

Ruitenwissers
Windscreen wipers
Scheibenwischer
Essuie-glaces
Limpiaparabrisas
Tergicristalli

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Waarschuwing
Verdraai **nooit** de schroef aan de buit-zijde van de ruitenwissermotor.

Warning
Never adjust the screw on the outside of the wiper motor.

Achtung
Verdrehen Sie **niemals** die Schraube an der Außenseite des Scheibenwischermotors.

Attention
Ne jamais tordre la vis à l'extérieur du moteur d'essuie-glace.

Precaución
No atornillar/ destornillar jamás el tornillo situado en el exterior del motor del limpiaparabrisas.

Avvertenza
Non girare mai la vite situata all'esterno del motorino del tergicristallo.

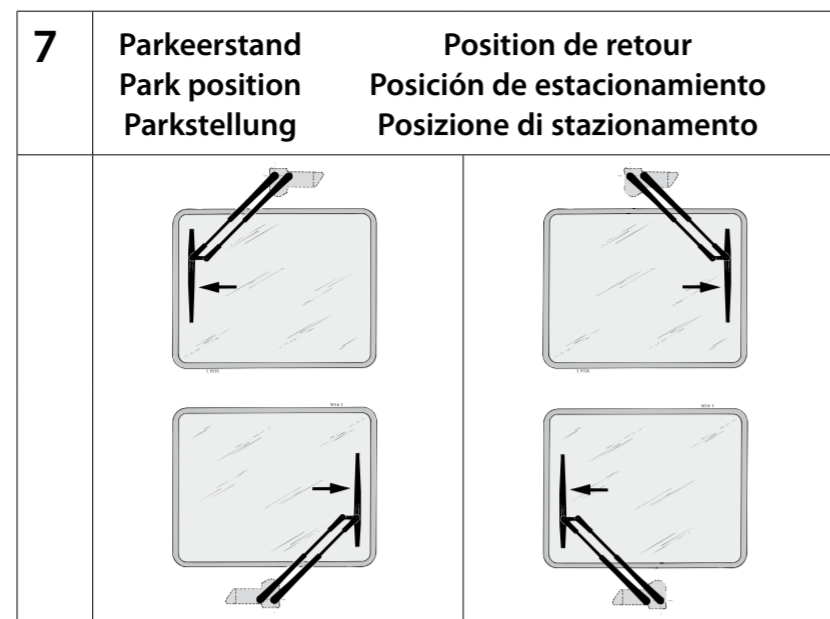
