

TOTAL VISIBILITY SOLUTION

VISIONAV

Marine Windows

CLEANAV

Window Wiper & CVS

SOLANAV

Anti glare Sunscreen

BLINNAV

Blackout Blind





COMPANY INTRODUCTION

Since the establishment in 1986 Jung Gong has been specialized in manufacturing diversified range of marine window, window wiper, CVS, anti glare sunscreen and blackout blind.

The list of our customers covers all the shipyards in Korea, major shipyards in Japan, China, Taiwan, Singapore, Vietnam, India, Malaysia, USA, U.A.E, Saudi-Arabia, Egypt, Brazil, Rumania, Indonesia, etc(more than 20 nations).

As what we are mainly interested in is 'how to satisfy the customers in all respects', we will continue to make every endeavor not only to meet immediate requirement but also to cope with any demand in future.

Jung Gong Ind. Co., Ltd.



3Million USD Export Commemoration Award



10Million USD Export Commemoration Award



Bronze Industrial medal Award



HISTORY

| 1986 | Established Jung Gong Ind. co., Ltd. |
|------|---|
| 1991 | Registered for Trading Business |
| 1999 | Obtained ISO 9002 System (DNV) |
| 1999 | Obtained CE Mark |
| 2000 | Designated as High Potential Export Company (Busan and Ulsan Small and Mid Enterprise Export Support Center) |
| 2002 | Conferred with 3Million USD Export Commemoration Award |
| 2003 | Obtained ISO9001/ISO14001/OHSAS18001 system(DNV) |
| 2007 | Conferred with 10Million USD Export Commemoration Award |
| 2011 | Awarded Bronze Industrial Medal from the Government |
| 2013 | Awarded Leading Company Certificate from the Government |
| 2014 | Awarded Merit Medal from the Government |

Integrated management system



ISO 9001 Quality Management



ISO 14001 Environmental Management



OHSAS 18001 Health & Safety Management



2ND FACTORY

- SITE 4,704 m², BUILDING 2,765 m²
- SHINPYUNG-DONG, SAHA-GU, BUSAN, KOREA
- PRODUCTION OF NONFERROUS FRAME : AL.ALLOY, BRONZE



3RD FACTORY

- \cdot SITE 4,948 m^2 , BUILDING 2,112 m^2
- SONGJEONG-DONG, GANGSEO-GU, BUSAN, KOREA
- PRODUCTION OF METAL FRAME



4TH FACTORY

- · SITE 2,314 m², BUILDING 1,197 m²
- · SHINPYUNG-DONG, SAHA-GU, BUSAN, KOREA
- PRODUCTION OF WIPER & CVS
- PRODUCTION OF ANTI GLARE SUNSCREEN

SIDE SCUTTLE



| Standard | ISO, BSMA & JIS | |
|---|---|--|
| Material Al-Alloy, Brass, Steel & Stainless Steel | | |
| Method of fitting | Welded and Bolted | |
| Туре | Non-Opening & Opening, Etc. | |
| Glass | Toughened , Heated , Double Glazing, Laminated, Etc. | |
| Accessories | Insect Screen, Sun Screen, Roller Blind, Hanger, Etc. | |
| Nominal size | 200, 250, 300, 350, 400 & 450 DIA | |

RECTANGULAR WINDOW





| Standard | ISO, BSMA & JIS |
|-------------------|---|
| Material | Al-Alloy, Brass, Steel & Stainless Steel |
| Method of fitting | Welded and Bolted |
| Туре | Non-Opening & Opening, Etc |
| Glass | Toughened , Heated , Double Glazing, Laminated, Etc. |
| Accessories | Insect Screen, Sun Screen, Roller Blind, Hanger, Etc. |



FIRE RESISTANT WINDOW & SIDE SCUTTLE





Fire Resistant Window

| Standard | IMO Resolution A.754(18), NORSOK, IGC CODE |
|----------------|--|
| Fire Integrity | H120, A60, A30, A0, B30, B15 |
| Accessories | Window Box, Internal Blind |
| Fire Glass | Contraflam, Pyroswiss |



Fire Resistant Side Scuttle

| Standard IMO Resolution A.754(18), NORSOK | | |
|---|----------------------------|--|
| Fire Integrity | A60 | |
| Accessories | Window Box, Internal Blind | |
| Fire Glass | Contraflam | |

Type Approval Certificate: ABS, BV, DNV, LR, GL, KR, NK, RINA, CCS, USCG, MED, etc.

