

Press-Pack IGBT 3-Level Inverters

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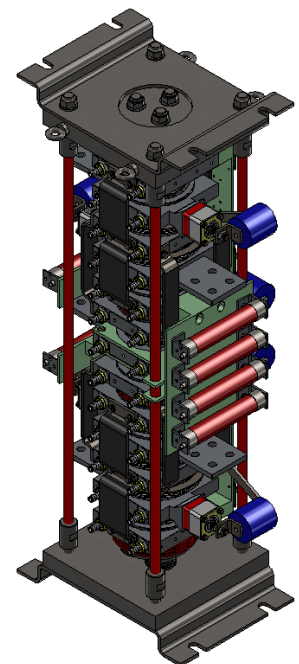
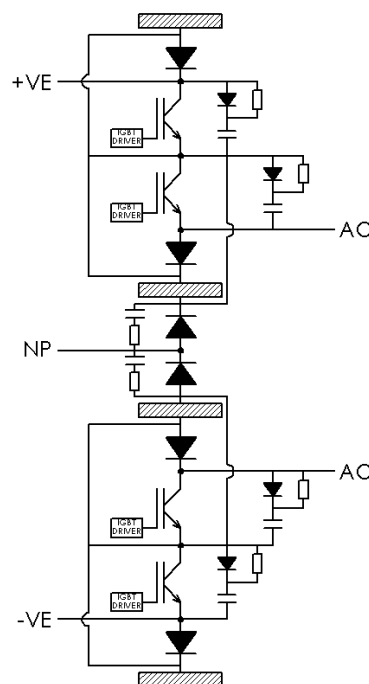
A range of 3-level topology assemblies using press-pack IGBT technology have been developed to serve applications at the highest end of the power market.

3 separate designs are available, a totally independent 3.3kV system, a 6.6kV system and a 10kV system. The 6.6kV and 10kV systems are based on the combination of 2 IGBT stacks and 1 diode stack. Each system benefits from direct water cooling to provide highly effective heat dissipation away from the devices and pre-loaded disc spring clamping to evenly distribute the applied force across the entire surface area of the device.

Also designed into each system is an integrated snubber circuit design and an isolated clamping rod system to limit the occurrence of eddy currents within the unit.

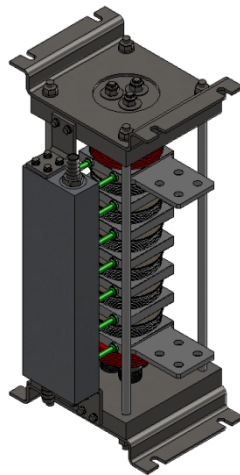
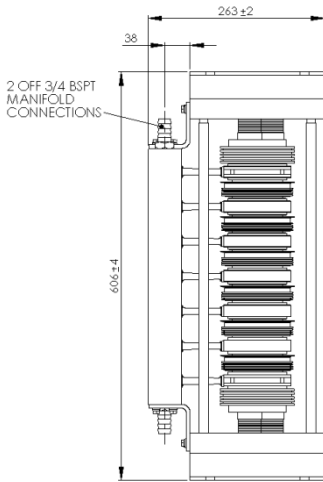
Features and benefits

- Direct water cooled for effective heat dissipation
- Pre-loaded clamping to evenly distribute the applied force
- Isolated clamping rod system
- Integrated snubber circuit
- Single unit mechanical configuration: Short inductance paths for relative size of unit to avoid high stray inductance
- Advanced optically fired gate trigger circuits

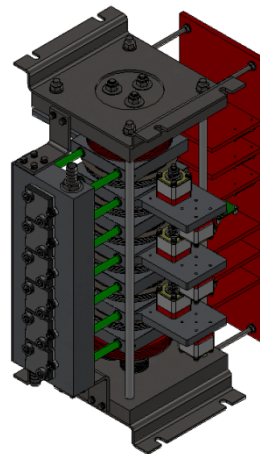
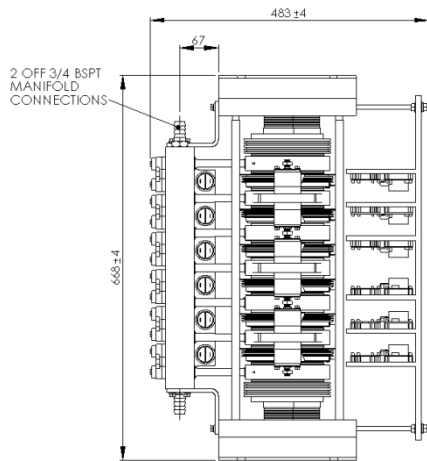


