CE REV 006c

Quick®

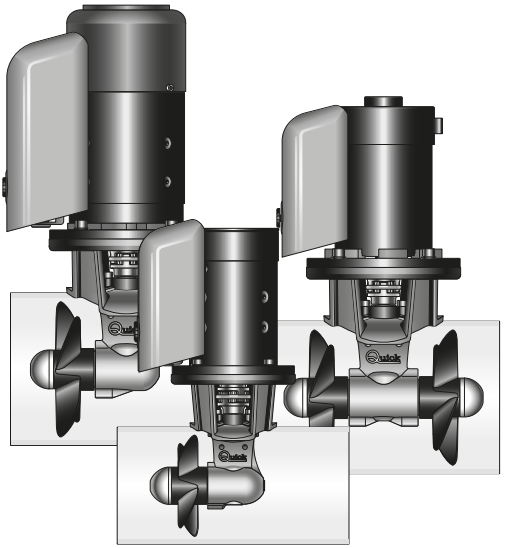
High Quality Nautical Equipment

BOW THRUSTER

BTQ140

BTQ185

SINGLE AND DOUBLE PROPELLER



IT Manuale d'uso

EN User's Manual

ELICHE DI MANOVRA DI PRUA

BOW THRUSTERS

IT INDICE

EN INDEX

CHARACTERISTICS

BEFORE USING THE BOW THRUSTER, READ THIS INSTRUCTION MANUAL CAREFULLY.
IF IN DOUBT, CONTACT YOUR NEAREST QUICK® DEALER.

WARNING: Quick® Bow Thrusters have been designed and constructed only for nautical use.
⚠ Do not use these appliances for other uses.
⚠ Quick® shall accept no responsibility for direct or indirect damages caused by improper use of the appliance or an improper installation.
⚠ The Bow Thruster is not designed to maintain loads generated in particular atmospheric conditions (storms).
⚠ We recommend you entrust preparation and positioning of the tube on the hull to a skilled professional. These are generic instructions and do not give details of the preparatory operations for installing the tunnel, since this is the competence of the boatyard. The installer shall bear full responsibility for any problems caused by defective installation of the tunnel.
⚠ Do not install the electric motor near easily inflammable objects.

THE PACKAGE CONTAINS:
bow thruster - drill template - o-ring (for assembly) - user's manual - conditions of warranty.

TOOLS REQUIRED FOR INSTALLATION:
BTQ140, drill and drill bits Ø 6 mm (1/4"); hollow mill Ø 27 mm (1"1/16); hexagonal male key: 4 mm, 5 mm, 6 mm; fork or polygonal key: 17 mm.
BTQ185, drill and drill bits da Ø 9 mm (3/8"); hollow mill Ø 32 mm (1"1/4); hexagonal male key: 5 mm, 6 mm, 8 mm; fork or polygonal key: 19 mm.

QUICK®"ACCESSORIES RECOMMENDED: TCD1022 - TCD1042 - TCD1044 - TCD1062 - TMS - TSC - PSS - TFH3 - TFH6

MODELS	BTQ1403012	BTQ1404012
N° Propellers	1	
Tunnel Ø	140 mm (5" 33/64)	
Motore Power	1,5 KW	2,2 KW
Voltage	12 V	12 V
Section of wire	50 mm² (AWG 1)	95 mm² (AWG 3/0)
Fuse	150A CNL DIN	225A CNL DIN
Thrust	30 kgf (66.1 lb)	40 kgf (88.2 lb)
Weight	11,8 kg (26.0 lb)	12,4 kg (27.3 lb)
Limit thickness values of the tubes: min. 4,5 mm - max 6,5 mm (min. 11/64" - max 1/4")		

MODELS	BTQ1805512	BTQ1805524	BTQ1807512	BTQ1807524	BTQ1809512	BTQ1809524
N° Propellers	1					
Tunnel Ø	185 mm (7" 18/64)					
Motore Power	3,0 KW		4,0 KW		6,0 KW	
Voltage	12 V	24 V	12 V	24 V	12 V	24 V
Section of wire	120 mm² (AWG 4/0)	70 mm² (AWG 2/0)	150 mm² (AWG 300MCM)	120 mm² (AWG 4/0)	2 x 95 mm² (2 x AWG 3/0)	120 mm² (AWG 4/0)
Fuse	250A CNL DIN	150A CNL DIN	350A CNL DIN	250A CNL DIN	350A CNL DIN	250A CNL DIN
Thrust	55 kgf (121.2 lb)		75 kgf (165.3 lb)		95 kgf (209.5 lb)	
Weight	17,2 kg (37.9 lb)	17,5 kg (38.6 lb)	17,5 kg (38.6 lb)	20,5 kg (45.2 lb)	27,2 kg (59.9 lb)	24,4 kg (53.8 lb)
Limit thickness values of the tubes: min. 4,5 mm - max 6,5 mm (min. 11/64" - max 1/4")						

