## MK3 Thyristor Inverter

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# High-Power Thyristor Inverter developed by Hi-tech and Extensive Experience

***Since the company was founded over 50 years, NetuRen as a pioneer in induction heating has been working on research and development for state of the art technologies and filling the more diversifying and ever advancing industry's need. Our latest developed Thyristor inverter MK3 has drastically reduced the size of conventional Thyristor inverter, increased the output power up to 2000kW and enhanced the flexibility to meat the diversifying applications for use of hardening treating and melting.***

## ■Frequency and output

The MK3 accommodates a frequency range of 0.5kHz to 3kHz at an output range of 600kW to 2000kW. Refer to the following ratings for details.

## ■Energy savings

To obtain higher efficiency, incoming voltage is fixed to 700 to 800V (depends on output voltage required) for reducing switching and transfer losses.

## ■Compact design

Adapting large size thyristor devices and miniaturized main circuit component, MK3 has successfully accomplished ultra-compact size for saving of floor space.

## ■Easy maintenance and inspection

Thyristors, printed circuit boards and other components are all placed at the front for easy maintenance access. Cooling water circulation system(option) helps to solve the water problems.

## ■Dependable protective circuits

The following protective circuits ensure safe inverter operation in case of touching coils, no-load operations, over-load operations and other operation errors.

### Tripping operations

●Door interlock ●Cooling water flow ●Water inlet/outlet temp.
●IDC trip ●VDC trip ●LOW.F trip ●HI.F trip ●C.F.D trip
●Driving SCR trouble ●Continuous Curr. ●Curr. unbalance ●UV trip

### Limited operations

●IDC limit ●VL limit ●Power limit

## MK3 Thyristor Inverter Ratings

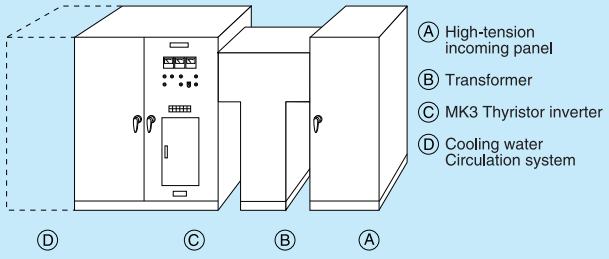
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Output | Output capacity(kW) | 600 | | 800 | | | 1000 | | 1200 | | 1500 | | 2000 | |
| | Frequency(kHz) | 1 | 3 | 0.5 | 1 | 3 | 0.5 | 1 | 0.5 | 1 | 0.5 | 1 | 0.5 | 1 |
| Input | Voltage (V) | 3φ, 700V±10%, 50/60Hz | | | | | 3φ, 800V±10%, 50/60Hz | | | | | | | |
| | Capacity (kVA) | Output(kW)÷0.9=Input(kW) | | | | | Output(kW)×1.4=Input(kVA) | | | | | | | |
| Cooling water | Water flow (L/min) | 130/180 | | 160/220 | | | 200/280 | | 220/300 | | 270/380 | | 350/490 | |
| | Water inlet/outlet dia. | 40A/50A | | | | | 50A/50A | | | | 65A/65A | | | |
| | Common specifications | Water pressure: 0.2-0.4MPa, Water temperature: below 35℃ | | | | | | | | | | | | |
| External dimensions | Height H (mm) | 1950 | | | | | | | 2350 | | | | | |
| | Inverter W1 (mm) | 1600 | | | | | 1800 | | 2400 | | | | | |
| | Cooling system W2(mm) | 900 | | | | | | | | | | | | |
| | Total Width W0 (mm) | 2500 | | | | | 2700 | | 3300 | | | | | |
| | Depth D (mm) | 1200 | | | | | 1400 | | 1600 | | | | | |
| | Mass (kg) | 2500/3000 | | 2700/3200 | | | 3000/3500 | | 3500/4200 | | 3700/4700 | | 4000/5000 | |

※Input capacity does not include KVA for cooling water system.

※Larger values in dual ratings are for equipment with cooling water circulation system and smaller for without system.

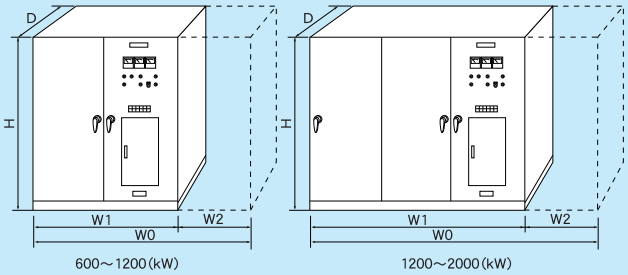
※Standard of MK3 is 12 pulse conrtol,if 6 pulse control is required, feel free to contact us.

## Typical Layout of MK3 Inverter




※Incoming voltage of MK3 is 700(800)V and requires the high-tension incoming panel.
If customer provides 700(800)V, then Ⓐ and Ⓑ are not required.

## Outline Drawings




※Dotted line indicates cooling water circulation system and it is optionally available.
※Cooling water circulation system with ion-exchanger and without (Supply and circulate deionized water) ion-exchanger are both available.

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- Feel free to contact us for information on inverters with other output capacities and frequencies not indicated in the above tables.
- Specifications and external appearance are subject to change without notice for product improvement.


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