



# NAVAL PROTECTION

## OERLIKON SEARANGER® 20

### 20 MM REMOTE CONTROLLED GUN STATION

This high precision, stabilized 20 mm gun station is designed for mounting on any type of boat or ship. Apart from its use on light patrol and combat boats, this medium calibre, fast-firing gun is an ideal complement to current automated weapon systems on larger vessels and plays an important role in the close-range defence.

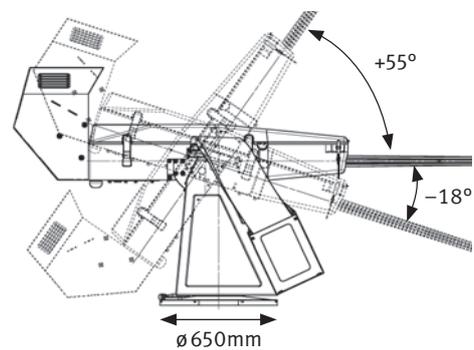
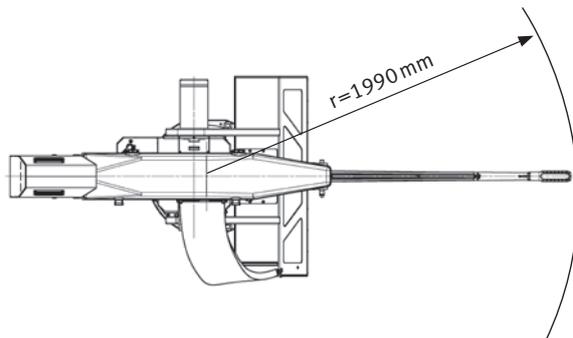
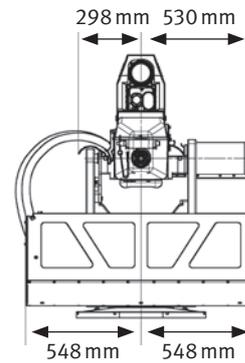
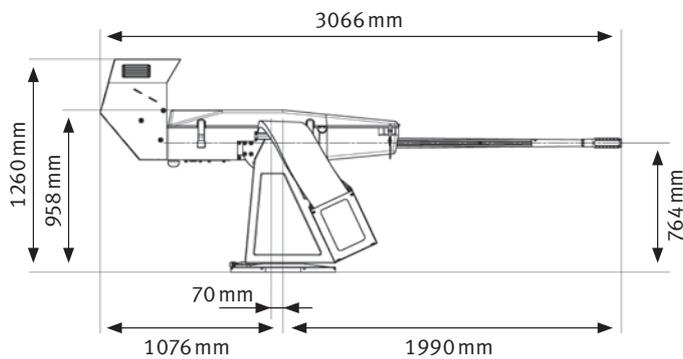
The gun is remote controlled from a gunner station. The modular sensor unit is equipped with state-of-the-art electro-optical sensors and a video tracking unit. Thanks to the integrated stabilization and ballistics computation, target engagement is simple and effective.

The integrated high precision 20 mm Oerlikon Cannon® KAE is a very reliable weapon with a high rate of fire and excellent precision. It is simple to operate and maintain. The KAE automatic cannon fires single shot, rapid single shot and burst mode and has been equipped with state-of-the-art safety features. The belted ammunition feed contains up to 200 rounds ready to fire.

The Oerlikon KAE can fire all types of 20 mm x 128 ammunition. For naval defence purposes, the modern 20 mm SAPPIE-T ammunition has been developed, which is very insensitive and provides an excellent penetration performance.

#### MAIN FEATURES

- Remote controlled naval gun station
- Effective combat range: up to 2,000 m
- 20 mm x 128 Oerlikon Cannon® KAE
- High precision
- Max. rate of fire: 1,000 rds/min
- Rapid single shot mode: 200 rds/min
- Single belt feed
- Up to 200 rounds ammunition ready to fire
- Modular electro-optical sensor package
- Remote gunner station
- Reliable operation
- Simple maintenance
- Interface for remote target designation (e.g. optical target designator or navigation radar)
- Option: optical target designator



## TECHNICAL CHARACTERISTICS

### Cannon

Cannon type	Oerlikon automatic cannon KAE
Calibre	20 x 128 mm
Nominal rate of fire	1,000 rounds/min
Rapid single shot mode	200 rounds/min
Mean muzzle velocity ( $V_0$ )*	1,050 – 1,150 m/s
Cannon recoil	max. 12 mm
Length of cannon with muzzle brake	2,627 mm
Barrel length (85 cal.)	1,700 mm
Weight of cannon complete	96 kg
Weight of barrel with muzzle brake	28 kg

### Gun

Weight of gun without ammunition	490 kg
Weight with 200 rounds of ammunition	570 kg
Swept radius (barrel 0°)	1,990 mm
Training arc	±155°
Elevation arc	-18° to +55°
Training speed	60°/s
Elevation speed	60°/s

\*depending on ammunition type

### EO-sight & fire control

Sensor package	TV/IR/LRF
TV camera	1/2.8" CMOS colour, 1920 x 1080 pixel
Field of view TV camera	48° – 2°
IR camera (uncooled)	8 – 14 µm, 640 x 480 pixel
Field of view IR camera	WFoV: 14.3° x 10.7° NFoV: 4.6° x 3.5°
Laser rangefinder	Eye safe class 1 M, 1 Hz
Tracking module	Integrated target tracker
Stabilization	Integrated gyro measuring unit

### 20 mm x 128 ammunition

Types (Nato code)	TP-T, AP-T, SAPPIE-T, HEI-T
Number of rounds ready to fire	up to 200
Mass of round*	320 – 340 g
Mass of projectile*	102 – 128 g
Length of round	203.5 mm
Projectile flight time to 1,000 m*	1.1 – 1.2 s
Projectile flight time to 2,000 m*	2.8 – 3.2 s

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## Rheinmetall Air Defence AG

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