Raytheon Anschütz

Standard 22 M

Gyro Compass System

Standard 22 M

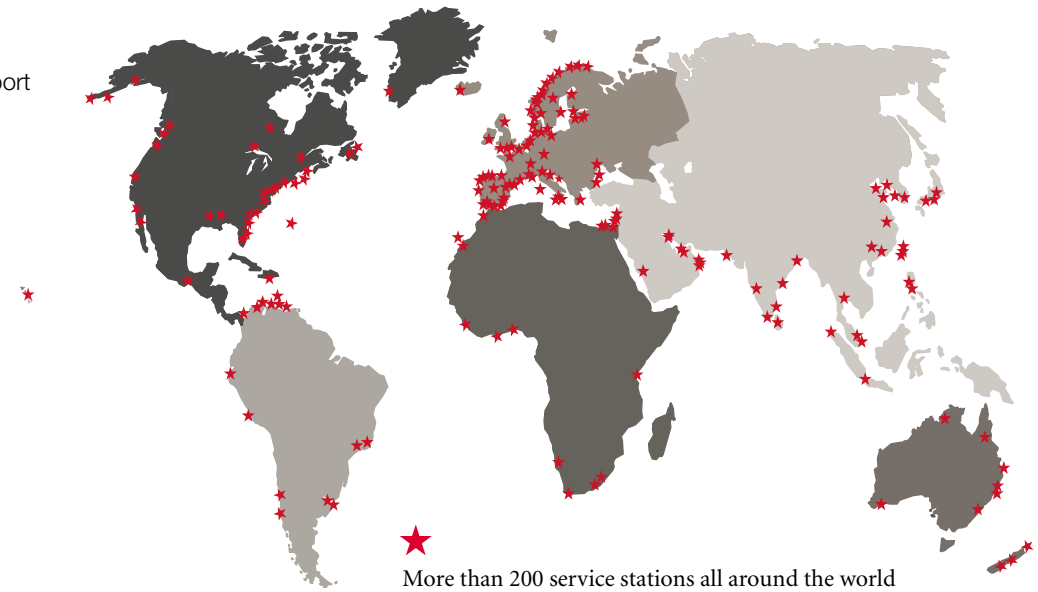
The Standard 22 M gyro compass system is a modern, modular state-of-the-art system, specifically designed for applications on board of naval vessels and incorporates the latest technologies for gyro compass systems, based on 100 years of experience. Operational safety was dramatically increased due to a patented data transmission technology that completely replaces the use of slip rings and a patented dual CAN bus for redundant data distribution. It is compatible with all Anschütz gyro compasses and steering systems and meets the latest international approval requirements.

The Standard 22 M generates an accurate directional reference signal to indicate the ship's heading relative to true north. It can be used as a main heading reference or as a back-up system for inertial navigation systems. The Standard 22 M is equipped with an optical pick up system, enabling digital signal processing. The sensor and system electronics, which incorporate microprocessor techniques, convert the gyro signal into a high speed serial data format. Its modular construction of both hardware and software enables it to be custom-fit to any installation requirement and makes it exceptionally easy to operate.

The inherent speed error of a gyro compass, which is caused by a physical dependence on latitude, ship's speed and heading, is corrected automatically by the use of position and speed input from GPS and Log. Alternatively the user could input this data manually via the control unit. Automatic monitoring of the Standard 22 M is realized by integrated BITE.

Digital processing is also used to improve the dynamic behaviour of the compass. In quick settling mode, heading information is available within just one hour. The Standard 22 M uses the technology of the world's leading gyro compass Standard 22 which is type approved in accordance with the International Maritime Organisation (IMO) standards and has been approved in compliance with the high speed craft code but is adapted to the specific requirements on board of naval vessels.

Our worldwide sales and service network provides product and service support wherever needed.



