

# **Kongsberg Azimuth Thrusters**

# **Underwater Mountable azimuth thrusters type UUC PM and UUC**

A robust, heavy-duty L-drive azimuth thruster specifically designed for extended and reliable DP operation on offshore vessels.

Our range of underwater mountable thrusters are designed for easy underwater mounting and dismantling without dry-docking the application. Our underwater mountable thrusters provide reliable transit and DP operation.

Our thrusters are delivered with powers from 3,000 kW up to 6,500 kW. Compact construction provides advantages for mounting at the shipyard and during maintenance. The range is capable of underwater mounting and demounting without the need of dry-docking, using a special lifting technique, unique sealing and locking device.

## Typical applications of UUC PM and UUC thrusters

- Semi-sub drilling rigs / ships
- Production vessels
- Other large vessels
- Offshore windmill installation vessels

# **Key features**

- L-drive with integrated steering gear
- Nozzle Straight or tilted with mild or stainless steel inner surface
- FP propeller for variable speed
- Electric drive
- Hydraulic and electric steering

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#### Type UUC PM

The UUC PM type underwater mountable thruster is highly efficient, simple and compact solution for various offshore applications where space is limited. The integrated PM motor is mounted very low between the steering gear which enables the low installation height. Thanks to the PM motor, the thruster gives great electrical efficiency gain over the complete operational profile. With a new type of lubrication and, as alternative, environmentally friendly sealing solutions, the UUC PM thruster type has become more environmentally friendly as well as more energy efficient.

#### **Key advantages of UUC PM thrusters**

- Low installation height due to integrated PM motor
- Great energy efficiency due to PM motor, electric steering and spray lubrication
- Simple design, no need for intermediate shafting or flexible coupling
- Underwater mountable and demountable



**UUC PM 355** 

## Type UUC

Over thousand units delivered, well-known UUC product family with complete range of thruster sizes available. Compact construction is advantage when mounting and demounting the thruster. Design is suitable for various application.

# **Key advantages of UUC thrusters**

- Proven design, over thousand units delivered
- Excellent in both DP and transit
- Complete range of UUC thrusters for optimum unit choice
- Underwater mountable and demountable

#### **UUC HT - High Thrust version**

The UUC HT is a well known and trusted product. All the components are within our well proven range, and the HT product range is interchangeable with existing UUC series: 405 → 355 HT

Larger slowly rotating propeller creates same thrust with less power giving increased efficiency up to  $18-25\,\%$ 

Smaller e-motor in power and drive also provides:

- Less installed power on vessel
- Reduced underwater noise

The KONGSBERG UUC thrusters can be further configured to meet special customer needs such as different height options between thruster and e-motor, Condition Monitoring Solutions (CMS) & Remaining Useful Life (RUL) and integration between control-, DP- and automation system.

## **Technical data**

| UUC PM                 | 355  | 405  | 405  | 405 HT* | 455* | 455* | 455 HT* |
|------------------------|------|------|------|---------|------|------|---------|
| Propeller diameter (m) | 3.7  | 3.8  | 4.1  | 5       | 4.3  | 5    | 5.5     |
| Power (kW)             | 4200 | 4500 | 4500 | 4500    | 5000 | 5500 | 6000    |
| Input (rpm)            | 750  | 720  | 720  | 720     | 750  | 720  | 700     |
| Thrust (mtons)         | 81   | 86   | 91   | 102     | 100  | 120  | 135     |

<sup>\*</sup>Planned future releases

| UUC HT                 | 355  | 405  |
|------------------------|------|------|
| Propeller diameter (m) | 4.5  | 5    |
| Power (kW)             | 3800 | 4500 |
| Input (rpm)            | 750  | 720  |
| Thrust (mtons)         | 86   | 102  |

| UUC                    | 305         | 355         | 405         | 455         | 505  |
|------------------------|-------------|-------------|-------------|-------------|------|
| Propeller diameter (m) | 3.0 - 3.2   | 3.5         | 3.8         | 4.1         | 4.5  |
| Power (kW)             | 3000 - 3200 | 3800 - 4000 | 4500 - 4800 | 5000 - 5500 | 6500 |
| Input (rpm)            | 720 - 720   | 720 - 750   | 720 - 750   | 720 - 750   | 600  |
| Thrust (mtons)         | 55 - 61     | 71 - 74     | 84 - 90     | 95 - 102    | 123  |