10kV System – Phase leg requirement: 2 x IGBT stack & 1 x Diode stack

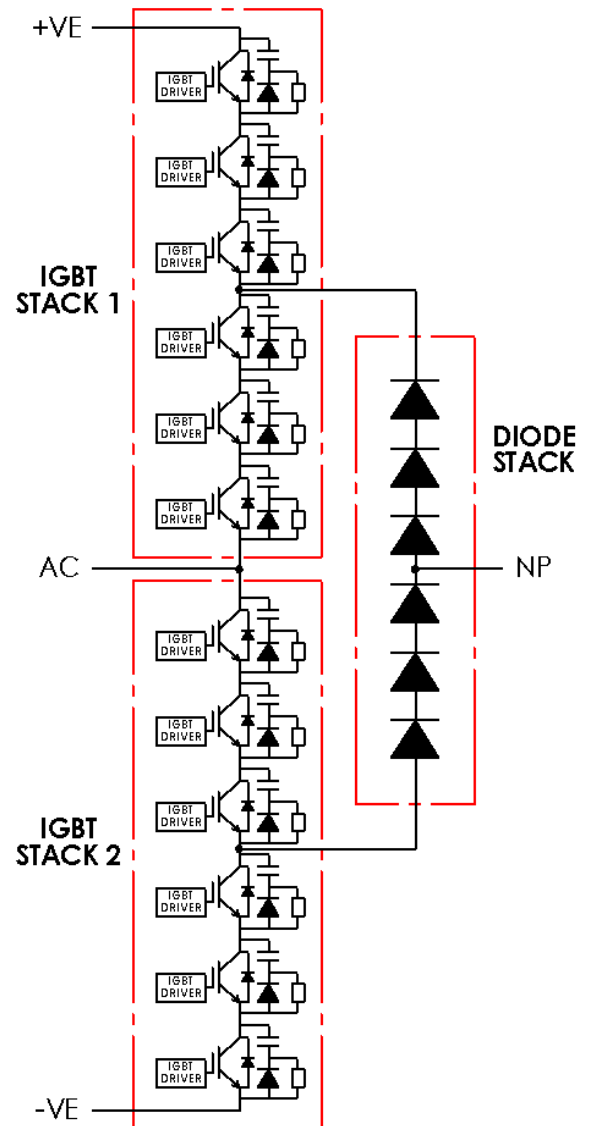
Power Rating (MW)	16
Nominal Line Current (Amps)	1000
No. of IGBT's	6
No. of Diodes	6
No. of Coolers	7
Required IGBT Type	T1600GB45G
Required Diode Type	E2400TC45C



Diode stack: XA1000TV45WE/A



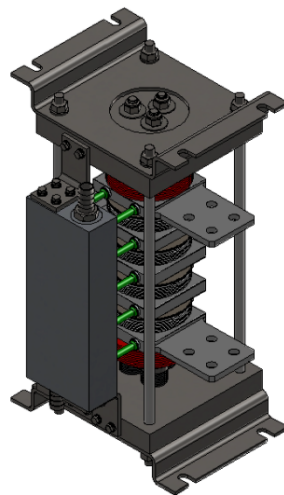
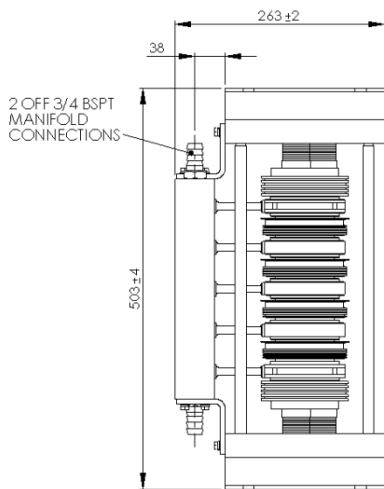
IGBT stack: XA1000GV45WT/A



