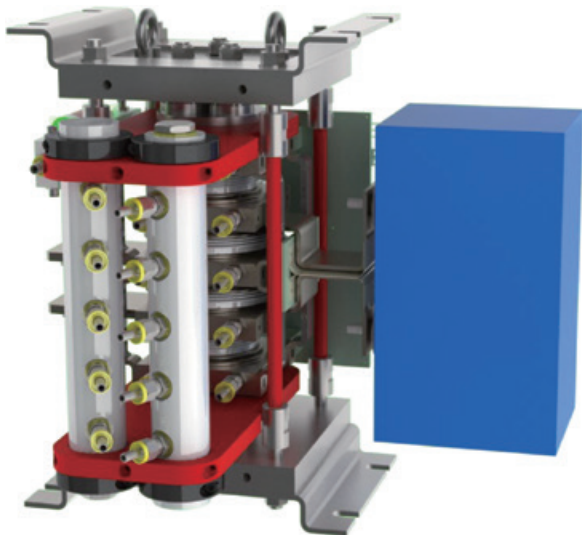


# Custom Assemblies

## Our Design Philosophy

IXYS UK has a long and successful history in providing custom design solutions for its customers. The assemblies seen on display here and in this guide are a small sampling of the capabilities that we have in this fast growing area.

From concept through development and manufacture to after sales support, we believe strongly in working closely with our customer every step of the way – extending our philosophy of teamwork beyond our own organisation.



## Customisable Modular Multi-level Converter

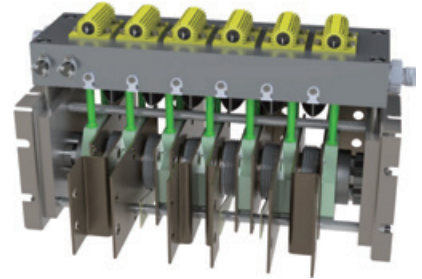
- Fully customisable
- Complete pressure contact construction
- Reduced explosion risk
- Stable short circuit failure mode
- Direct water cooled for effective heat dissipation
- Pre-loaded clamping to evenly distribute the applied force
- Isolated clamping rod system
- Integrated snubber circuit
- Single unit mechanical configuration:  
short inductance paths for relative size of unit to avoid high stray inductance
- Advanced optically fired gate trigger units

DC Link Voltage	2.8kV
Rated Current	1200ARMS
No. of IGBT's	2
No. of Diodes	2
No. of Coolers	5
Required IGBT Type	T2400GB45E
Required Diode Type	E2400TC45C

### XA3412MB30WW – AC/DC Converter

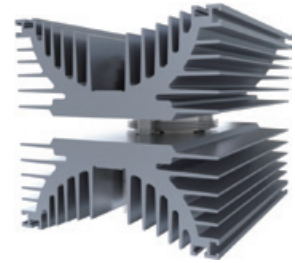
A very compact 3MW water cooled AC/DC conversion assembly. Industrial input, line system voltage of 690V @50Hz — fixing 6 pcs of W3708MC320 rectifier diode. This assembly utilises a 3-point clamping system to ensure uniform and efficient force distribution across the entire device contact face. The aluminium-nitride insulated coolers allow the user to operate the stack with standard coolants without the need to implement expensive de-ionised water systems.

Recent application on a semi-submersible crane vessel — Offshore oil and gas technology.



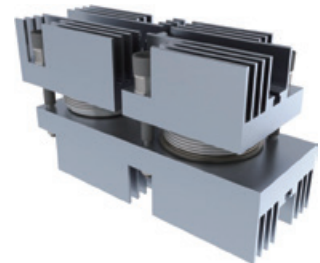
### XA6405EX28AN

Clamp assembly utilising the latest direct fused technology devices. This enables the utilisation of existing heatsink technology, while not compromising the clamping due to the mechanical stability of the device, therefore giving better thermal performance.



### XA3565HS18AN – Soft Start Module

This is a flexible design soft-start module, suitable for applications up to 710W. This particular example utilises the N3565HA180 phase control thyristor but the design can be arranged to utilise a variety of devices to accommodate customer requirements.



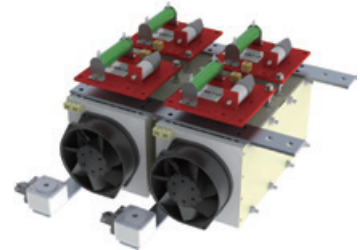
### XA3842MX28AW/A&B

2MW natural air cooled AC/DC conversion assembly — Section of sixphase connection parallel bridge (with IPT 120° conduction), with 750V output voltage - fixing 3pcs of rectifier diode type W3842MC280.



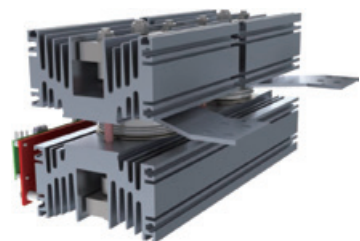
### SXC1076FB

A typical industrial, fan-cooled AC regulator up to 0.37kW drive for industrial applications. Recommended system voltage 415V @50Hz , ambient temperature 45°C This assembly is part of our customisable WESTACK series.



### XA1500TX25AN

This is a single, natural air cooled, IGBT switch utilising the T1500TD25E, 2.5kV Press-pack IGBT, with the free wheel diode E2250VF25C.





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