# YORK Marine air conditioners

## Type SCU-E/G – Generation III

### Features for SCU-E

- Self-contained marine designed air conditioners
- High-quality finish for accommodation areas
- Cooling capacity ranging from 9,7 kW to 39,6 kW.
- Standard refrigerant R404A or R407C
- Duct or Plenum connections
- Digital LCD delivery air temperature controller
- Air intake located at the front for SCU-E17-41 and on side for SCU-E10
- Standard range of units for 3x400V/50Hz or 3x440V/60Hz for freshwater or seawater.
- HP/LP manometers

### Features for SCU-G

- Self-contained air conditioners specially designed for galleys.
- 100 % fresh air intake according to Solas 2000
- Cooling capacity ranging from 9,7 kW to 25,4 kW
- Standard refrigerant R404A or R407C
- Duct or plenum connection
- Digital LCD delivery air temperature controller
- Air intake located at the back of the SCU-G17-25. SCU-G10 the air intake is fitted on the side
- Standard range of units for 3x400V/50Hz or 3x440V/60Hz for freshwater or seawater
- HP/LP manometers

### Compressor

SCU E & G uses hermetic scroll compressor. The compressors are fitted with heating elements.

### Condenser

A cleanable shell-and-tube condenser with Cu/Ni tubes for seawater, and a soldered stainless-steel plate-heat exchanger for fresh water.

### Heating elements

The unit is delivered with built in electrical heating elements for winter conditions (design temperature - 20°C).

### Air cooler

A Cu/Al coil treated with polyurethane to resist the saline air is standard. A washable flat filter is located in front of the air coil. The unit has a stainless steel drip tray with extra depth to take pitch and roll into consideration.

### Unit controls

A digital temperature controller, with LCD and sensors placed in the airflow, ensures the correct temperature. The LCD is located on the small panel in front of the unit as well as a switch for choosing the operation mode. The electric panel includes automatic circuit breakers. The compressor safety equipment includes HP/LP switches, on SCU-E27-41 a solenoid valve is mounted in the liquid line, filter/drier and liquid refrigerant sight glasses, and fittings to plug in pressure gauges.

### Casing

The steel plate casing is built on a rigid steel frame and is thermally insulated to prevent condensation. A plenum with adjustable grill is optional. Standard paint: RAL 9010.

### Fan

The unit has a V-belt-coupled centrifugal fan with IP55 motor. Resiliently mounted fans with low static pressure are used to ensure an extra-low noise level when a plenum is fitted. For duct connections a high pressure fan is used. Fan and fan motor are mounted on a common frame.

### Optional features

- Fresh-air intake damper and/or counter flanges
- Supply air and return-air intake for duct connection
- Flexible connections and counter flanges for fresh-air intake
- Cooling-water flow valve
- Electrical heating coil

*Unit shown with duct connection*

# Technical Data

| Type | Sea Water 32 °C | | | | Fresh Water 36°C | | | |
|---|---|---|---|---|---|---|---|---|
| | Cooling cap. kW 50/60 Hz | Pow. cons. kW (Comp.+Fan) 50/60 Hz | Nom. cooling water flow $m^3/h$ | Press. drop nom. flow KPa | Cooling cap. kW 50/60 Hz | Pow. cons. kW (Comp.+Fan) 50/60 Hz | Nom. cooling water flow $m^3/h$ | Press. Drop nom. flow KPa |
| **SCU-E10** | 10.3/12.6 | 3.45/4.13 | 8,00 | 50 | 9.7/11.9 | 3.65/4.33 | 4.7 | 8 |
| **SCU-E17** | 12.4/15.6 | 3.85/4.53 | 8,00 | 50 | 11.8/14.7 | 4.05/4.53 | 5.5 | 35 |
| **SCU-E20** | 15.6/19.1 | 4.75/5.63 | 8,00 | 45 | 14.8/18.0 | 5.05/6.03 | 7,00 | 35 |
| **SCU-E27** | 21.1/25.4 | 7.20/7.75 | 10,00 | 70 | 20.2/23.9 | 6.50/8.15 | 9,00 | 40 |
| **SCU-E32** | 26.5/32.0 | 7.50/8.91 | 13,00 | 20 | 24.9/30.0 | 7.80/9.41 | 11.5 | 50 |
| **SCU-E41** | 32.3/39.6 | 9.6/11.48 | 17,00 | 25 | 30.4/37.1 | 10.00/12.08 | 14.5 | 65 |
| **SCU-G10** | 10.3/12.6 | 3.07/3.71 | 8.10 | 50 | 9.7/11.9 | 3.27/3.91 | 7,0 | 20 |
| **SCU-G17** | 12.4/15.6 | 3.85/4.31 | 8.00 | 50 | 11.8/14.7 | 3.85/4.61 | 5.5 | 35 |
| **SCU-G25** | 21.1/25.4 | 6.25/6.71 | 10.00 | 70 | 20.2/23.9 | 6.05/7.11 | 9,0 | 40 |

*The above figures are based on R404A, 100 KPa = 1 Bar*

| Type | For duct connetion | | Plenum connection | Electrical heating |
|---|---|---|---|---|
| | Air flow $m^3/h$ 50/60 Hz | External static press. Pa | Air flow $m^3/h$ 50/60 Hz | 1-step (option) kW |
| **SCU-E10** | 1400/1700 | 400 | 1400/1700 | 6 |
| **SCU-E17** | 1900/2400 | 400 | 1900/2400 | 9 |
| **SCU-E20** | 2300/2800 | 400 | 2300/2800 | 10.5 |
| **SCU-E27** | 3300/4000 | 400 | 3300/4000 | 17 |
| **SCU-E32** | 3700/4500 | 400 | 3700/4500 | 24 |
| **SCU-E41** | 5000/6000 | 400 | 5000/6000 | 24 |
| **SCU-G10** | 850 | 500 | | 6 |
| **SCU-G17** | 1000 | 500 | | 12 |
| **SCU-G25** | 1500 | 500 | | 20 |

*Outside dimensions for sea- & fresh water cooled units are the same.*

| Type | Weight kg Fw/Sw | Weight incl. plenum kg Fw/Sw | Dimension for duct con. mm W x D x H | Dimension incl. plenum mm W x D x H |
|---|---|---|---|---|
| **SCU-E10** | 175/180 | 185/190 | 900x590x1 015 | 900x590x1 344 |
| **SCU-E1 7** | 190/200 | 200/210 | 900x520x1 650 | 900x590x1 900 |
| **SCU-E20** | 235/245 | 245/255 | 1000x700x1650 | 1000x700x1 900 |
| **SCU-E27** | 245/255 | 255/265 | 1000x700x1 650 | 1000x700x1 900 |
| **SCU-E32** | 340/360 | 350/370 | 1500x700x1700 | 1500x700x1950 |
| **SCU-E41** | 350/380 | 360/390 | 1500x700x1 700 | 1500x700x1950 |
| **SCU-G10** | 175/180 | | 900x590x1015 | |
| **SCU-G17** | 185/195 | | 900x520x1650 | |
| **SCU-G25** | 235/250 | | 1000x700x1650 | |

*Test: each unit has been tested in the factory for a minimum of 15 minutes.*
*Limitations: maximum air inlet temperature: 35°C DB–21°C WB. Min. air inlet temperature: 18°C DB–14°C WB. Minimum cooling water temperature: 20°C.*
*Dimensions are the same for seawater & freshwater.*

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