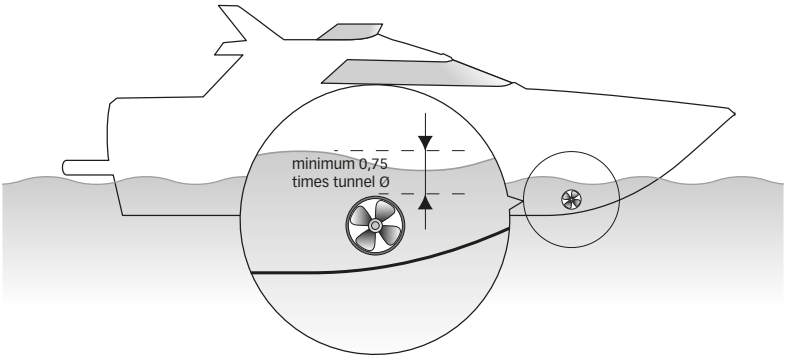
MODELS	BTQ1806512	BTQ1806524	BTQ1808512	BTQ1808524	BTQ1810512	BTQ1810524
N° Propellers	2 counter rotating					
Tunnel Ø	185 mm (7" 18/64)					
Motore Power	3,3 KW		4,3 KW		6,3 KW	
Voltage	12 V	24 V	12 V	24 V	12 V	24 V
Section of wire	120 mm² (AWG 4/0)	70 mm² (AWG 2/0)	150 mm² (AWG 300MCM)	120 mm² (AWG 4/0)	2 x 95 mm² (2 x AWG 3/0)	120 mm² (AWG 4/0)
Fuse	275A CNL DIN	175A CNL DIN	400A CNL DIN	275A CNL DIN	400A CNL DIN	275A CNL DIN
Thrust	65 kgf (143.3 lb)		85 kgf (187.4 lb)		105 kgf (231.5 lb)	
Weight	18 kg (39.7 lb)	18,3 kg (40.3 lb)	18,3 kg (40.3 lb)	21,3 kg (47.0 lb)	28 kg (61.7 lb)	25,2 kg (55.5 lb)
Limit thickness values of the tubes: min. 4,5 mm - max 6,5 mm (min. 11/64" - max 1/4")						

Quick® reserves the right to introduce changes to the equipment and the contents of this manual without prior notice.
In case of discordance or errors in translation between the translated version and the original text in the Italian language, reference will be made to the Italian or English text.

INSTALLATION REQUISITES

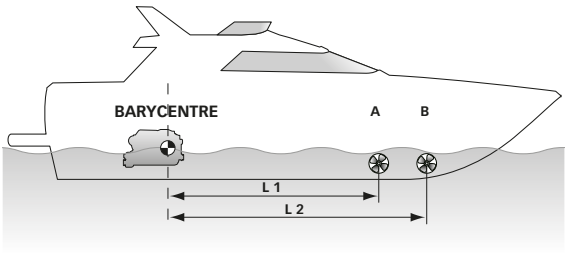
THE TUNNEL

- The position of the tunnel will depend on the interior and exterior shape of the boats bow.
- Optimal positioning of the tunnel will be in the bow and as low as possible, at least 0.75 times the tunnel diameter from the waterline.

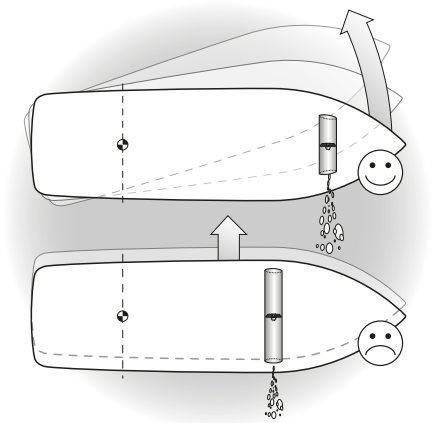


- To avoid cavitation in the propeller, the tunnel must be positioned as low as possible.
- The lever effect in the boat is proportional to the increase of the distance (L1 and L2) between the barycentre and the position of the tunnel A and B.

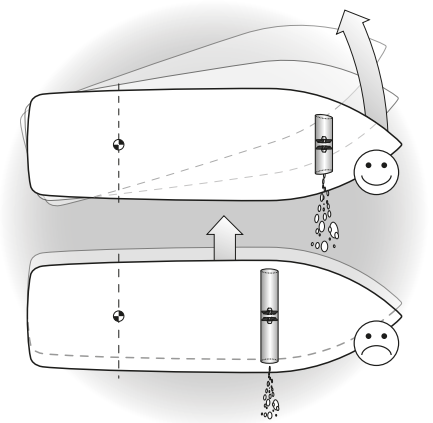
For greater lever effect prefer position B to position A.



SINGOL PROPELLER



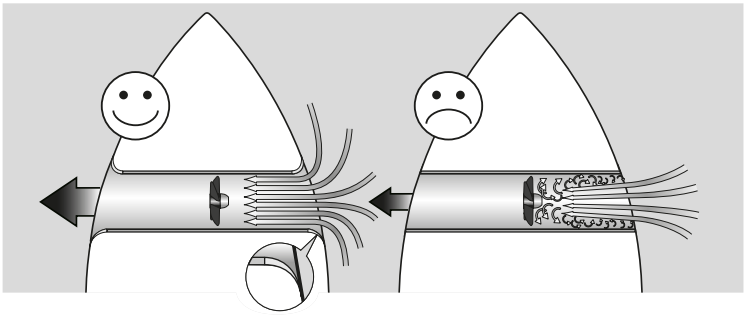
DOUBLE PROPELLER



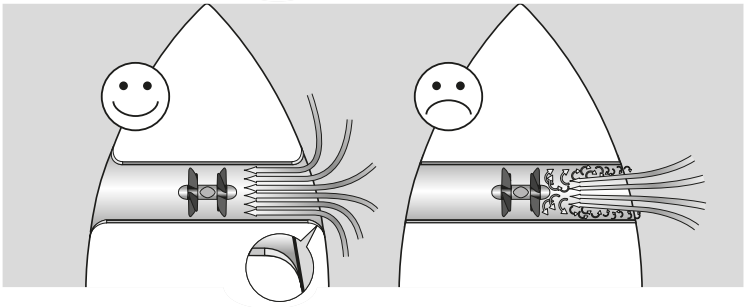
- An increase in the length of the tunnel increases the effect of the loss of charge, decreasing the nominal driving force.
- To limit losing charge, the optimal length is equal to 3-4 times the tube diameter; a ratio of up to 6 can be tolerated.

