

## TOTAL SOLUTION FOR OZONE TREATMENT SYSTEM

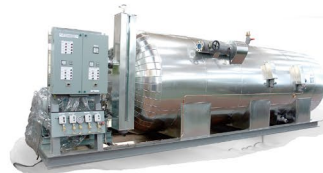


PACKAGE SOLUTION of  
OZONE SYSTEM | SAFETY EQUIPMENT | FIRE FIGHTING SPARE PART

## FIRE FIGHTING SPARE PART

### 01 HIGH PRESSURE CO<sub>2</sub>

- CO<sub>2</sub> nozzle(SC)
- 3-way V/V 1-5 line
- Pressure gauge
- Tube adaptor
- Optical smoke detector
- Flexible hose with adaptor
- Pilot loop
- Beam scale
- Ultrasonic liquid level indicator
- Air connection assy(Ball valve)



### 02 LOW PRESSURE CO<sub>2</sub>

- Motor siren with lamp
- Manifold check valve
- Regulator
- Control panel

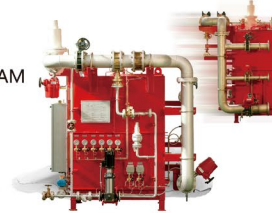


### 03 DRY CHEMICAL POWDER

- Main regulator
- Manual valve
- Control valve
- Y-strainer
- Level switch
- Control valve
- Eye bolt for fire monitor
- Pneumatic discharge valve
- Electric horn with rotating lamp
- Release control cabinet assy

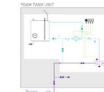
### 04 HIGH EXPANSION FOAM

- Foam proportioner
- Pressure vacuum
- Main V/V(MOV)
- Foam generator nozzle
- Safety V/V
- Filling cap



### 05 LOW EXPANSION FOAM

- Main V/V(POD)
- Foam monitor
- Butterfly V/V
- Inlet body
- Nozzle set
- Body handle
- Bearing male/female
- Strainer(Y-type)
- Constant pressure V/V
- Locking deviceE



### 06 LOOSE EQUIPMENT



**SWe&t**

#### CONTACT POINT

- R&D Center established
- Over 50ships and 100 system is applying well developed product of SW E&T
- Contract signed with NK as a proper authorized agency
- Well organized A/S team in order to reinforce the service quality
- Set-up an alliance connect with partners for safety equipment.

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+82 51 974 0457

R&D Center / Gi-Wook Kim  
gi-kim@swinco.com  
+82 51 973 0468

**SWe&t**  
**INNOVATES**

Authorized agency of **NK Group**.  
Opimal world wide Logistic system.

NK NKIS THE SAFETY

## OZONE SYSTEM

**01**

**OXYGEN GENERATOR**  
Based on standard, off-the-shelf technology  
Takes ambient air, strips off the nitrogen  
and concentrates the oxygen  
to supply the ozone generator



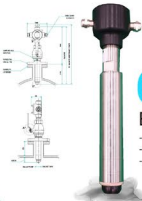
**02**

**OZONE INJECTOR**  
Based on standard, off-the-shelf  
Takes ambient air, strips off the nitrogen  
and concentrates the oxygen  
to supply the ozone generator



**03**

**ELECTRIC TRO ANALYZER**  
- Power : 24VDC  
- IP grade : IP56  
- Ex-proof type : IECEx ZONE1,  
TS group IIC(Ex-ib)



**08**

**OXYGEN ANALYZER**

- Power : AC 100-240V, 0.2A  
- Range : 0.5~100.0%  
- Output : 4~20mA



**06**

**OZONE DETECTOR (NEW)**

- Measurement principle  
: Dual-beam UV photometer (254nm), no moving parts  
- Power : Wide range input :100 ~ 240VAC, 15VA / Optional:12-36VDC, 15W  
- Weight : 1.5Kg



**05**

**ELECTROCHEMICAL SENSOR**

- Power : 24VDC  
- IP grade : IP66  
- Measurement range : 0~3ppm



**05**

**INJECTION DIFFUSER**



## SAFETY EQUIPMENT

### Competitive Point

1. Worldwide business range for supplying fire fighting spare parts, Service, Safety equipment
2. Partnership authorized by Viking, NK, CSM, TYCO, ORIENTAL to supply highly qualified product
3. Official approval received from certified classification companies

