

# NORBIT

## AQUA

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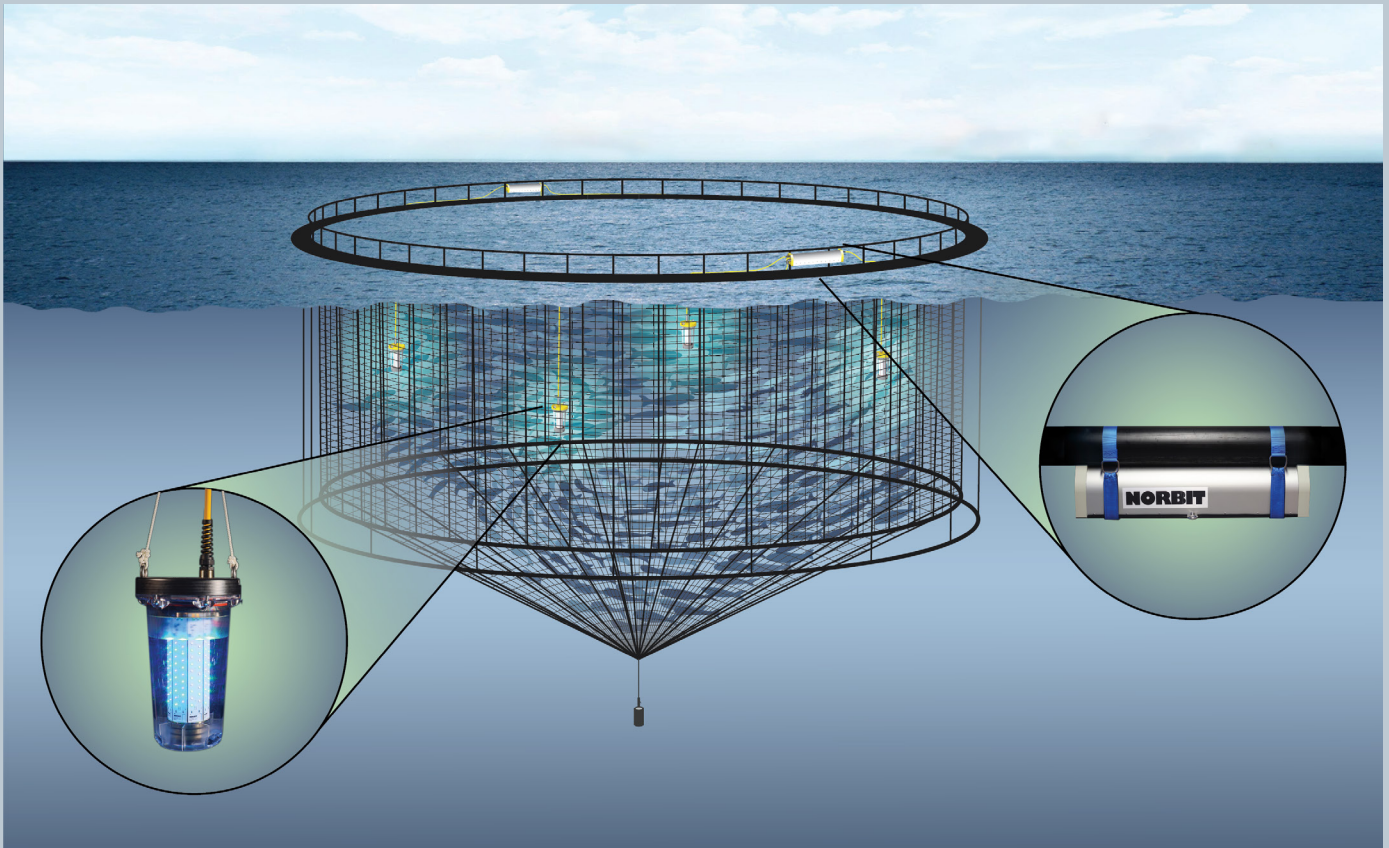
### NORBIT FCL600

FCL600 (Fish Centric Lighting) - Underwater light for aquaculture

Artificial light is known to accelerate fish growth and has been used in the aquaculture industry since the early 90s. This includes both cold- and warmwater species like cod, salmon, trout and kingfish, among others. Scientists and farmers have been working continuously to better understand the effects light has on farmed fish.

With the introduction of LED (light emitting diode) in mid-2000, new knowledge and possibilities have risen. In this lies new control options, purified light spectrum, energy savings, product lifetime and durability, HSE and fish welfare.

NORBIT have merged all these characteristics into one unit, the FCL600.



# NORBIT

- explore more -

EXPERTS in sensor equipment providing telemetry and communication solutions for harsh environments.  
NORBIT develops and delivers innovative products - allowing you to explore more.

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## Features

- ✓ Postpone maturation to achieve better growth, quality and welfare
- ✓ Controlled transformation from parr to smolt (smoltification)
- ✓ Initiate maturation in brood stock
- ✓ Lure the population down or up in the pen to avoid e.g., lice infestations, algae, hypoxia.
- ✓ Lower stress with a more correct “light environment”
- ✓ Better visibility for the fish hence better feed uptake
- ✓ Automatic ramp up within 10 minutes when power on to avoid stress
- ✓ No sharp edges (collision proof)
- ✓ Made of recyclable materials
- ✓ Highly energy efficient

## Applications

- ✓ Pen based sites
- ✓ Land based tanks/basins
- ✓ Freshwater facilities (RAS and flow through)
- ✓ Submerged pens
- ✓ Closed Aquaculture Systems (CAS)
- ✓ Semi closed systems
- ✓ Offshore fish farming

## Options

- ✓ User defined photoperiodic cycles
- ✓ Can be adapted for use in fulltime submerged pens

## Species

- ✓ Atlantic salmon
- ✓ Rainbow trout
- ✓ Cod
- ✓ Sea bass
- ✓ Sea bream
- ✓ Yellow tail
- ✓ Chinook salmon
- ✓ Tilapia
- ✓ Arctic charr

### LUMINAIRE SPECIFICATION (FCL600)

WEIGHT	5.8 kg
HEIGHT/WIDTH	32cm/20cm
IP (INGRESS PROTECTION CODE)	68
RAMP UP TIME	10min
LUMINAIRE VOLTAGE	48VDC
LIGHT SOURCE	LED
CABLE LENGTH	30m
WAVE LENGTHS	450-535nm
COOLING METHOD	CONVECTION
CORE MATERIAL	ALU BRONZE
LENS MATERIAL	POLYCARBONATE

### POWER DISTRIBUTION CABINET (PDC) SPECIFICATION

WEIGHT	17 kg
HEIGHT/WIDTH	18.3cm/94.4cm
DEPTH	17.0cm
IP (INGRESS PROTECTION CODE)	67
HOUSING MATERIALS	ALUMINIUM AND STAINLESS STEEL
TOTAL EFFICIENCY	1200W (2X600)
CABLE LENGTH	5m
SUSPENSION METHOD	VELCRO STRAPS
INPUT POWER	220VAC
OUTPUT POWER	48VDC