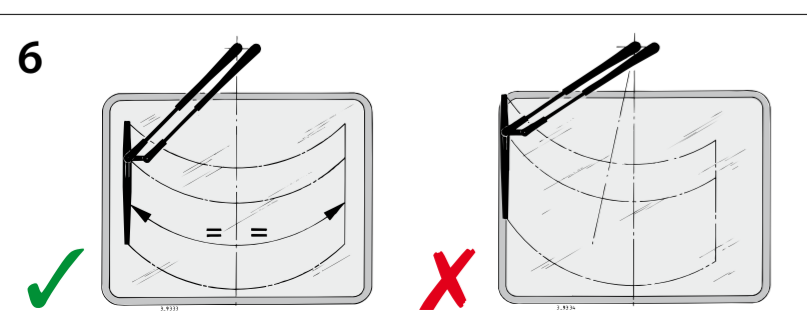
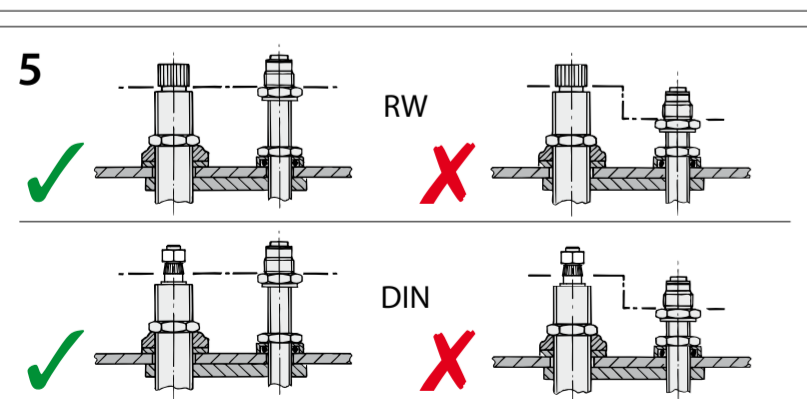
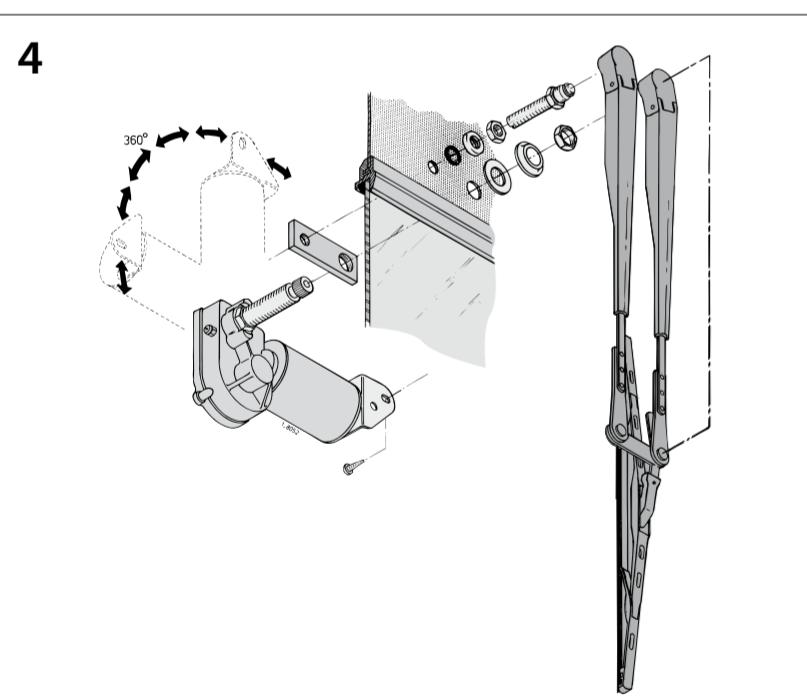
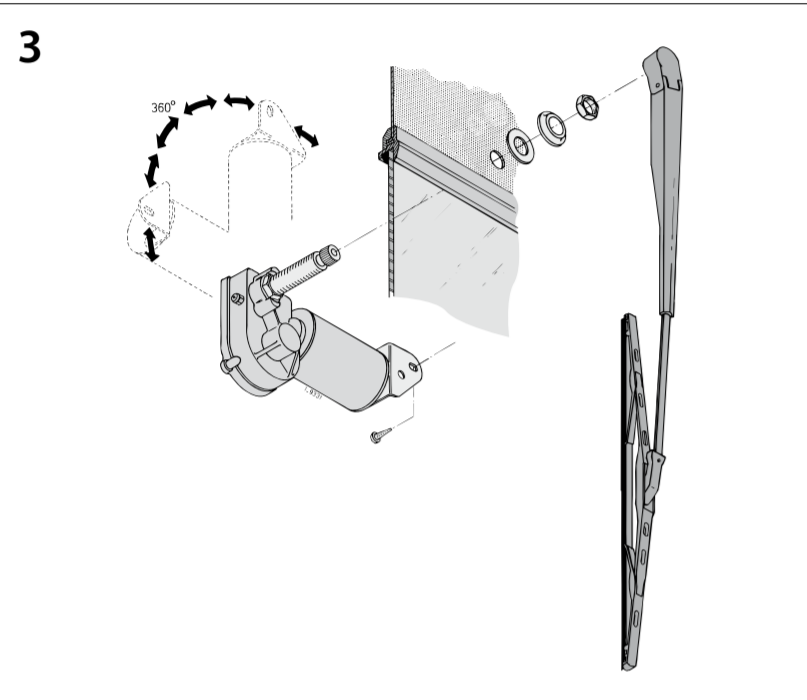
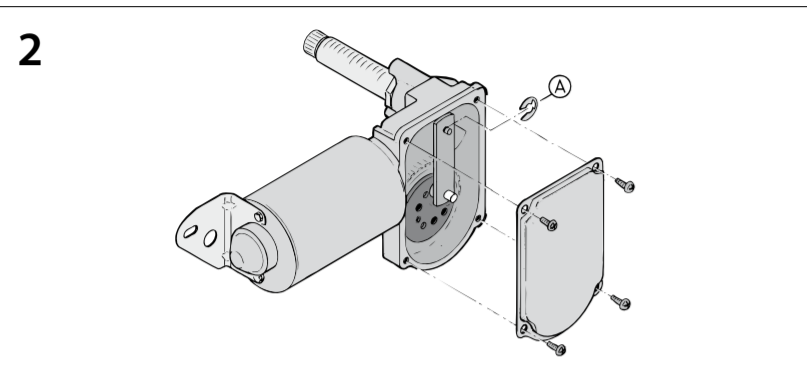
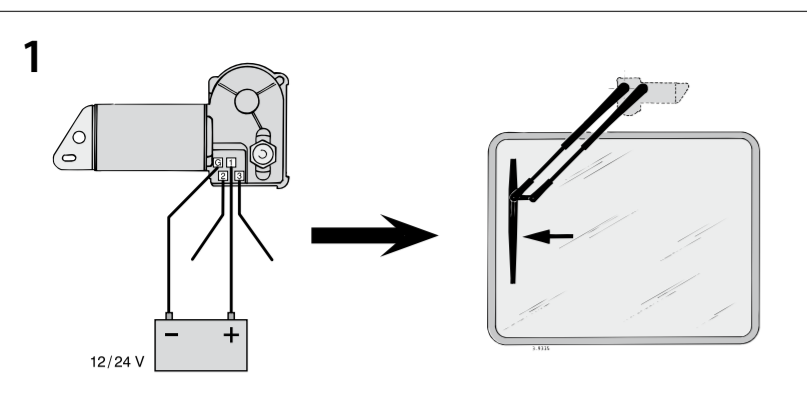
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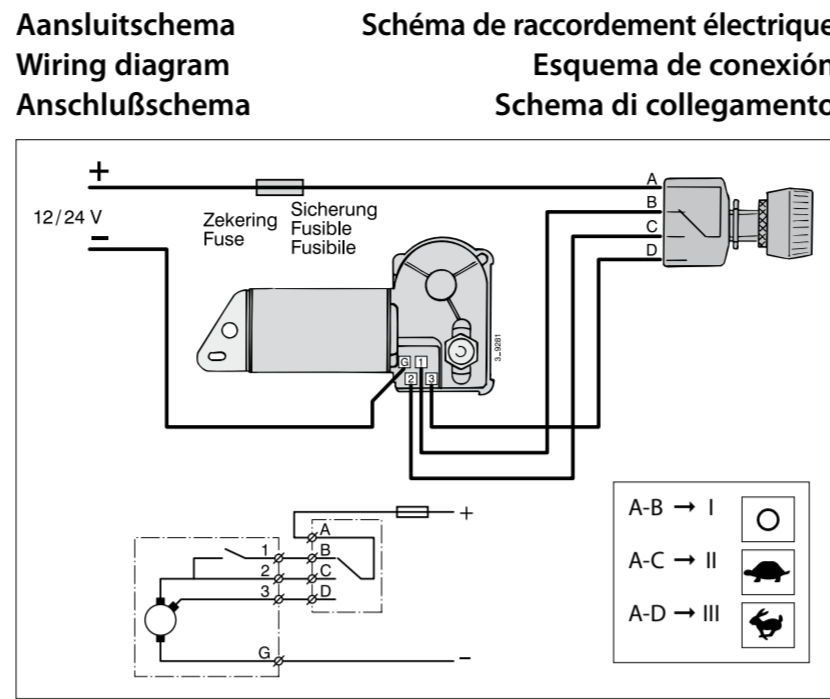


