | 188 | F/H | 110.0 | 16 | √ | |
| VKS-OSK-0224-4A5/10 | 3x380 to 500VAC | 132 | 224 | F/H | 197.5 | 17 | | √ |
| VKS-OSK-0275-4A5/10 | 3x380 to 500VAC | 160 | 275 | F/H | 210 | 18 | | √ |
| VKS-OSK-0316-4A5/10 | 3x380 to 500VAC | 185 | 316 | F/H | 195 | 19 | | √ |
| VKS-OSK-0341-4A5/10 | 3x380 to 500VAC | 200 | 341 | F/H | 218 | 20 | | √ |
| VKS-OSK-0375-4A5/10 | 3x380 to 500VAC | 220 | 375 | F/H | 259 | 21 | | √ |
| VKS-OSK-0431-4A5/10 | 3x380 to 500VAC | 250 | 431 | F/H | 272 | 22 | | √ |
| VKS-OSK-0489-4A5/10 | 3x380 to 500VAC | 280 | 489 | F/H | 300 | 23 | | √ |
| VKS-OSK-0552-4A5/10 | 3x380 to 500VAC | 315 | 552 | F/H | 318 | 24 | | √ |
| VKS-OSK-0629-4A5/10 | 3x380 to 500VAC | 355 | 629 | F/H | 353 | 25 | | √ |
| VKS-OSK-0730-4A5/10 | 3x380 to 500VAC | 400 | 730 | F/H | 372 | 26 | | √ |
| VKS-OSK-0787-4A5/10 | 3x380 to 500VAC | 450 | 787 | F/H | 455 | 27 | | √ |
| VKS-OSK-0852-4A5/10 | 3x380 to 500VAC | 500 | 852 | F/H | 460 | 28 | | √ |

Selection Recommendation : It's compulsory to collect all network conditions:

- Rated values and service type of the load to the filter
- Indication of the point where the filter has to be installed
- Rated values of other non-linear loads
- Frequency and value of the harmonic value to be reduced
- Presence and type of the power factor equipment in the network
- Other optional voltages, frequencies and currents, on demand.

■ For more technical details,please contact our sales representatives.



## Block schematic (THDi ≤10%)