INSTALLATION

• The rounded ends of the tunnel limit the creation of turbulences and cavitations, improving performance of the propeller thrust and reducing noise levels to a minimum.

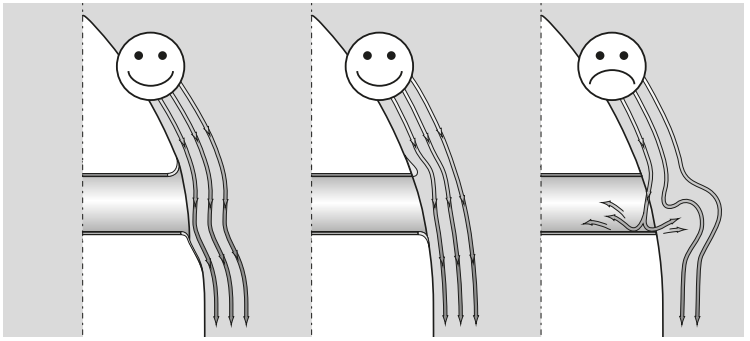


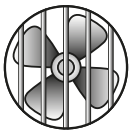
SINGOL PROPELLER



DOUBLE PROPELLER

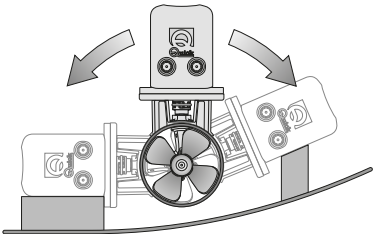
• The force produced by the flow of the water when the boat is moving produces resistance on the rear face of the tunnel, which is an area exposed frontally to the water flow.
To limit this phenomenon, prepare an indentation in the rear part of the tunnel. Otherwise, create a deflector on the front part of the tunnel.





• If the tunnel is near the waterline, it is advisable to fit a grating at the end of the tube.
The grating must have as large a vertical mesh as possible to avoid contrasting the propeller thrust.
The vertical mesh prevents the entry of most of the floating objects.

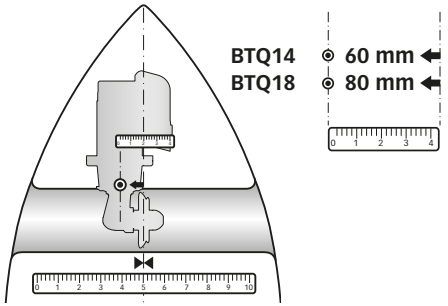
IL THRUSTER



• The thruster can be installed at any angle within 90° from vertical.
• If the electric motor is positioned of necessity at an angle of more than 30° from vertical, a special support must be constructed.

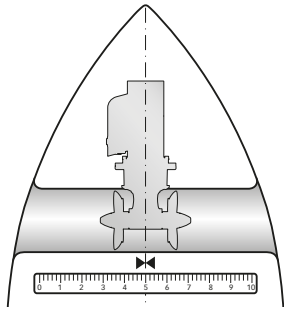
SINGOL PROPELLER

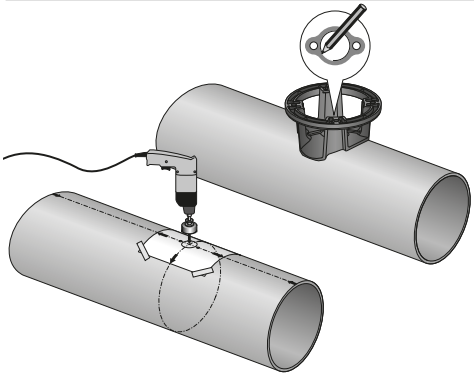
To position the thruster in the tube, find the half-way point and move to the value shown (**to the right or to the left see NOTE page 23**) in the table below so that the propeller is positioned exactly half way along the internal length of the tunnel.



DOUBLE PROPELLER

• To position the thruster in the tube, find the half-way point.

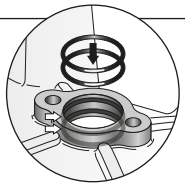




• Use the flange to mark the centre of the holes on the tube.

• Fix the drilling template on the reference points, making sure they are aligned with precision at the half-way point of the tube.
N.B. All holes must be exactly aligned with the half-way point of the tunnel, since tolerance between propeller and tunnel is minimal.

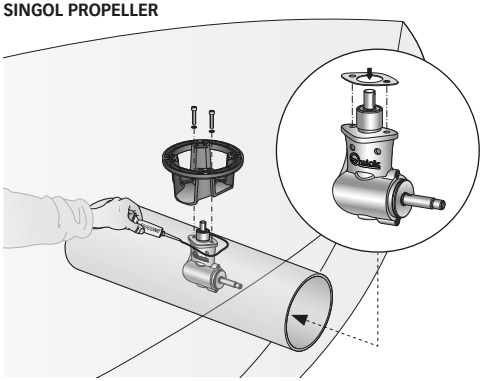
• Take care that there are no resin residues in the contact area between flange and tube; this could cause misalignment. Any resin residues and any other hindrance to correct contact must be removed by sandpaper.