★ More than 200 service stations all around the world

Standard 22 M gyro compass

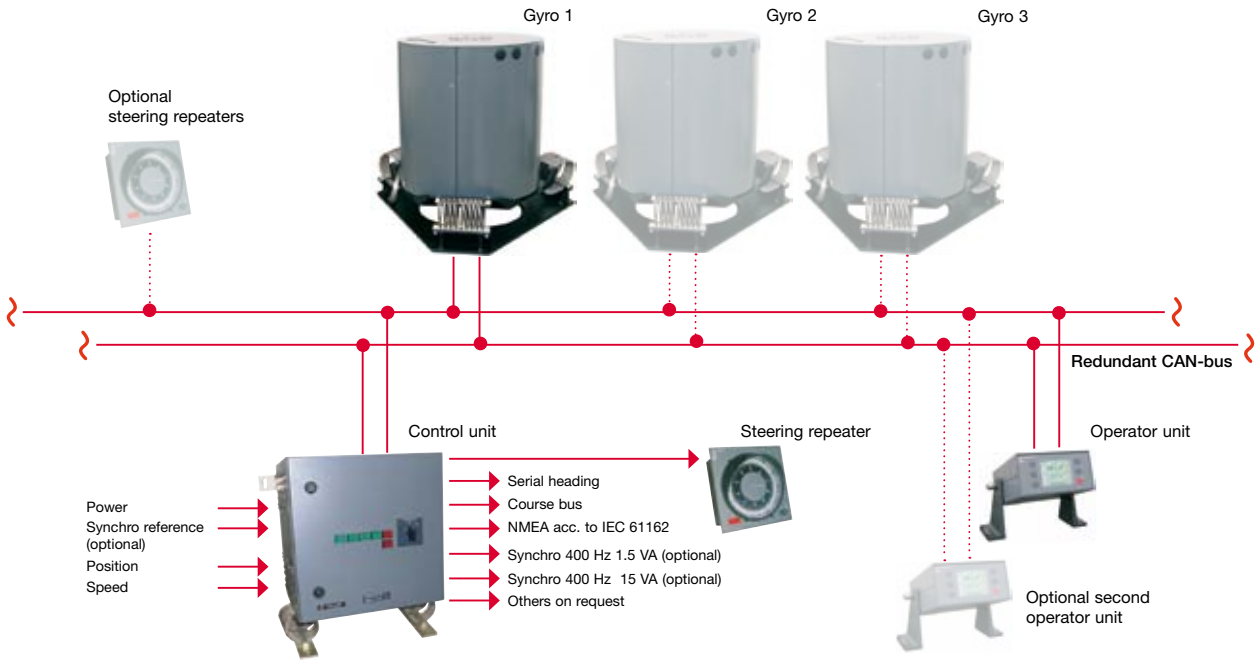
System Components

The basic system consists of

- Standard 22 M gyro compass
- Shock absorbing mount for the gyro compass
- Control unit with shock absorbing mounts
- Operator unit (desk or bulkhead mounted)

Outstanding Features

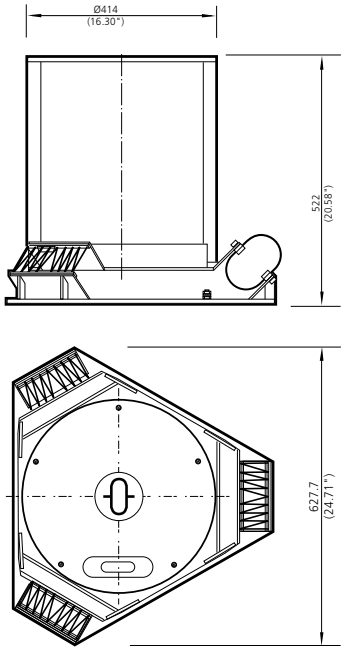
- Inductive, slip ring-free power transmission
- Advanced technology guarantees highest system reliability
- Patented Anschütz dual redundant CAN bus
- System-wide BITE
- Highest heading accuracy
- Highest dynamic up to 100 °/s
- Speed / latitude error correction / dynamic correction
- Quick settling mode
- Absolute digital pick up
- Digital and analogue outputs
- Flexible interface to log and GPS
- Easy to operate and service-friendly
- Low life cycle cost
- Easy to extend; extensions practically unlimited – can be fully integrated into inertial navigation systems (INS)



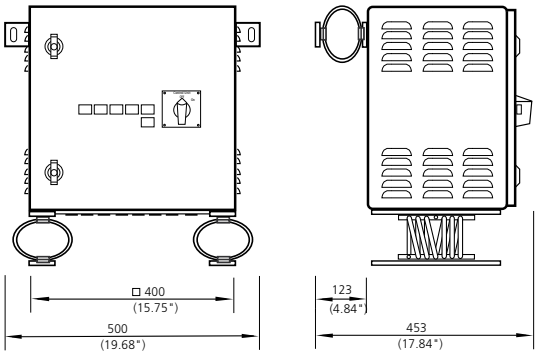
Technical Data

Accuracy	Settle point error: +/-0.1° secLat., RMS Static error: +/-0.1° secLat., RMS Dynamic error: +/-0.4° secLat., RMS (periodic roll and pitch (+/-45°) + horizontal acceleration) secLat. = 1/cosLatitude
System availability	Settling time (accuracy ≤ 2°): 3 hours Quick settling time (ship at pier) 1 hour MTBF > 100.000 hours for system > 40.000 hours for gyrosphere MTTR < 30 min.
Power supply	24 V DC in acc. with STANAG 1008
Power consumption	Gyro compass 80 W to 140 W (start-up) Control unit 45 W (without synchro) 55 W (with synchro) Operator unit 5 W
Synchro reference	115 V/400 Hz
Outputs	3x RS 422, Anschütz course bus Synchro 115 V/400 Hz, 1,5 VA Synchro 115 V/400 Hz, 15 VA Coarse/fine (1x, 2x, 4x, 6x, 10x, 30x, 36x, 45x, 360x)
Inputs	Log: NMEA acc. to IEC 61162, 200 P/NM GPS: NMEA acc. to IEC 61162 other formats on request
Environmental conditions	MIL-STD-810 F (also IEC 60945 available)
Temperature	operation -10 °C … +55 °C humidity +60 °C > 95 % r.h. storage -33 °C … +71 °C (without supporting liquid)
Magnetic measurements	VG 95577 A
Acoustic	BV 0450
Shock	BV 0430 for surface vessels and submarines
Vibration	BV 0440
EMC / EMI	MIL-STD-461 E
Type of enclosure	IP 23

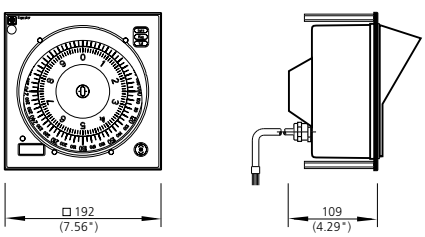
STD 22 M gyro compass with mounting plate 27.5 kg



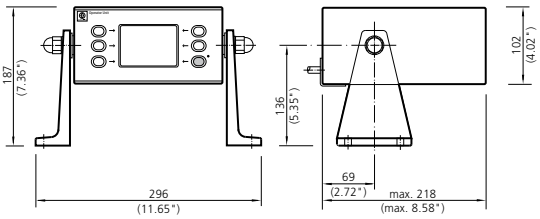
Control unit 28 kg



Steering repeater compass 1.7 kg



Operator unit with casing 3.5 kg



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