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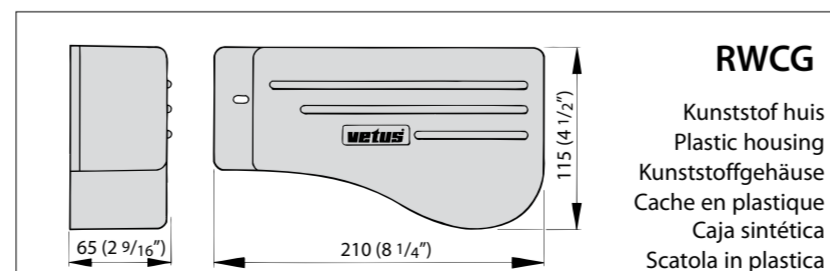
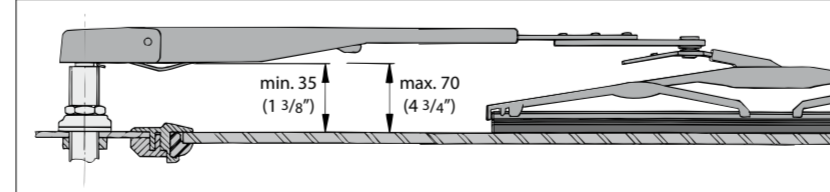
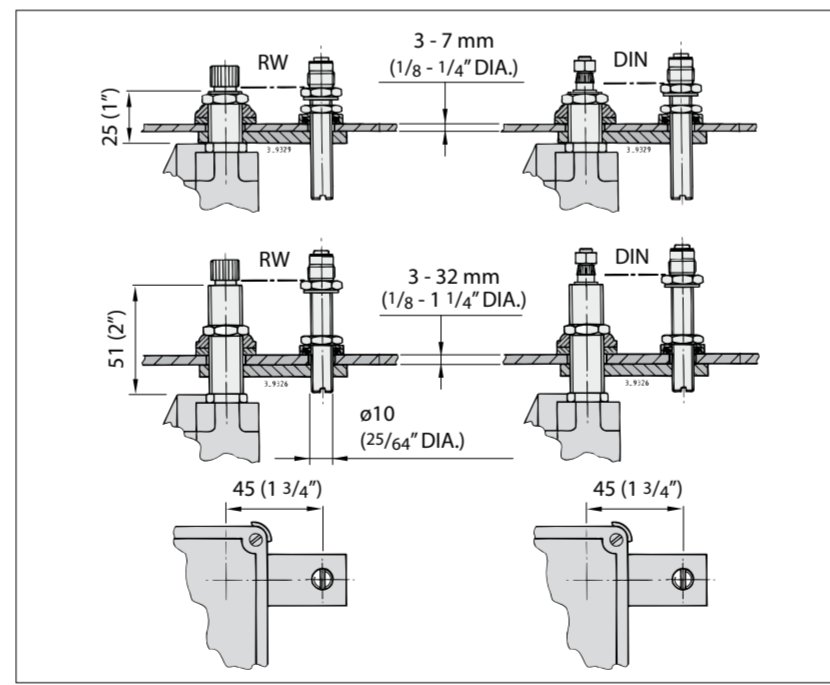
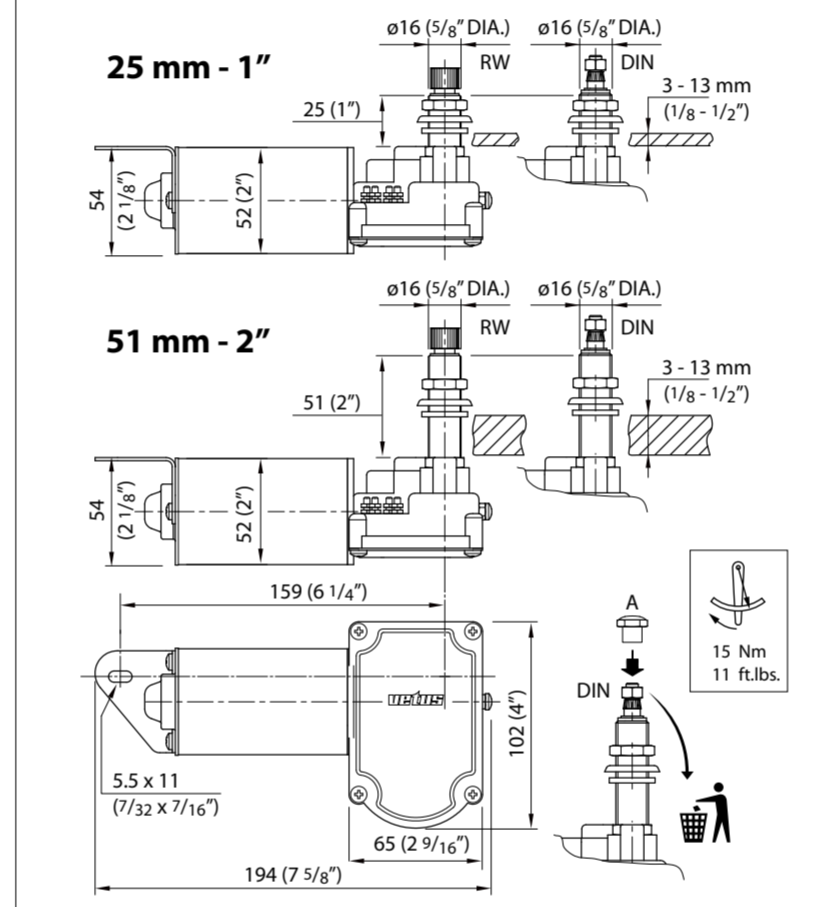