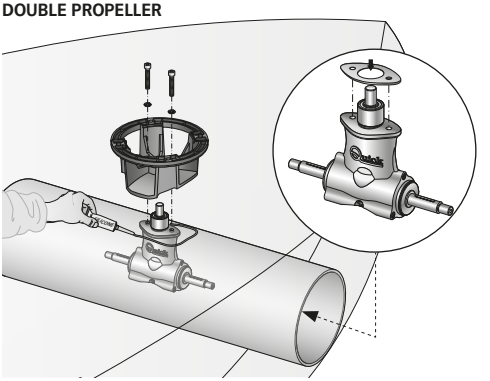
• Insert two o-rings into the special seats inside the flange.

GEARLEG AND MOTOR SUPPORT FLANGE

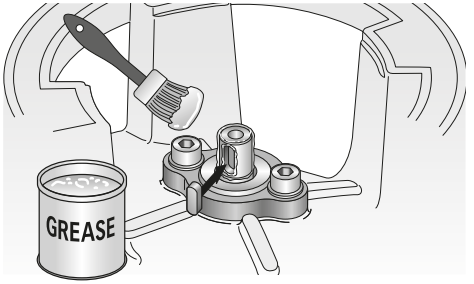
SINGOL PROPELLER



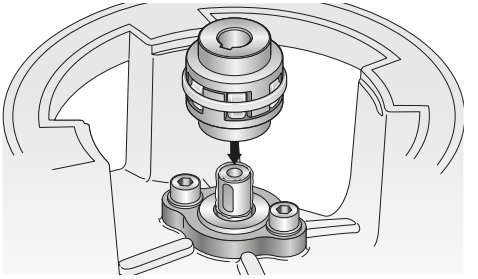
DOUBLE PROPELLER



- Proceed with fitting the gearleg with the special seal gasket.
- For further protection against the entry of water, apply silicone for nautical use around the point of contact between flange and tube.
- Fasten everything to the flange using the special screws and washers.

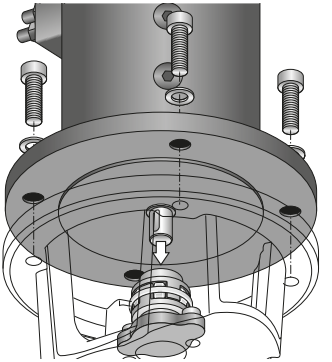


- Grease the terminal part of the gearleg shaft; fit the small key into its seat.



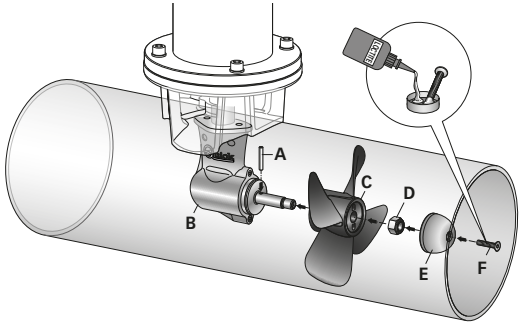
- Insert the elastic joint in the terminal part of the gearleg shaft.

- Grease the terminal part of the gearleg shaft; fit the small key into its seat.

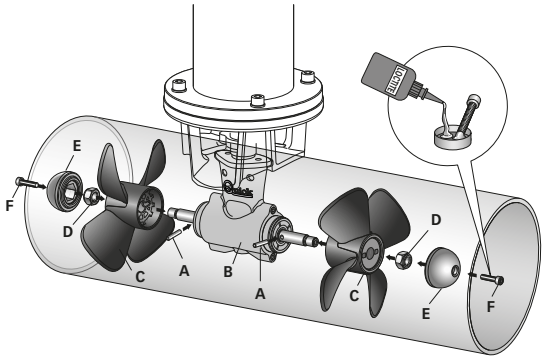


- Insert the motor onto the elastic joint; fasten it with the 4 screws and washers provided.

PROPELLER

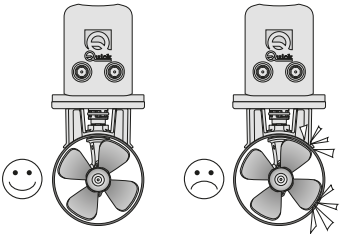


PROPELLER FITTING
Insert the drive pin **A** into the hole on the gearleg shaft **B**; assemble the propeller **C** to the gearleg, making it fit in correctly with the drive pin **A**; fix the propeller with the self-braking nut **D**. The anode **E** must be locked with the screw **F** soaked with building adhesive (such as Loctite).



PROPELLERS FITTING
Insert the drive pins **A** into the hole on the gearleg shafts **B**; assemble the propellers **C** to the gearleg, making it fit in correctly with the drive pins **A**; fix the propellers with the self-braking nuts **D**.
The anodes e must be locked with the screws **F** soaked with building adhesive (such as Loctite).

WARNING: on conclusion of assembly, make sure that the propeller is exactly positioned at the central point of the tunnel.

