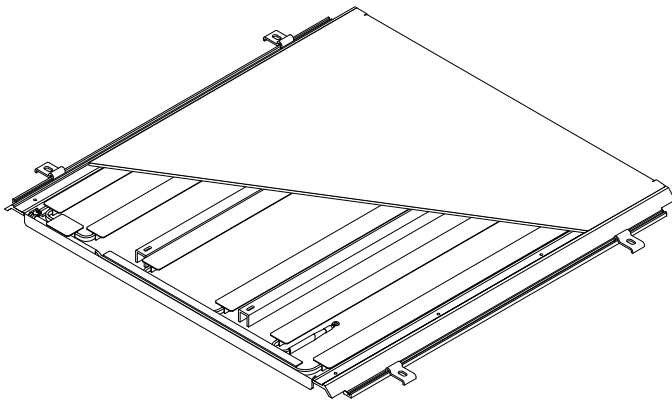


# ANTI-ICING SYSTEM FOR OFFSHORE WALKWAYS AND DECK SURFACES



### DESCRIPTION

The nVent RAYCHEM ArcticStep is a modular panel system for anti-icing or de-icing of walkways and deck surfaces on offshore platforms and vessels. It is designed for use in hazardous area installations in oil & gas and marine industries.

The system consists of a robust metallic top plate, an embedded nVent RAYCHEM self-regulating heating cable, fiber reinforced polymer supports, protective anti-slip coating, and adjustable fixations.

This hybrid light weight construction allows for fast and easy installation, minimizes heat loss and energy consumption, provides galvanic and thermal insulation from the deck surface, and ensures long life operation in harsh corrosive environments. Integrated cable channels protect the power supply cables from any mechanical damage.

### SPECIFICATIONS

Application	Hazardous, Zone 1, Zone 2 (Gas), Zone 21, Zone 22 (Dust), Ordinary area
Surface type	Offshore and onshore structures, on top of steel decks, grating (special fasteners and wind barrier are required), painted or unpainted.
Chemical resistance	Designed to withstand salt and corrosive atmosphere, sea water, cleaning solvents, oil. Protective Primer coating (black) + top layer antislip coating (yellow, RAL 1021)
Supply Voltage	230 Vac
Approvals	The ArcticStep is designed, tested and approved according to latest DNVGL Standards: DNVGL-OS-A201, and DNVGL-RU-SHIP Pt.6 Ch.6 for use in Winterized Basic, Cold and Polar conditions. nVent RAYCHEM QTVR heating cables are approved for use in hazardous area by PTB and Baseefa Ltd (ATEX, IECEx)



#### BTV System Approval information

Baseefa06ATEX00183X

Ex II 2 GD                      Ex e II T6      Ex tD A21 IP66 T80°C  
 IECEx BAS 06.0043X      IEx e II T6      Ex tD A21 IP66 T80°C