SOUND INSULATION WINDOW

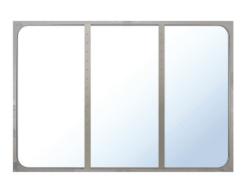


| Fire Integrity | Sound Insulation |
|----------------|------------------|
| H120 Class | 54 dB |
| A60 Class | 48~55 dB |
| A0 Class | 40~53 dB |
| Non Class | 31~54 dB |

- · Development of Rw=55dB Window
- · Obtained sound insulation data from 40 types of window

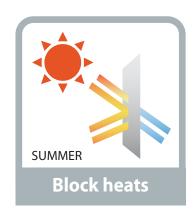
WINDOW FOR PASSENGER VESSEL





| Standard | ISO, BSMA & JIS |
|-------------------|---|
| Material | Steel & Stainless with extruded frame |
| Method of fitting | Welded |
| Туре | Non-Opening |
| Glass | Toughened, Heated, Double glazed, Laminated, etc. |

THERMAL INSULATION WINDOW





| Glass | Clear Glass | | Low-Emissivity Glass | | Tinted Glass | |
|-------------------------|-------------|--------|----------------------|--------|--------------|--------|
| | Single | Double | Single | Double | Single | Double |
| Solar Factor (%) | 0.8 | 0.69 | - | 0.47 | 0.48 | 0.61 |
| U-Value (W/m²°C) | 5.6 | 2.8 | - | 1.0 | 5.6 | 2.8 |
| Light Transmittance (%) | 88 | 78 | - | 69 | 63 | 64 |

· U-Value: Heat transmittance coefficient

· Solar Factor: Total Energy transmission

WINDOW BLIND SYSTEM

ADVANTAGE

- Improvement on design and space occupancy by combination of window box and blind.
- Combining the fuction of blackout and curtain.
- No screw to be exposed for elegant exterior.
- Design and color matched smoothly.
- Improving elements can make more valuable ships.
- Fabric not to be disjoined during opening and curtain.
- Easy installation and maintenance.
- Flame retardant tested according to FTP Code.
- MED certificated, ABS type approved.





STRAIGHT LINE WIPER



External Motor Drive





Standard Parking System



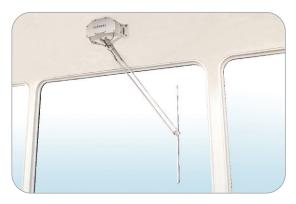
Curtain Parking System



| Standard | ISO 17899 | Arm Length / Blade Length | Max 1000mm |
|-------------------|--|------------------------------|---|
| Location of Motor | Internal Motor Drive, External Motor Drive | Wipe Speed | Variable Speed, Fast/Slow/Intermittent Speed |
| Blade | Single Blade, Twin Blade | Voltage | AC110/220 Volts, 1Ph/3Ph |
| Parking System | Standard Parking System, Curtain Parking System | Control System | Group/Individual/Master Control System |
| Stroke Length | Max 3500mm | De-icing | De-icing Heater |



PANTOGRAPH WIPER



| Wipe arc | Max.90° |
|--------------------|---|
| Arm length | Max.1000mm |
| Blade length | Max.1000mm |
| Wipe speed | Variable, Fast/Slow/Intermittent Speed |
| Voltage | AC110/220Volts, 1Ph or DC24V |
| Parking & De-icing | Automaitic self parking & De-icing heater |

CLEAR VIEW SCREEN



| Standard | ISO 3904 |
|-----------------|---------------------|
| Clear size | 300, 350mm Diameter |
| Voltage | AC110, 220Volt-1Ph |
| Operating speed | 1800±200rpm |
| De-icing | De-icing heater |



<WIPER CONTROLLER>



<WIPER CONTROLLER>



<CVS CONTROLLER>

ADVANTAGE

AC Induction Motor

- Less noise during operation
- High efficiency & power
- Outstanding durability

Fast Wiping Speed

- Fast speed: 76m/min
- Slow speed: 38m/min
- In comply with rule (68m/min)