Angolo di pulitura		
	110°	110°
Angulo de barrido		
	100°	100°
Angle d'essuyage		
	90°	90°
Wischwinkel		
	80°	80°
Wiping angle		
	70°	70°
Wishoek		
	60°	60°
	50°	50°
	40°	40°



Hoofdafmetingen
Overall dimensions
Hauptabmessungen

Dimensions hors-tout
Dimensiones principales
Misure principali



General
Locate mounting position of wiper assembly.

Determine whether adequate space is available for the wiper motor (see 'Overall dimensions').

Also check if it is possible to adjust the selected wiper arm, in combination with the selected blade, for the desired wiping surface (see separate sheet 'Wiping surfaces').

Wiped angle and parked position
The standard setting for the screen wiper gives a wiped angle of 110 degrees and a parked position on the left (when seen from outside with the motor mounted at the top of the screen).
If desired, the angle and/or the parked position may be adjusted.

Before the wiped angle or parked position can be adjusted, the wiper motor should be in the parked position, see Drawing 1.
To check this, connect the negative (-) wire and the '1' wire to the battery. If the motor is not in the parked position, it will turn until it stops in the parked position. Check that the voltage marked on the wiper motor is the same as the on-board voltage!

Changing the wiped angle or parked position:

- Remove the gearbox cover, see Drawing 2.
- Remove the spindle lock ring from the swinging arm spindle.
- Lift up the connecting strip.

The situation is now as shown in Drawing 7 (110 degrees wiped angle and left-side parked position).

- Remove the two screws (X); the wiper angle plate can now be rotated.
- Determine the new position of the wiper angle plate on the basis of desired wiped angle and parked position with the aid of Drawing 3.
- Replace the screws.
- Replace the connector strip in the gearwheel (in the fitting hole for the angle required).
- Reassemble in reverse order from above.

Mounting wiper motor with single wiper arm, see drawing 3
Use the drill-pattern to mark the holes for stud (16 mm diameter, 5/8") and mounting bracket (for selftapping screw 4.8-mm, no. 10 or for screw M5). Drill the holes. When the plastic housing is also used, fit the wiper motor in the plastic housing now.
Mount the wiper motor using the supplied washers and nut. For 'DIN' arms see 'Mounting DIN arm at the motor'.
Tighten the nut with a torque of 3.5 - 5.5 Nm (30 - 50 in.lbs.).
Place the wiper arm onto the stud.
Check after the wiring has been connected the position of the wiper arm onto the shaft and the adjusted length of the arm.

Mounting wiper motor with pantograph wiper arm, see drawing 4
Use the drill-pattern to mark the holes for stud (16 mm diameter, 5/8"), for mounting bracket (for selftapping screw 4.8-mm, no. 10 or for screw M5) and for auxiliary stud (10-mm diameter). Drill the holes.
When the plastic housing is also used, fit the wiper motor in the plastic housing now.
Install mounting strip onto the stud. Install wiper motor using the supplied washers and nut. For 'DIN' arms see 'Mounting DIN arm at the motor'.
Tighten the nut with a torque of 3.5 - 5.5 Nm (30 - 50 in.lbs.).
Install auxiliary stud and adjust for the correct height, see drawing 5.
Place the wiper arm onto the stud and mount the auxiliary arm onto the auxiliary stud by means of screwing.
Check after the wiring has been connected the position of the wiper arm onto the shaft and the adjusted length of the both the arms, see drawing 6.

Mounting 'DIN' arm at the motor
Remove the nut at the motor shaft. NOTE: The mounting hole in the arm has no grooves. Place the arm on the knurled shaft. Apply the nut (A) supplied with the wiper arm and tighten the nut with 15 Nm (11 ft.lbs.). The arm is now secured to the shaft.

Electrical installation
Make sure that the voltage stamped on the wiper motor is identical as the ship's power supply voltage!
The minimum cross-section for the connecting cables is 1.5 mm² (AWG 16).
Connect wiper motor as per wiring diagram.
A switch* and fuse** or automatic circuit breaker** must be incorporated in the positive cable.

* The switch must be rated for 10 A.
** Fuse or circuit breaker: 4 A for 12 Volt system
3 A for 24 Volt system

Connect the G connection on the wiper motor to the minus terminal (-) of the ship's power supply. The wiper motor has Insulated return.

Maintenance
When sailing on sea-water it is recommended to rinse wiper arm, wiper blade and motor shaft regularly with fresh water.

Technical data

Voltage	: 12 V DC	24 V DC
Speed 1 (34 sweep/min)	: 1.7 A	0.8 A
Speed 2 (47 sweep/min)	: 2.5 A	1.5 A
(Based on 400 mm (16") long arm and 400 mm (16") long wiper blade)		
Adjustable wiper angle	: 40, 50, 60, 70, 80, 90, 100, 110 degrees.	
Adjustable parking position	: Right or left	
Weight	: 1.2 kg (2 lbs 10 oz)	
Protection	: IP20	