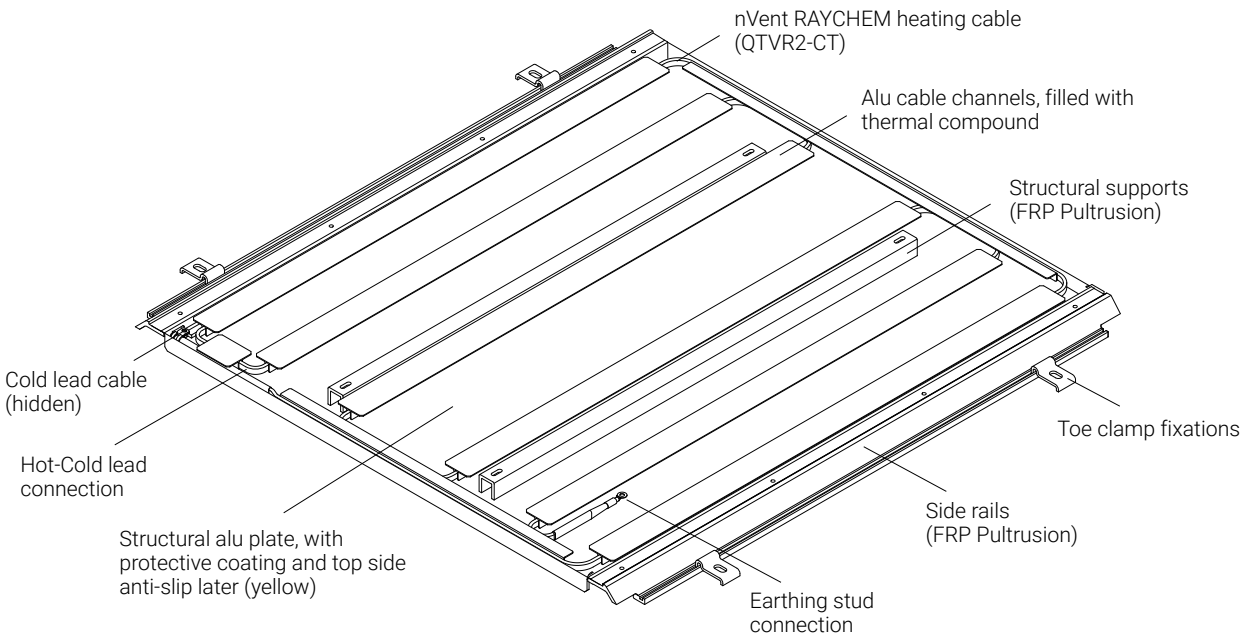
#### QTVR System Approval information

Baseefa06ATEX0185X

Ex II 2GD                      Ex e II T4      Ex tD A21 IP66 T130°C  
 IECEx BAS 06.0045X      Ex e II T4      Ex tD A21 IP66 T130°C

Temperature class	T4
Impact load	250 kg/m <sup>2</sup>
Materials of construction	Top plate: Aluminium (4 mm) Pultrusions + supports: fiber reinforced polymer (FRP)
Cold lead connection	Power cable in oil resistant TPE/PUR, size 1.5 mm <sup>2</sup> , standard length: 10 m. Approved for electrical installation in offshore and marine

## SPECIFICATIONS



## DIMENSIONS (\*)

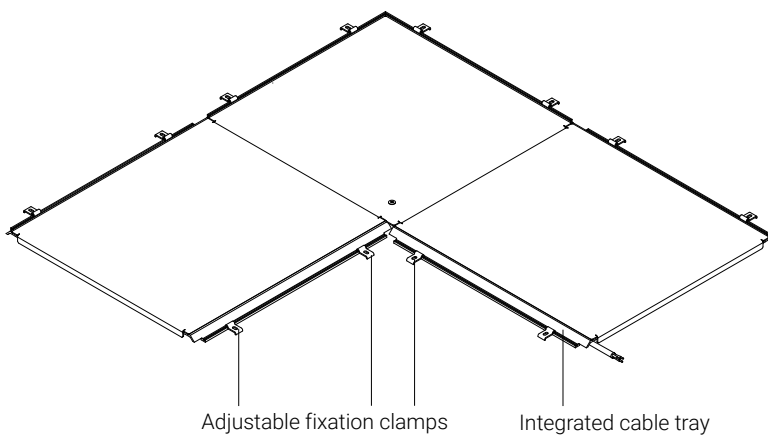
3 Types	Straight	Straight Long	Corner
Size (m)	1.0 * 1.0	2.0 * 1.0	1.0 * 1.0
Height (mm)	35	35	35
Weight (kg)	<20	<40	<20

