INTRODUCTION

Brimmond Group, Rigrun Europe and Preffered Marine Cranes work globally to deliver safer, efficient and cost-effective engineered solutions.

Brimmond Group
• In-house design & engineering
• Bespoke Engineering
• Rental Equipment
• Testing & Spooling
• Service, Maintenance, Refurbishment
• Technicians & Operators

Preffered Marine Cranes
• Marine Cranes
• Refurbishment, Service & Repairs
• Testing and Load Testing
• Technicians & Operators

Rigrun Europe
• Equipment for offshore/onshore drilling
• Service, Maintenance
• Testing, Surveying
• Training
Brimmond Group supplies specialist hydraulic, mechanical and electrical equipment delivering high quality, cost effective solutions for some of the most challenging global locations.
ABERDEENSHIRE FACILITIES

• Experienced team with high staff retention rate

• Purpose built facility

• 2.5 acre site with purpose built facilities in order to meet the demands of clients

• No redundancies during oil & gas downturn
BRIMMOND
Delivering Integrated Solutions To Meet Customers’ Needs

DESIGN, ENGINEER & MANUFACTURE

- Bespoke design and engineering to client requirements
- Hydraulic, pneumatic & electrical equipment
- Subsea and ROV equipment
- Well abandonment & casing recovery towers
- Pressure test equipment

RENTAL EQUIPMENT

- Flushing & Filter spreads
- Diesel & electric HPU’s 4Kw - 400kW
- A range of spooling winches & reelers
- Pump spreads including centrifugal & submersible
- Marine Cranes & LARS A-frames
- Subsea deployment equipment

TESTING & SPOOLING

- Test Bay facilities
- Up to 1000 tonnes load tests
- Pressure testing
- Tensile testing
- Crane testing
- Back tension spooling services

SERVICE, MAINTENANCE & REFURBISHMENT

- Onsite inspections, service, repair & maintenance
- Refurbishment services
- Full strip repair and modifications to HPUs, marine cranes, spoolers, reelers & winches
- Offshore Crews - Technicians, Operators & Engineers
RENTAL FLEET

Internationally renowned for a rental fleet offering a wide range of high quality product packages and engineering solutions to support subsea and offshore applications.

- Hydraulic Power Units (Diesel, Electric)
- Pump packages
- Flushing Equipment
- Pressure Test Equipment
- Marine Cranes & Lifting Equipment
- Spoolers, Reelers & Winches
- Filtration Equipment
- Solids Recovery System
- Subsea Tooling & Subsea Baskets
- Diving Tooling
- Auxiliary Equipment (hoses, overboard chutes, sheaves, hose reels and air driven HPUs)
PRODUCT FOCUS - HYDRAULIC POWER UNIT
SUBSEA APPLICATIONS

- Diver Tooling
- Flushing
- Spoolers, Reelers, Winches
- Well Intervention
- Diamond Wire Spread
- LARS & Cranes
# 45/52KW ELECTRIC HPU ZONE 1
## TECHNICAL OVERVIEW

### WORK AREA CLASSIFICATION

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="CE Symbol" /></td>
<td>Suitable for Safe Area use only</td>
</tr>
</tbody>
</table>