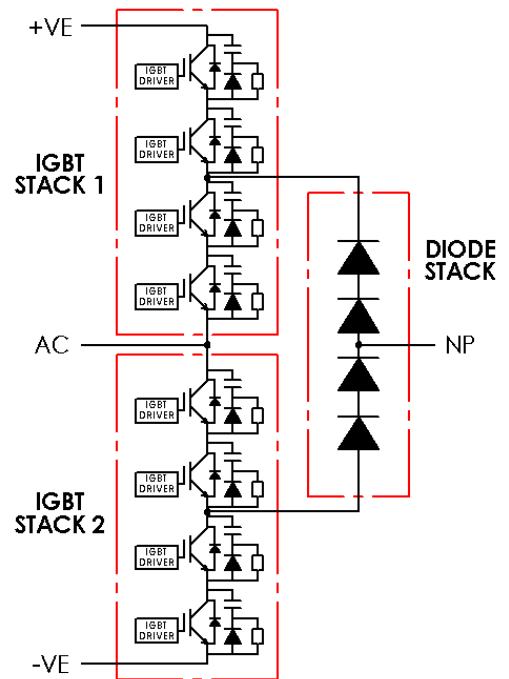
Phase leg schematic

6.6kV System – Phase leg requirement: 2 x IGBT stack & 1 x Diode stack

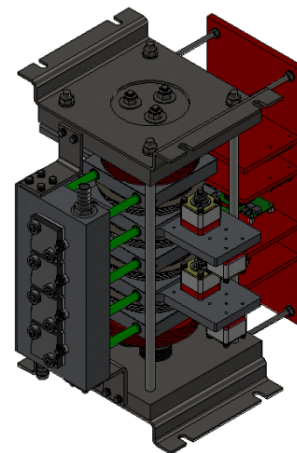
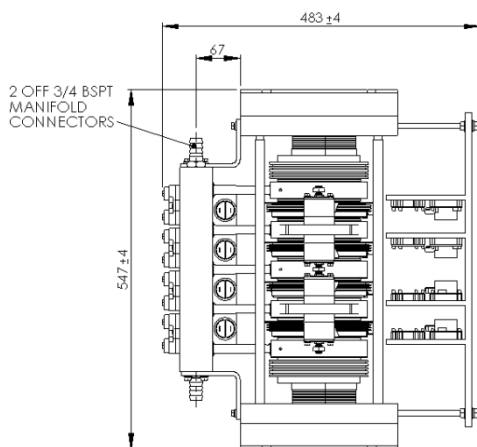
Power Rating (MW)	12
Nominal Line Current (Amps)	1000
No. of IGBT's	4
No. of Diodes	4
No. of Coolers	5
Required IGBT Type	T1600GB45G
Required Diode Type	E2400TC45C



Diode stack: XA1000TV45WE/B



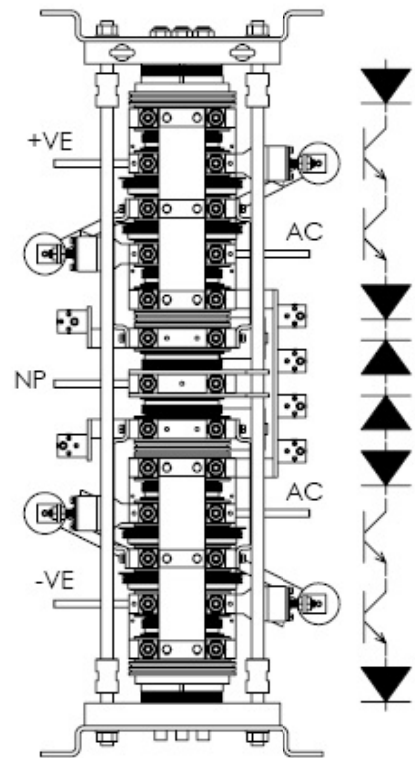
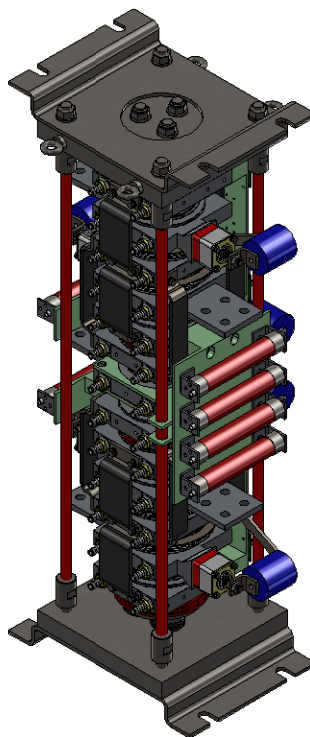
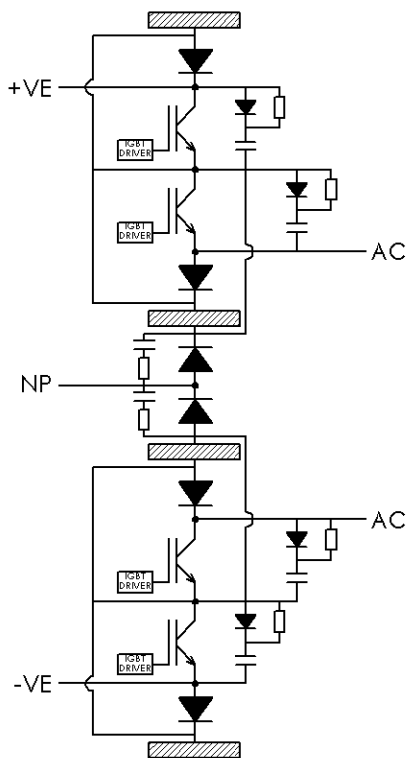
Phase leg schematic



IGBT stack: XA1000GV45WT/B

3.3kV System – Complete phase leg

Power Rating (MW)	8
Nominal Line Current (Amps)	1600
No. of IGBT's	4
No. of Diodes	6
No. of Coolers	13
Required IGBT Type	T2400GB45E
Required Diode Type	E2400TC45C



XA1600GV45WT



IXYS UK Westcode Ltd's BS EN ISO9001 quality system is registered by BSI



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