- APPROVAL  
- Certificate of Recognized Maintenance Factory  
- ABS, BV, DNV GL, RRS, KR, LR, RINA, NK
- MANUFACTURER AUTHORIZED CERT  
- VIKING LIFE-SAVING EQUIPMENT  
- CSM Marine Star Rubber Products Co Ltd  
- ORIENTAL INSPECTION & SERVICE CO.LTD  
- DRAGER
- CORNING Hurling Life-saving Appliance Manufacturing Co. Ltd

**01**

**LIFE RAFT**

Liferafts usually stored in glass packaging steel storage cylinder, a dedicated life raft shelves installed in the ship, you can raft directly into the water, either automatically inflated (Hearth shaped raft)



**02**

**Portable multi - gas detector for safety**

- Approval : MID  
- IP grade : IP67  
- Applicable gas : LEL(Combustible) O2, CO, H2S  
- Alarm mode : Highly visible flashing LED, Pinging > 90db Audible



**03**

**Breathing Apparatus**

- Air Cylinder volume : 5-8BL  
- Normal working Pressure : 300Bar  
- Air Storage capacity : 1500-2048L  
- Weight : 10-14kg



**04**

**PSS040 VIKING Immersion Suit**

- Approval : MID SOLAS / IFSO 25002  
- Outer material : PVC coated nylon / ZD4TEX  
- Design features : Mobile system for pockets  
/ Integrated life jacket  
/ Adjustment of leg width  
- Size : 42, 48, 54, 60, 66, 99/42, 99/48  
- Service interval : 1year



**05**

**SOLAS Marine Fire Safety Package**

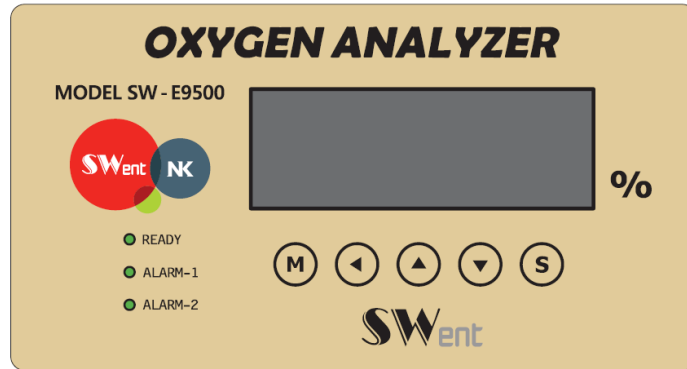
There are specific SOLAS/MED requirements for marine fire fighting as well as flag state approval requirements. VIKING can supply a full package of approved products as needed for your fleet.





BWTS

# BWTS DETECTOR & SENSOR



Oxygen Analyzer



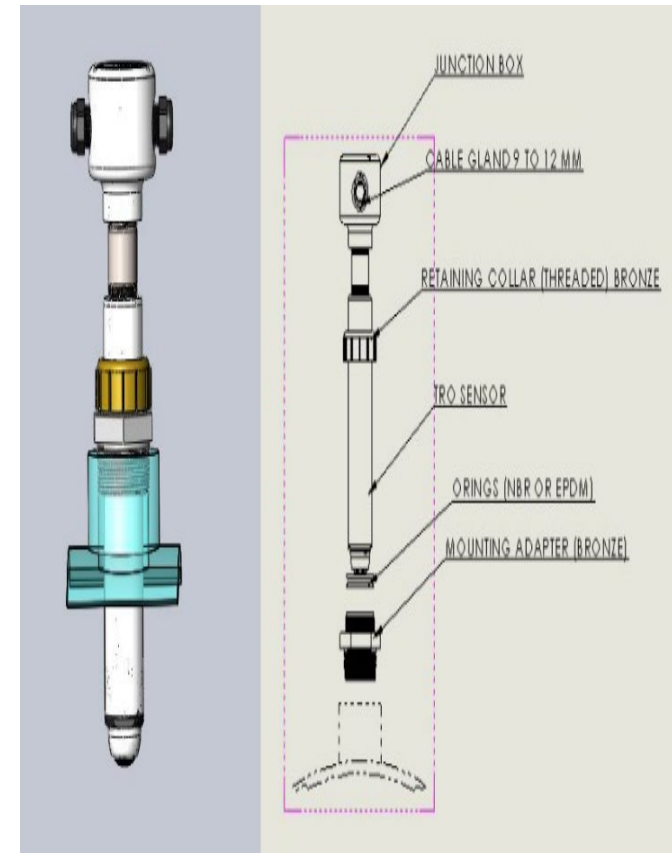
Ozone Analyzer



O2 detector & O3 detector



MFC VALVE



T.R.O Analyzer

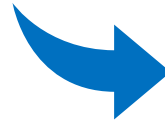
## Fire Fighting System – High Pressure Co2 System