### TECHNICAL SPECIFICATION – STANDARD SUPPLY

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Motor Type</strong></td>
<td>Brook Crompton thermostatically protected motor</td>
</tr>
<tr>
<td><strong>Electrical Requirements</strong></td>
<td>380 - 480V, 3 phase, 50/60Hz (45kW @ 50Hz / 52kW @ 60Hz)</td>
</tr>
<tr>
<td><strong>Starter</strong></td>
<td>Star Delta</td>
</tr>
<tr>
<td><strong>Pump Type</strong></td>
<td>Kawasaki variable displacement piston pump</td>
</tr>
<tr>
<td><strong>Pump Output (maximum)</strong></td>
<td>140 lpm, 320 bar</td>
</tr>
<tr>
<td><strong>Filtration</strong></td>
<td>90 micron suction, 3 micron pressure, 10 micron return</td>
</tr>
<tr>
<td><strong>Oil Tank Capacity</strong></td>
<td>360 litre</td>
</tr>
<tr>
<td><strong>Oil Type</strong></td>
<td>ISO 32 as standard, others on request</td>
</tr>
</tbody>
</table>
| **Hydraulic Connections** | Quick release couplings (client specified type)  
1” Pressure  
1/4” Case Drain  
1 1/4” Return |
| **Cooler** | Thermo controlled air blast cooler |
| **Control Panel** | Mains isolator  
Emergency stop button  
Start/stop push buttons  
Phase reversal indicator  
High temp cut off indicator  
Low oil cut off indicator |
| **Deck Cable** | 40 metre (when new) |
| **Remote Emergency Stop** | 40 metre (when new) |
| **Moving & Handling** | DNV 2.7-1/EN12079 certified frame  
4-leg certified sling set  
Forklift pockets |
| **Deck Fastening** | Sacrificial weld down plates |
| **Dimensions** | 1570mm (L) x 1300mm (W) x 2000mm (H) |
| **Weight** | 3,000 kg (gross) |

### MAIN DIMENSIONS
# 57KW DIESEL HPU – ZONE 2

## TECHNICAL OVERVIEW

### WORK AREA CLASSIFICATION

| CE |  
|---|---|
| Group II Category 3 (Zone 2) Gas Group IIB | Temperature Class T4 |

### TECHNICAL SPECIFICATION – STANDARD SUPPLY

<table>
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<tr>
<th>Description</th>
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</tr>
</thead>
<tbody>
<tr>
<td><strong>Engine Type</strong></td>
<td>JCB 444NA</td>
</tr>
<tr>
<td><strong>Starter</strong></td>
<td>Jetstream ATEX air turbine starter</td>
</tr>
</tbody>
</table>
| **Engine Output** | 57kW @ 2200 RPM (Continuous)  
63kW @ 2200 RPM (Intermittent) |
| **Pump Type** | Main: Kawasaki variable displacement piston pump  
Auxiliary: Hydraperm fixed displacement gear pump |
| **Pump Output** | Main Pump: 160 l/min, 340 bar  
Auxiliary Pump: 25 l/min, 210 bar |
| **Filtration** | 90 micron suction, 3 micron pressure, 10 micron return |
| **Oil Tank Capacity** | 460 litre |
| **Oil Type** | ISO 32 as standard, others on request |
| **Hydraulic Connections** |  
Main Pump: 1” Pressure  
1/4” Case Drain  
1 1/4” Return  
Auxiliary Pump: 3/4” Pressure  
1/2” Case Drain  
3/4” Return |
| **Fuel Tank Capacity** | 225 litre |
| **Control Panel** | Engine start/stop controls  
Engine speed control  
Pump controls |
| **Safety Features** | 110V platform shutdown  
Optional remote emergency stop |
| **Moving & Handling** | DNV 2.7-1/EN12079 certified frame  
4-leg certified sling set  
Forklift pockets |
| **Dimensions** | 2500mm (L) x 1260mm (W) x 2050mm (H) |
| **Weight** | Gross 3,000 kg |
PRODUCT FOCUS – MARINE CRANE
SUBSEA APPLICATIONS

- Tooling deployment
- ROV deployment
- Divers’ golden gate project
- Vessel crane support
- IWOC
- Pipelay tower
At Brimmond, we have a number of facilities that allow us to carry out spooling in the correct way, these facilities include:

- 18-meter-long 1000t test bed
- 25 tonne back tension spooler
- 75 tonne hydraulic spooler
- Real time line monitor and recording

We have the ability to safely secure equipment, allowing accurate and steady back tension spooling of up to 25 tonnes. Brimmond have spooled 10’s of kilometres of umbilical/wire rope and using our spooling line monitor we can provide data including back tension distance spooled and spooling rate. Using this information, we can prove we have achieved the tension profile requested.
DELIVERING PROJECT ENGINEERING SOLUTIONS
DELIVERING BACK DECK EQUIPMENT & SERVICES

Deck support equipment and services supporting subsea operations, with equipment including; hydraulic power units (diesel, electric, air), marine cranes, over-boarding chute, hose reels, tooling deployment and recovery, ROV deployment. Supplying your equipment requirements for delivering safe efficient handling and powering a range of back deck equipment.