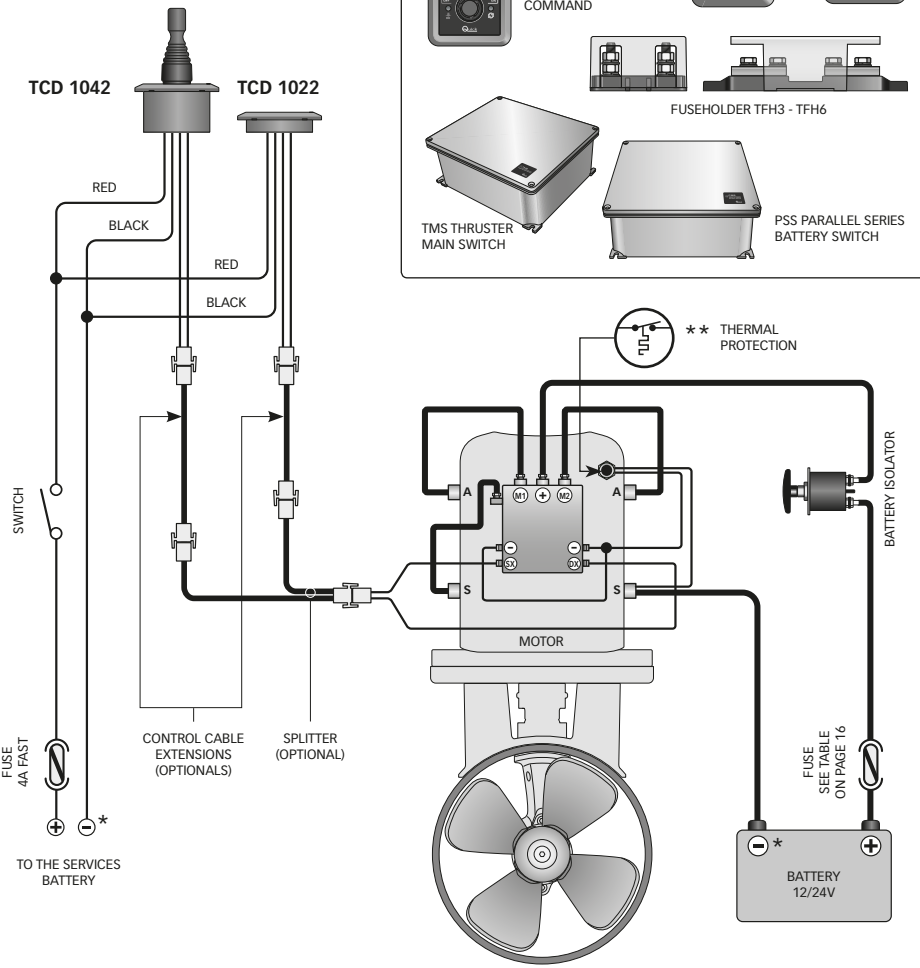


CONTROL PANEL

To install the control panel, consult the "TCD 1022 - TCD 10422 - TCD 1044 instruction manuals.

CONNECTION DIAGRAM

BASIC SYSTEM
BTQ14 - BTQ18



QUICK® ACCESSORIES FOR ACTIVATION OF THE THRUSTER

* COMMON NEGATIVE FOR THE BATTERY GROUPS.

** **WARNING:** IN CASE OF OVERTEMPERATURE, THE THERMAL PROTECTION ON THE MOTOR WILL OPEN AND INTERRUPT THE NEGATIVE CONTACT ON THE SOLENOID UNIT. WAIT AS LONG AS THE SYSTEM NEEDS TO REACTIVATE.

WARNING

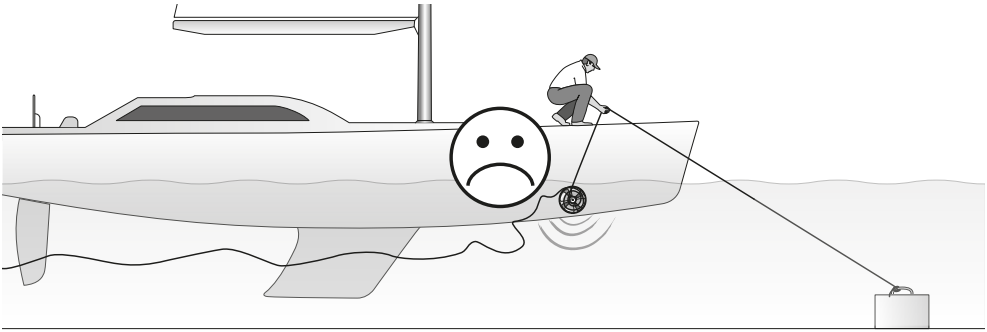
WARNING: this bow thruster is not designed for continuous use.
It is equipped with protections which limit its operation at a maximum time span, as reported on the controls' manual.
It is strongly forbidden to bypass or modify such protections in order to increase the operating time span, lest voiding the warranty and thus lifting any responsibility from Quick SPA.

WARNING: make sure no swimmers or floating objects are in the vicinity before switching on the thruster.

WARNING: there must not be flammable materials in the peak or in the area where the Bow Thruster motor is.

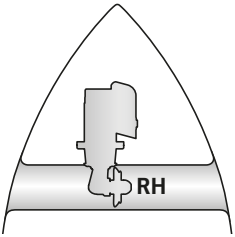
WARNING: do not operate the bow thruster out of the water for more than 10 seconds.

WARNING: during mooring, it is recommended not to leave in the water any free line, which may be sucked in by the propellers, thus leading them to break.



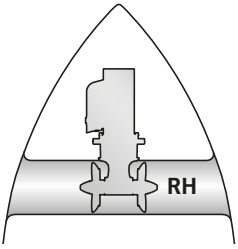
SINGOL PROPELLER

NOTE: the bow thruster must be installed with the propeller on the right-hand side of the gearleg (see figure).



DOUBLE PROPELLER

NOTE: the bow thruster must be installed with the **RH** propeller on the right-hand side of the gearleg (see figure).