# Spare Parts

# 01

## HIGH PRESSURE CO<sub>2</sub>

- CO2 nozzle(SC)
- 3-way V/V 1~5-line
- Pressure gauge
- Tube adaptor
- Optical smoke detector
- Flexible hose with adaptor
- Pilot loop
- Beam scale
- Ultrasonic liquid level indicator
- Air connection assy(Ball valve)



Co2 N2 Cylinder / Pilot Cylinder



Cylinder Valve



Main Valve Ass'y



Flexible Hose Ass'y



Pilot Loop Ass'y



Main Valve Ass'y



Valve Actuator



Release Control Cabinet Ass'y



Time Delay Pneumatic / Electric



**SWe&t**

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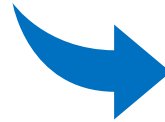
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Optical Smoke Detector EX



Optical Smoke Detector



Prefilter



Airflow Detector with Plug and Cable



Universal Drain Box



3-Way Valve



Universal Drain U-bolt Type



Universal Drain PT

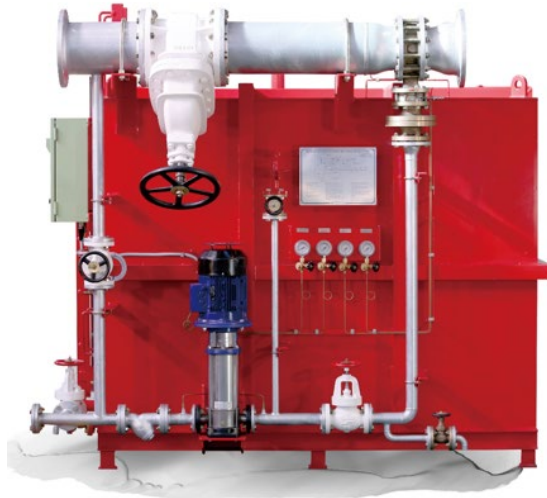


**SWe&t**

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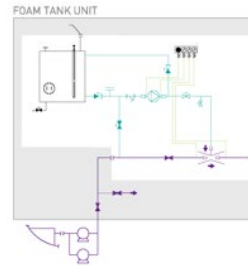
**DNV-GL**

# Spare Parts



## 05 LOW EXPANSION FOAM

- Main V/V(POD)
- Foam monitor
- Butterfly V/V
- Inlet body
- Nozzle set
- Body handle
- Bearing male/female
- Strainer(Y-type)
- Constant pressure V/V
- Locking deviceE



Foam Monitor



Bearing for Foam Monitor SFHD 150



Foam Proportioner



Mechanical Seal For KSB Pump



Diaphragm of the Foam Proportioner 80/200



Diaphragm of the Foam Proportioner 50/150



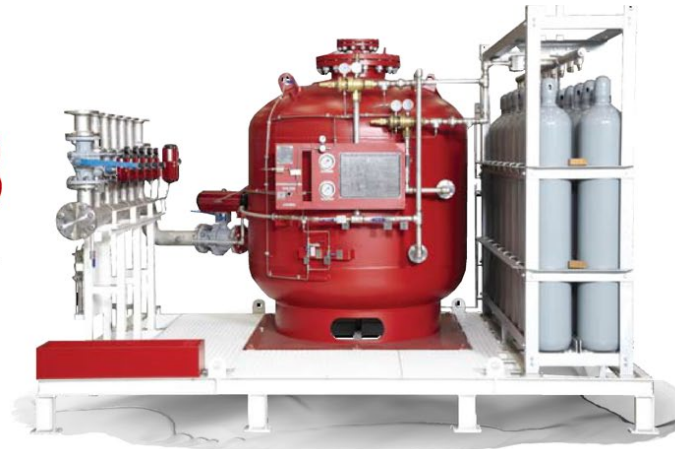


# Spare Parts

03

## DRY CHEMICAL POWDER

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Low Water mist Nozzle



Mechanical Seal For KSB Pump



Mist SOL 6 Manual Valve 20A



Mist SOL 6 Manual Valve 25A



Press Gauge



Press Gauge, With Cock



Dry Chemicals



Nozzle Pistol



**SWe&t**

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# PERSONAL PROTECTIVE EQUIPMENT