Longer Blades, Arms & Stroke

- Max blade length: 1000mm
- Max arm length: 1000mm
- Max stroke length: 3500mm

User Interface Control System

- Optimum control system for maximum convenience

Installation Method

- Easy installation of Wiper
- Easy installation of Arm

Design of Wiping system

- Optimum design considering W/H structure and outdoor environment

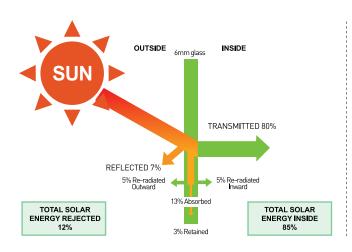
Global Service Network

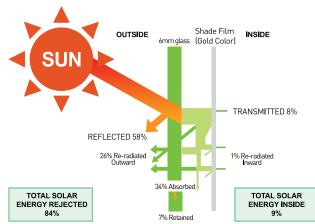
- Anytime
- Anywhere
- Anything

Total Visibility Solution

- Window, Wiper, CVS, Sunscreen, Window box Package system

PERFORMANCE OF SOLANAV™ SHADE FILM





SHADE FILM... For Your Place In The Sun.

For solar and fade protection, you can have it made in the shade with shade films. Used in Anti Glare Sun Screen, these light filtering film rise to the occasion when it comes to versatility and performance.

Shade films are manufactured in a variety of transparent constructions, each incorporating polyester films impregnated with ultraviolet absorbers that reject up to 99% of damaging UV radiation.

So they block out the sun's damage without blocking out the view. These films are available in reflective, semi-reflective and non-reflective constructions. On SOLANAV™ Anti Glare Sun Screen, reflective shade films are available.

Reflective shade films provide the greatest solar energy control and daytime privacy. To maximize solar energy rejection, these laminates contain an aluminum metallized layer which is either visible or hidden between layers of dyed film.

PERFORMANCE DATA OF SHADE FILM

| FILM COLOUR | Gold | SILVER | GREY | BRONZE |
|-------------------------------|------|--------|------|--------|
| % Total Solar Energy Rejected | 84 | 84 | 64 | 61 |
| % Glare Reduction | 94 | 92 | 92 | 85 |
| % Visible Light Transmittance | 5 | 7 | 7 | 13 |
| % Ultraviolet Light Rejected | 99.9 | 99.3 | 99.9 | 99.9 |



DEFINITIONS OF SHADE PERFORMANCE TERMS

Total solar Energy Rejected (TSER) Percentage of the solar energy in the total solar spectrum that is reflected or absorbed by the window and associated window treatments.

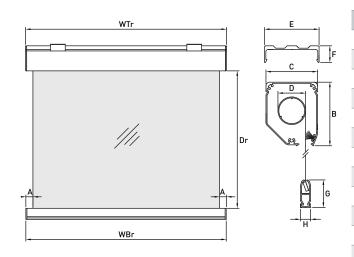
Visible Light Transmittance(VLT) Percentage of visible solar energy that is allowed to pass through a window and associated window treatments.

Glare Reduction(GR) Percentage of visible solar energy that is not allowed (rejected) to pass through a window and associated window treatments. The near opposite of Visible Light Transmittance.

Ultraviolet Light Rejected(UVLR) Percentage of ultraviolet solar energy that is rejected.

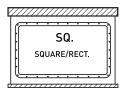


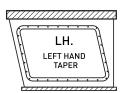
DIMENSIONS OF ANTI GLARE SUN SCREEN

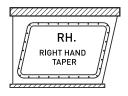


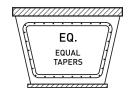
| Description | WTr < 2800mm | WTr ≥ 2800mm |
|-----------------|--------------|--------------|
| DIMENSION A | 19mm | 19mm |
| DIMENSION B | 68mm | 78mm |
| DIMENSION C | 56mm | 64mm |
| DIMENSION D | ø30mm | ø38mm |
| DIMENSION E | 59mm | 67mm |
| DIMENSION F | 18mm | 18mm |
| DIMENSION G | 30mm | 30mm |
| DIMENSION H | 11mm | 11mm |
| MIN. WIDTH(WTr) | 450mm | 450mm |
| MAX. WIDTH(WTr) | 2800mm | 3500mm |
| MIN. DROP(Dr) | 250mm | 250mm |
| MAX. DROP(Dr) | 3000mm | 3000mm |

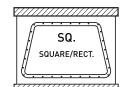
SCREEN SHAPES AVAILABLE





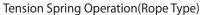






ROLLER OPERATING MECHANISMS







Side Chain Operation(Chain Type)

Hints on Tension Spring Operation

- Do not allow the blind to retract quickly by itself. Always control the speed of ascent by holding onto the pull cord.





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