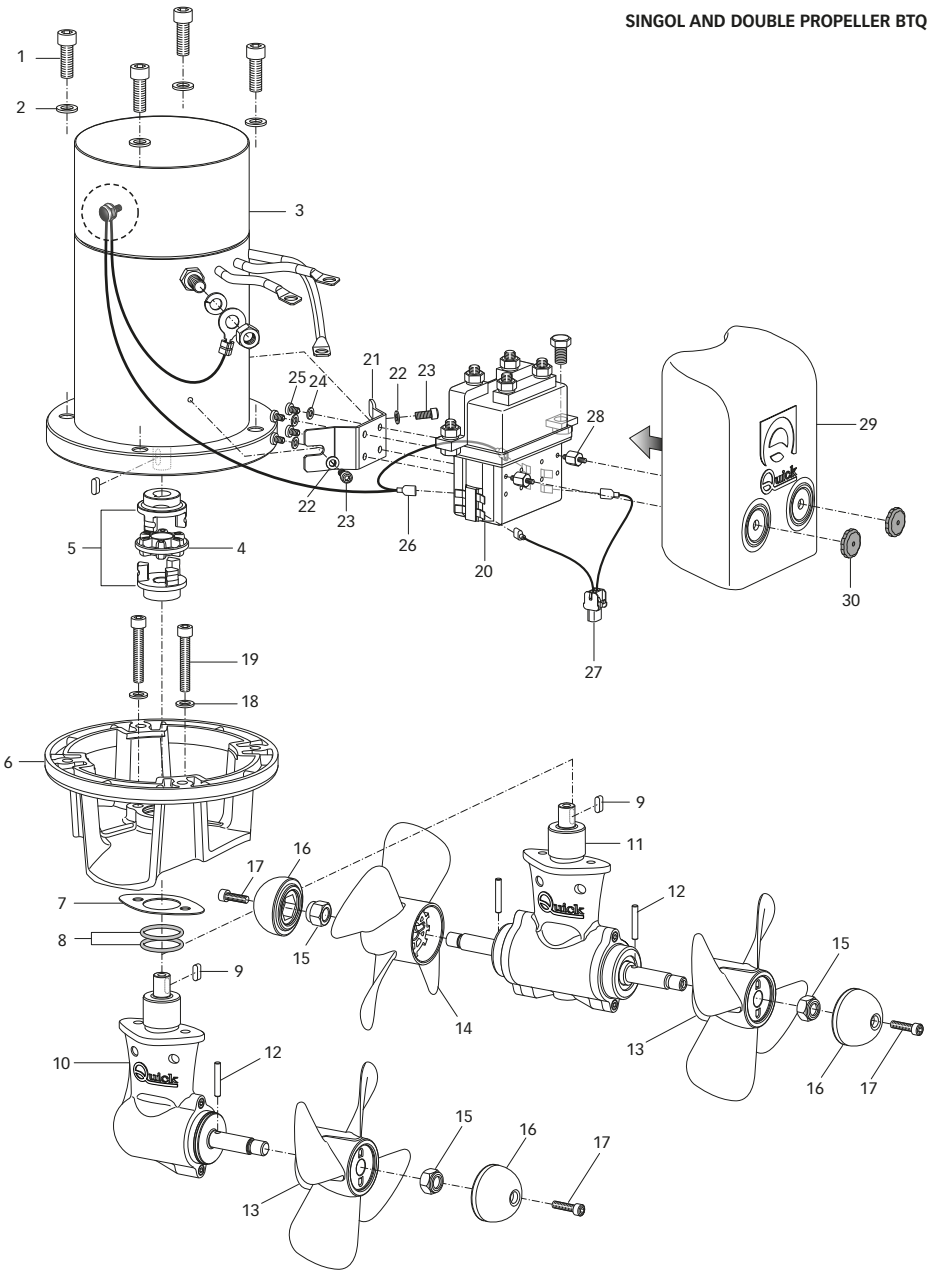


In case the bow thruster needs to be installed on the opposite position, the connection of the two wires (blue and grey) to the control cable on the reversing contactor unit must be inverted.

USE OF BOW THRUSTER

START-UP
Start-up happens following activation of a TCD panel.
To use the thruster refer to the manual of the TCD control.

SINGOL AND DOUBLE PROPELLER BTQ



POS.	DESCRIPTION
1	Motor mounting screw
2	Motor mounting washer
3	Motor
4	Even tension device
5	Half-joint
6	Motor flange
7	Gearbox gasket
8	O-Ring
9	Key
10	Gearleg (single propeller)
11	Gearleg (double propeller)
12	Propeller drive pin
13	Right propeller (RH)
14	Left propeller (LH)
15	Propeller mounting nut
16	Anode tip
17	Anode tip mounting screw
18	Washer
19	Gearleg mounting screw
20	Reversing contactor unit
21	Clamp reversing contactor unit
22	Washer
23	Screw
24	Grower
25	Reversing contactor unit mounting screw
26	BTQ thermal protection + cable
27	Command wire
28	Carter spacer B
29	Carter reversing contactor unit
30	Fasteners carter reversing contactor

Quick® Thrusters are made in materials that are resistant to the sea environment: In any case, it is indispensable to periodically remove salt deposits that form on the outer surfaces to avoid corrosions and consequent system inefficiency.

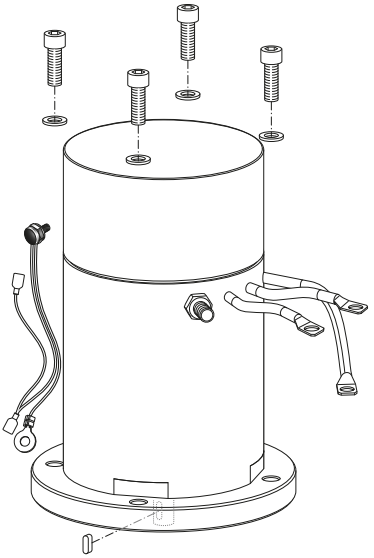
WARNING: make sure that the power supply to the electric motor is not switched on when maintenance operations are carried out.