## THERMAL OUTPUT RATING (\*)

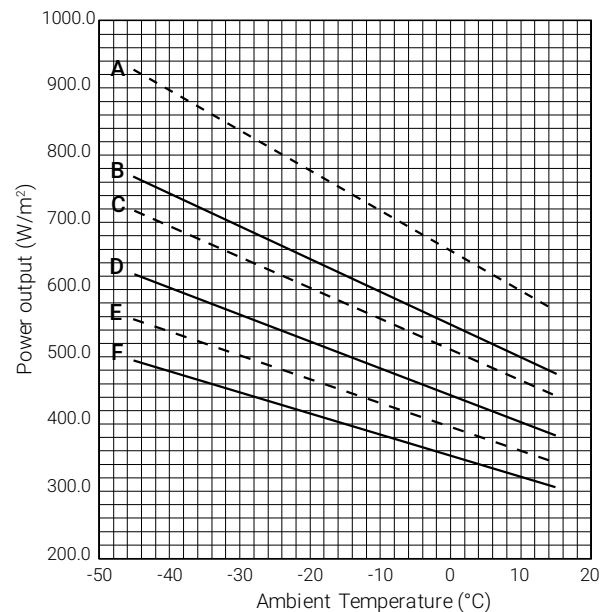
3 Versions	RAS-350	RAS-500	RAS-650
Minimum power output @ -20°C (W/m²)	350	500	650

(\*) Customized sizes and power outputs available, up to 1800 W/m². Contact your nVent sales representative.

## Size customization possible



nVent RAYCHEM ArcticStep nominal power output at 230 Vac (W/m²)



**A** = RAS 650 - Light wind      **D** = RAS 500 - No wind  
**B** = RAS 650 - No wind        **E** = RAS 350 - Light wind  
**C** = RAS 500 - Light wind      **F** = RAS 350 - No wind

## INSTALLATION INSTRUCTION

Complete panel wiring information and schematics are provided with the product. All electrical installations must be carried out by an approved electrician in compliance with local electrical requirements and norms.

### MAXIMUM INSTALLED SURFACE AREA (IN M<sup>2</sup>) PER CIRCUIT BASED ON TYPE 'C' CIRCUIT BREAKERS

Electrical protection sizing	Start-up temperature	RAS-350	RAS-500	RAS-650
16 A	-20°C	7	5	3
	-10°C	8	5	3
	+5°C	9	6	4
25 A	-20°C	12	8	6
	-10°C	12	9	6
	+5°C	14	11	7
32 A	-20°C	15	11	8
	-10°C	16	12	8
	+5°C	18	14	10

The above numbers are for estimation only. For more information contact your local nVent sales representative. nVent requires the use of a 30 mA residual current device to provide maximum safety and protection from fire. Where design results in higher leakage current, the preferred trip level for adjustable devices is 30 mA above any inherent capacitive leakage characteristic of the heater as specified by the trace heater supplier or alternatively, the next common available trip level for non-adjustable devices, with a maximum of 300 mA. All safety aspects need to be proven.

### ORDERING DETAILS

Name	Description	PN code
RAS-350-S-1.0-10	ArcticStep, 350 W/m <sup>2</sup> , Straight, 1 m long	RAS-00001
RAS-350-S-2.0-10	ArcticStep, 350 W/m <sup>2</sup> , Straight, 2 m long	RAS-00002
RAS-350-C-1.0-10	ArcticStep, 350 W/m <sup>2</sup> , Corner, 1 m long	RAS-00003
RAS-500-S-1.0-10	ArcticStep, 500 W/m <sup>2</sup> , Straight, 1 m long	RAS-00004
RAS-500-S-2.0-10	ArcticStep, 500 W/m <sup>2</sup> , Straight, 2 m long	RAS-00005
RAS-500-C-1.0-10	ArcticStep, 500 W/m <sup>2</sup> , Corner, 1 m long	RAS-00006
RAS-650-S-1.0-10	ArcticStep, 650 W/m <sup>2</sup> , Straight, 1 m long	RAS-00007
RAS-650-S-2.0-10	ArcticStep, 650 W/m <sup>2</sup> , Straight, 2 m long	RAS-00008
RAS-650-C-1.0-10	ArcticStep, 650 W/m <sup>2</sup> , Corner, 1 m long	RAS-00009

RAS-xxx-Y-x.x-yy: RAS = RAYCHEM ArcticStep / xxx = Power W/m<sup>2</sup> / Y: S = straight, C = corner / x.x-yy = length panel-length cold lead cable

### ACCESSORIES

Name	PN code
RAS-TOE.CLAMP-15PC	RAS-ACC0001
RAS-CABLE.COVER-2M	RAS-ACC0002
RAS-GRAT.MAT-10M	RAS-ACC0003

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