Life jacket



Inflatable Life jacket 150N



SCBA



EEBD



Immersion Suit



Fireman Suit



Chemical Suit



Life Buoy, Fire Blanket



LOOSE EQUIPMENT

# Life Saving Appliance

**SWe&t**  
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**Powder Extinguisher**



**CO2 Fire Extinguisher**



**Mounting Bracket**



**Jet / Spray Nozzle**



**Fire Hose Box**



**SPANER**



**Fire Hose**

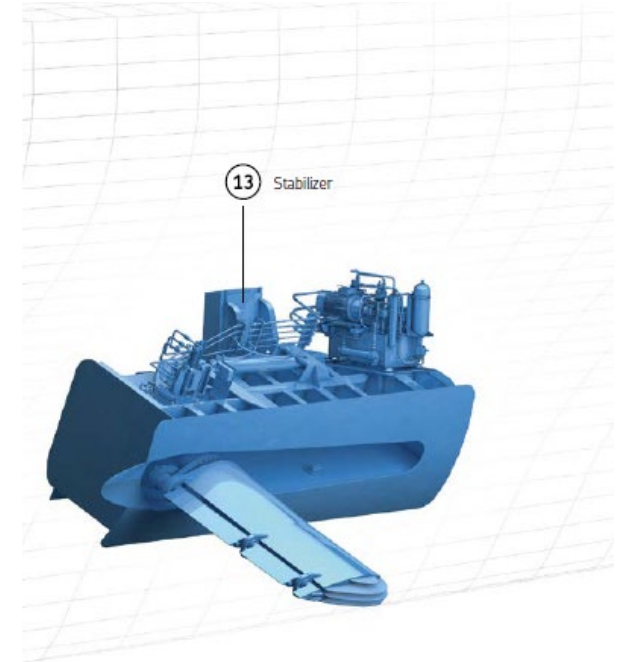
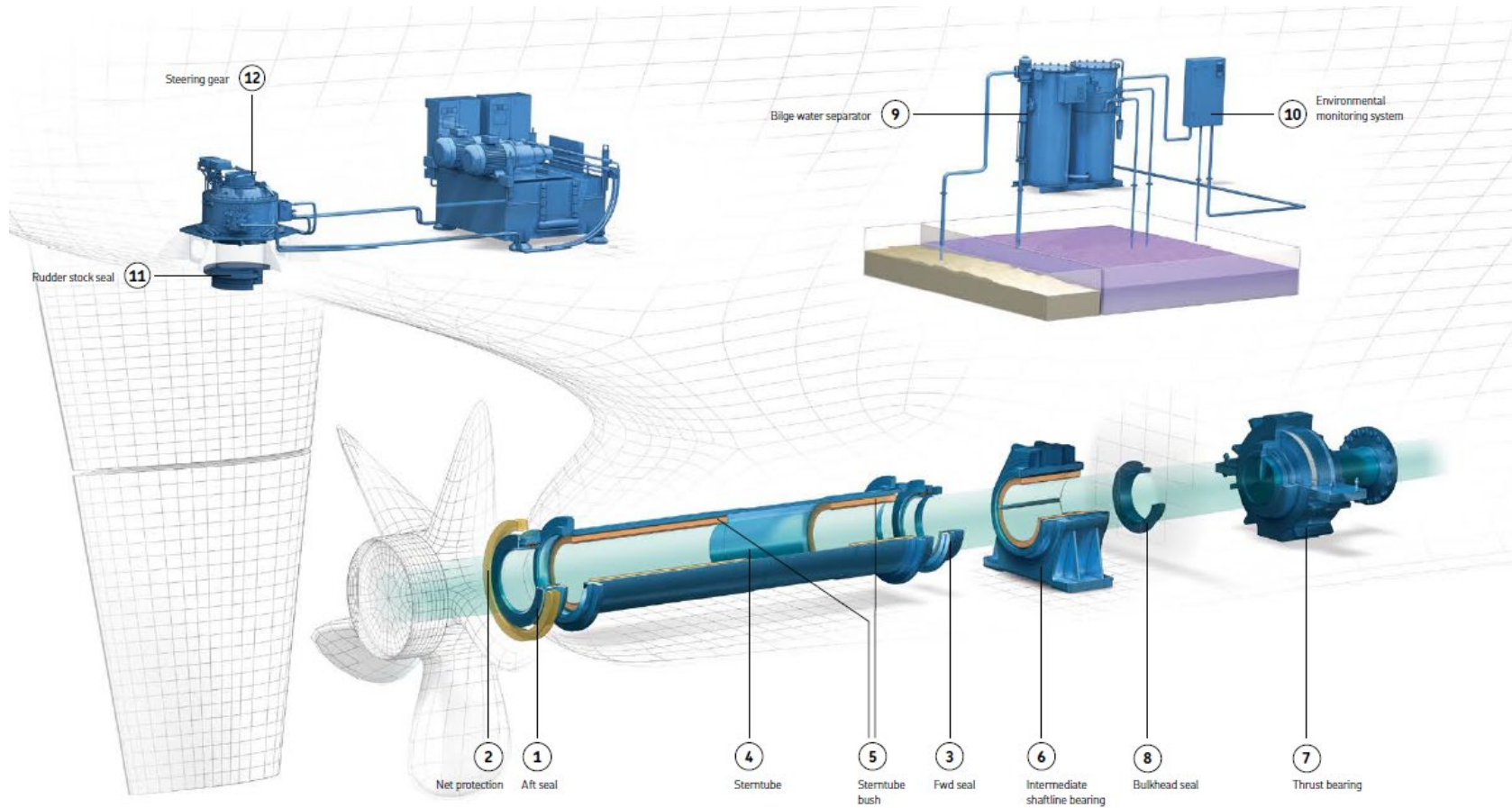