We consider every aspect of your project from space accessibility to operational integrity and time constraints.

Our team of professionals work in partnership to deliver the best solutions, while also offering a bespoke modification service, to ensure your unique project receives the right package to meet your needs anywhere in the world.
LARS – MASS EXCAVATION SUPPORT

Bespoke solutions and rental solutions to support mass excavation operations.

- Specialized Hydraulic Power Units (HPU) with Adapt fittings and hoses to connect with clients’ equipment.
- 200kw Diesel HPU – ATEX Zone 2
- 220kW Electric HPU – Safe Area
- 370kW Diesel HPU – Safe Area, or bespoke build such as Modular
- 400kW Diesel HPU – ATEX, Zone 2
- Pneumatic and Hydraulic Hose Reelers
- Overboarding chute
- A-Frame winch package
- Offshore personnel
PUMP, FILTRATION & FLUSHING UNITS

- Heavy duty centrifugal pumps are ideal for demanding applications handling water, chemicals and hydrocarbons, for well testing operations, chemical pickling, chemical flushing and tank emptying

- Dual Vessel Filter for use across a wide variety of applications

- Heated tanks for applications for chemical and oil heating to carry out hot oil flushing and chemical cleaning
SUBSEA BESPOKE EQUIPMENT PROJECTS
CASE STUDIES
Brimmond Group were approached to supply an Effer 175000-6S marine knuckle boom crane to support a decommissioning project in the UK Continental Shelf.

Brimmond’s marine crane was utilised to manoeuvre and stack mattresses on deck which had been recovered from the seabed by the vessels main crane.

The Effer 175000-6S combined with Brimmond’s highly skilled operators allowed for mattresses to be stacked 20% higher, meaning the number of port calls were reduced, saving on overall vessel usage and therefore cutting overall costs.

The state-of-the-art crane that Brimmond supplied allowed access to deck space that was not accessible with the main vessel crane.

The package also included a twin 45kW electric HPU, modular base, winch, radio and remote control.

The Effer 175000-6S is the largest of its type in Europe for hire, has the ability to lift 5350kgs at 21.47 metres, and up to 20650kgs at 7.08 metres.

The crane is fitted with the latest technology such as a sea state limiting device, which controls the lifting ability of the crane depending on the sea state.

For this particular campaign the device was set to Sea-state 4 (SS4), which allows operation in up to 2.5m wave height.
Each industry sector has their own unique challenges and many difficult problems that require bespoke, high quality and resilient packages. By applying the combined experience of Brimmond Group, Preffered Marine Cranes and Rigrun Europe, the team has undertaken and delivered on an array of projects, highlights include:

- Cranes to support the construction of the £3bn Queensferry Crossing project
- Engineering Drill String Compensator system for a drilling rig operating from South Africa
- Hydraulic engineering and design incorporated as part of a decommissioning well abandonment tower
- 150 kW Zone 1 electric hydraulic power unit with integral hydraulic control
- Supply and installation of 4 marine knuckle boom cranes on the British Antarctic survey vessel which could accommodate a load from 11.6T e at a reach of 5.2m to 4T e load at a reach of 13.7m reach
SUMMARY

A responsive engineer-led organisation combined with decades of extensive industry experience delivering tailor-made engineering solutions which will address the growing demand for bespoke packages.

From concept to design, engineering through to installation and commissioning we use the latest technology to support clients, maintaining a fast turn-around and delivering cost savings innovative systems and solutions.

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