Dismantle once a year, following the points below:

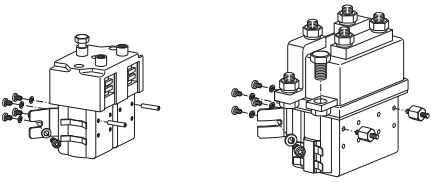
- Clean propellers (13 and 14), tunnel and gearleg (10 or 11).
- Replace the zinc anodes (carry out this operation more often if needed).
- Replace the propellers if damaged or worn out.
- Check the tightness of all screws.
- Ensure that there is no water seepage inside.
- Check that all electrical connections are well tightened and oxide-less.
- Check that the batteries are in good conditions.

WARNING: do not paint the anodes (16), the sealing and the gearleg's shafts where the propellers is lodged.

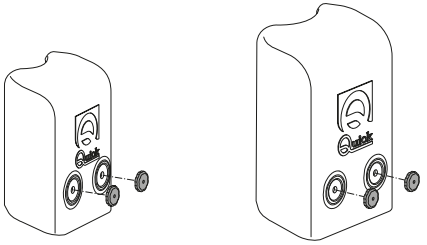
SPARE PARTS



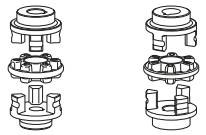
OSP MOTOR 1500W 12V BTQ125-140+T	FVEMFEL15121400
OSP MOTOR 2200W 12V BTQ125-140+T	FVEMFEL22121400
OSP MOTOR 3000W 12V BTQ185+T	FVEMFEL30121800
OSP MOTOR 3000W 24V BTQ185+T	FVEMFEL30241800
OSP MOTOR 3300W 12V BTQ185+T	FVEMFEL33121800
OSP MOTOR 3300W 24V BTQ185+T	FVEMFEL33241800
OSP MOTOR 4000W 12V BTQ185+T	FVEMFEL40121800
OSP MOTOR 4000W 24V BTQ185+T	FVEMFEL40241800
OSP MOTOR 4300W 12V BTQ185+T	FVEMFEL43121800
OSP MOTOR 4300W 24V BTQ185+T	FVEMFEL43241800
OSP MOTOR 6000W 12V BTQ185+T	FVEMFEL60121800
OSP MOTOR 6000W 24V BTQ185+T	FVEMFEL60241800
OSP MOTOR 6300W 12V BTQ185+T	FVEMFEL63121800
OSP MOTOR 6300W 24V BTQ185+T	FVEMFEL63241800



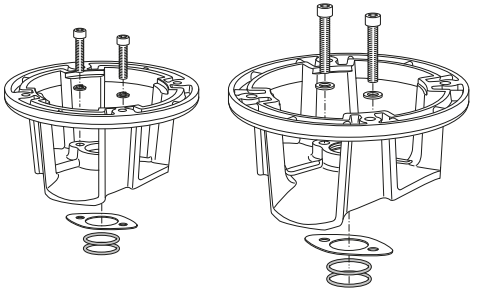
OSP KIT REVERSING CONTACTOR UNIT 150A 12V	FVSGRCT15012A00
OSP KIT REVERSING CONTACTOR UNIT 150A 24V	FVSGRCT15024A00
OSP KIT REVERSING CONTACTOR UNIT 350A 12V	FVSGRCT35012A00
OSP KIT REVERSING CONTACTOR UNIT 350A 24V	FVSGRCT35024A00



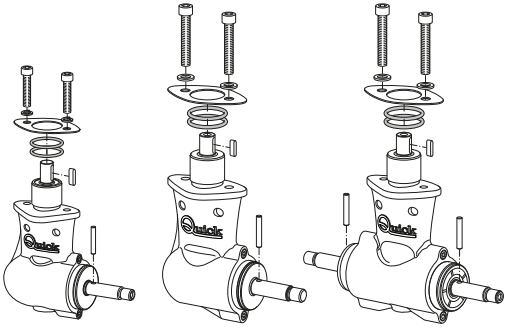
OSP KIT CARTER 'A' BTQ	FVSGCARTABTQA00
OSP KIT CARTER 'B' BTQ	FVSGCARTABTQB00



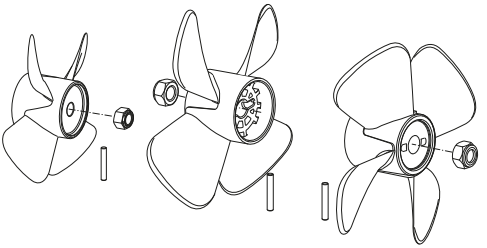
OSP KIT JOINT BTQ 140 30/40KG S	FVSGG141114SA00
OSP KIT JOINT BTQ 185	FVSGG1851414A00



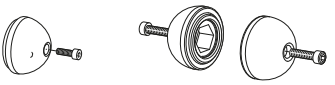
OSP KIT FLANGE BTQ140	FVSGFLBTQ140A00
OSP KIT FLANGE BTQ185	FVSGFLBTQ185A00



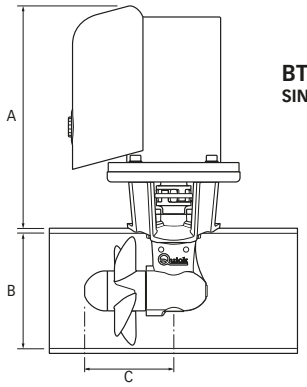
OSP KIT GEARLEG BTQ140	FVSGGBBT1400A00
OSP KIT GEARLEG BTQ185	FVSGGBBT1850A00
OSP KIT GEARLEG BTQ185 DP	FVSGGBBT185DA00