**First Aid Kit**

# Bilge Water Separator & Bearing

**SW**e&t

(주) 신우이앤티



# Bilge Water Separator & Bearing

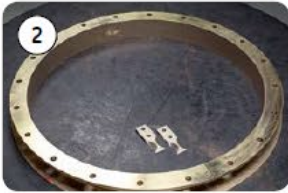


(주) 신우이앤티



**1**  
Aft seal  
Oil lubricated

- **Airspace (SV/II)**  
Non-pollution aft lip seal for highest environmental requirements. Total separation of water and oil (four-ring seal). Designed to comply with the VGP2013 – No EAL required.
- **Multisafe (BR)**  
Aft lip seal with double security against seawater infiltration (four-ring seal).
- **Multisafe (M)**  
Aft lip seal with double security against sterntube oil discharge (four-ring seal).
- **Advanced (B)**  
Standard aft lip seal with additional pressure control (three-ring seal).
- **Basic (A)**  
Aft lip seal for most standard requirements (three-ring seal).



**2**  
Net protection

- **SIMPLEX-COMPACT Net protector**  
Dirt, net and rope protection ring, effective aft seal protection against dirt, fishing nets and lines.
- **Net cutter**  
Knife blades – basic aft seal protection against fishing nets and lines.
- **Net pick-up**  
Net and rope collecting ring, advanced aft seal protection against fishing nets and lines.



**3**  
Fwd seal  
Oil lubricated

- **Basic (Z)**  
Fwd lip seal for most standard requirements (two-ring-seal).
- **CPP (ZL)**  
Fwd lip seal for oil lubricated stern tubes with additional oil supply for controlled pitch propellers (three-ring-seal).



**8**  
Bulkhead seal

- **Centrax**  
Maintenance-free mechanical seal for watertight sealing of shafts leading through bulkhead openings.
- **SIMPLEX**  
Lip seal designed for gas- and watertight sealing of shafts leading through bulkhead openings.



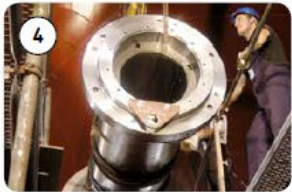
**9**  
Bilge water separator

- **TURBULO MPB**  
TURBULO-MPB designed for the treatment of bilge water on ships in accordance with the IMO Resolution MEPC107(49). Approved for 15 ppm/5 ppm requirements.



**10**  
Environmental monitoring system

- **TURBULO BlueMon**  
TURBULO BlueMon monitoring system; comprehensive monitoring and mapping system for all emissions on vessels which are subject to MARPOL 73/78 Annex I – VI.



