



## Custom Manufactured Power Units

A longstanding customer of Berendsen's engaged us to assist in completing hydraulic components as part of a large scale project they were carrying out for a power station in Eastern Europe.

### THE PROJECT

The customer, a company specialising in systems associated with gas turbine power generation, commissioned us in July 2014 to produce two large custom manufactured power units. Having previously worked with us on numerous other hydraulic projects, the customer was confident in our ability to produce such a complex hydraulic solution. We were also able to offer a competitive price as all of the custom manufacturing of components could be undertaken in-house.

The task at hand involved the manufacture of two large power units to operate a diverted door at the power station. The door weighs several tons and is activated only during emergencies, so the power units needed to be able to power the door to open and close rapidly without power on site. In addition to this, the power units needed to operate effectively in the -25°C climate conditions of the power station.

Berendsen's in-house Engineering and Design experts assisted with the design process and worked closely with the client to ensure the needs of the end user were met.



### THE MANUFACTURE

To be able to meet the requirements of the end user, a variety of components were used. These components underwent a rigorous selection process to ensure the end product would provide durable, reliable operation. Each power unit has:

- ✓ A custom manufactured 2m x 2m x 2m steel enclosure
- ✓ 2 x 500L stainless steel tanks with 4 x 11kw pump motor sets



- ✓ 12 accumulators
- ✓ Fully electro-proportional controls
- ✓ 8 x custom manufactured cylinders
- ✓ 8 x custom manufactured manifolds

The manifolds were custom designed by our engineering experts and manufactured at our ISO:9001 certified manufacturing hub in Newcastle, NSW. The purpose built manifolds provide a unique solution to eliminate the use of a complex hose system and prevent leaks.

In addition to the custom manufactured components, it was an obvious choice for the team to select other components from well-known hydraulic brands such as Eaton, trusted for their quality and reliability.

### TESTING

As part of Berendsen's standard design process, the power unit underwent rigorous Finite Element Analysis (FEA) to confirm its sound safety capacity and to minimise the amount of materials required to manufacture the manifolds, thereby ensuring cost efficiency.



Following a four month manufacturing process, the power units underwent local commissioning in Berendsen's Melbourne workshop in October, 2014 and were sent to Vietnam for testing in December. The power units will be installed on-site in Uzbekistan early in 2015.

### THE RESULT

Despite the challenging nature of the project, Berendsen met the specified budget and delivered the two units on time. Manufacturing quality certifications and appropriate documentation were also supplied to meet the end user requirements.

Berendsen has a nationwide branch network and the capacity to distribute, service or manufacture hydraulic products for a variety of applications.

Contact us on 1800 814 411 to discuss your unique hydraulic requirements today.