**4**  
Stern tube  
Oil lubricated

- **FlexiTube**  
Complete stern tube with white metal bush bearings, completely piped and ready to install. Design allows compensation of axial movement.
- **Stern Tube**  
Complete stern tube with white metal bush bearings, completely piped and ready to install.



**5**  
Stern tube bush  
Oil lubricated

- **SIMPLEX stern tube bush**  
White metal bush bearing for fwd and aft position.



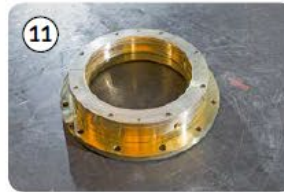
**6**  
Intermediate shaftline bearing

- **Plummerblock**  
Self-lubricating radial shaft bearing with an upper and lower bearing shell.
- **Tunnel bearing**  
Self-lubricating support shaft bearing with lower bearing shell.



**7**  
Thrust bearing

- **High load thrust bearing**  
Single-collar axial thrust bearing.



**11**  
Rudder stock seal  
Grease lubricated

- **Upper seal type**  
Upper rudder stock seal for installation at the top of the rudder stock trunk.
- **Lower seal type**  
Lower rudder stock seal against sea water for installation at the lower end of the rudder stock trunk.
- **Lower seal type for coker unit installation**  
Lower rudder stock seal against sea water for installation inside the coker unit.



**12**  
Steering gear

- **Rotary vane steering gear system**  
Compact rotary vane steering gear for any rudder design.



**13**  
Fin stabilizer  
Retractable

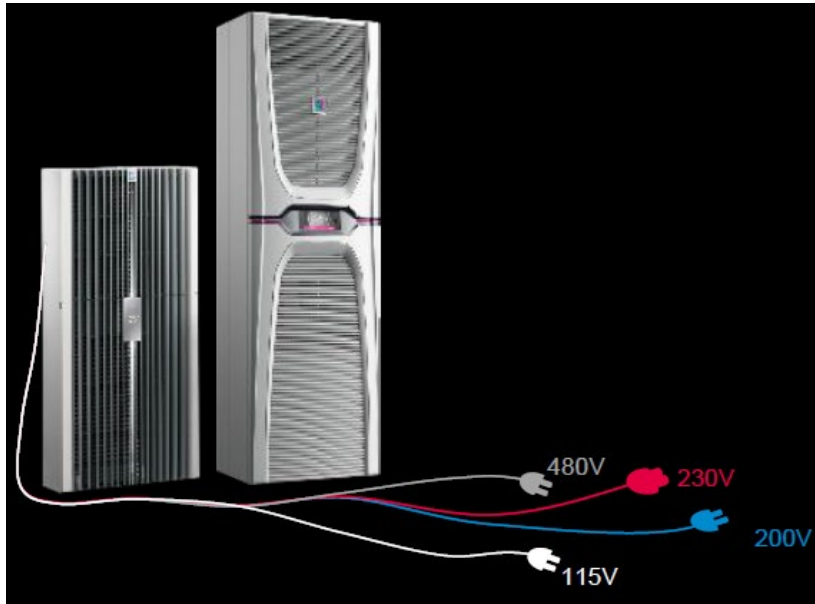
- **Type S**  
Completely retractable fin stabilizer for reducing any rolling movement.



# Air Cooling Unit



(주) 신우이앤티



## Blue e+: One technology for every application.

This cooling unit is at home in any environment. Blue e+ units are suitable for all industries and environments. Choose from a range of efficient solutions covering all requirements and applications:

- Multi-voltage capabilities for global use in every sector
- A wide output range for all cooling requirements from 0.3 –5.8 kW
- Sheet steel version for all typical industry applications
- Stainless steel and chemical versions for challenging ambient conditions
- Robust outdoor version with anti-vandalism features



\*DNVGL-CG-0339에 따  
라 인증됨

# WATERFIN REAGENT KIT



	WATERFIN Reagent	Company H Reagent
Components	1 Buffer 4 Indicators + 4 DPD powders	1 Buffer 4 indicators + 4 DPD powders
Lifetime	Buffer : 1 year / Indicator : Every 3 months with cooling chamber	Buffer : 1 year / Indicator : Every 3 months with cooling chamber
Price	Low ↓ ★★★★	High ↑