OSP KIT PROPELLER D140 R	FVSGEL140R00A00
OSP KIT PROPELLER D185 RH	FVSGEL185R00A00
OSP KIT PROPELLER D185 LH	FVSGEL185L00A00

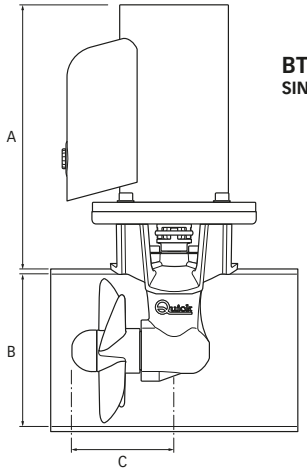


OSP KIT ANODE FOR PROPELLER BTQ140	FVSGANBTQ140A00
OSP KIT ANODES FOR PROPELLERS BTQ185	FVSGANBTQ185A00



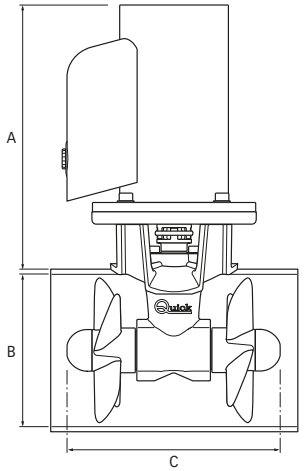
BTQ140
SINGLE PROPELLER

BTQ140	BTQ1403012	BTQ1404012
A	268 (10" 9/16)	268 (10" 9/16)
B	140 (5" 1/2)	140 (5" 1/2)
C	108 (4" 1/4)	



BTQ185
SINGLE PROPELLER

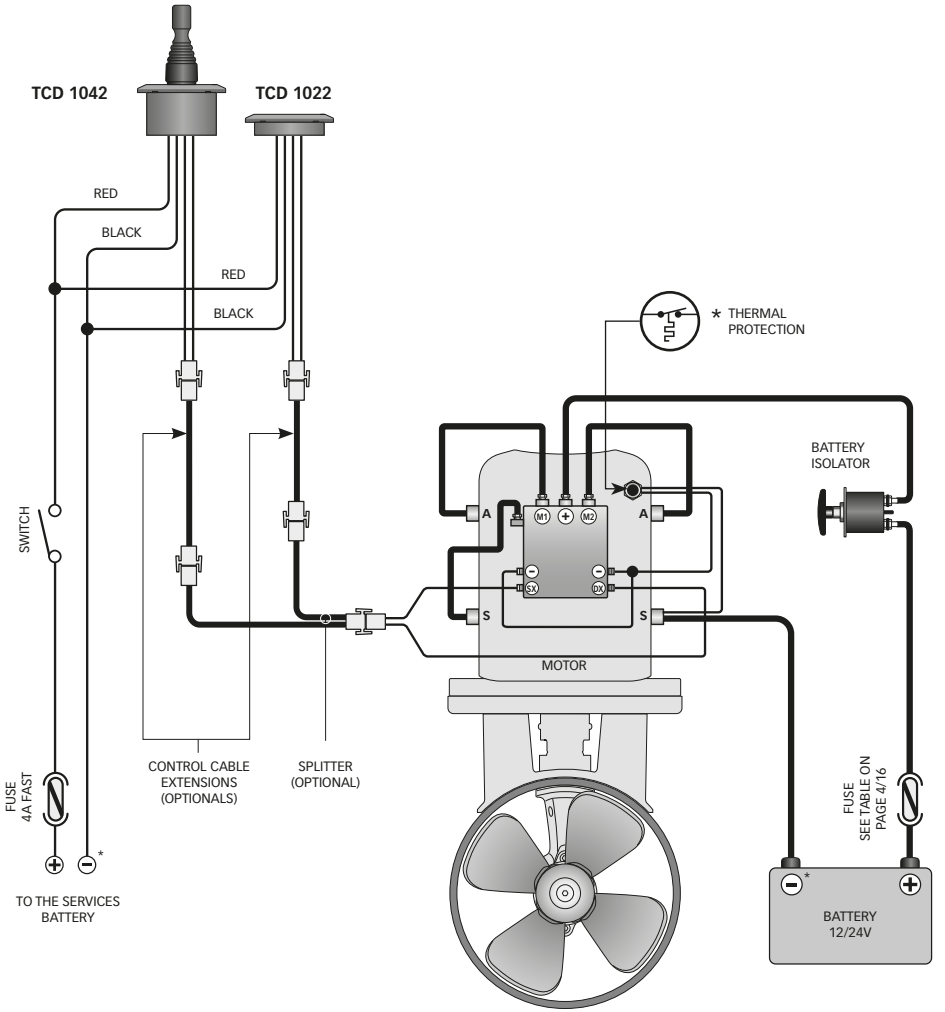
BTQ185	BTQ1805512	BTQ1805524	BTQ1807512	BTQ1807524	BTQ1809512	BTQ1809524
A	292 (11" 1/2)	278 (10"15/16)	329 (12")	280 (11")	410 (16" 9/64)	374 (14" 23/32)
B	185 (7" 9/32)					
C	123 (4" 27/32)					



BTQ185
DOUBLE PROPELLER

BTQ185	BTQ1806512	BTQ1806524	BTQ1808512	BTQ1808524	BTQ1810512	BTQ1810524
A	292 (11″ 1/2)	278 (10″15/16)	329 (12″)	280 (11″)	410 (16″ 9/64)	374 (14″ 23/32)
B	185 (7″ 9/32)					
C	265 (10″ 7/16)					

BOW THRUSTERS
SISTEMA BASE / BASIC SYSTEM



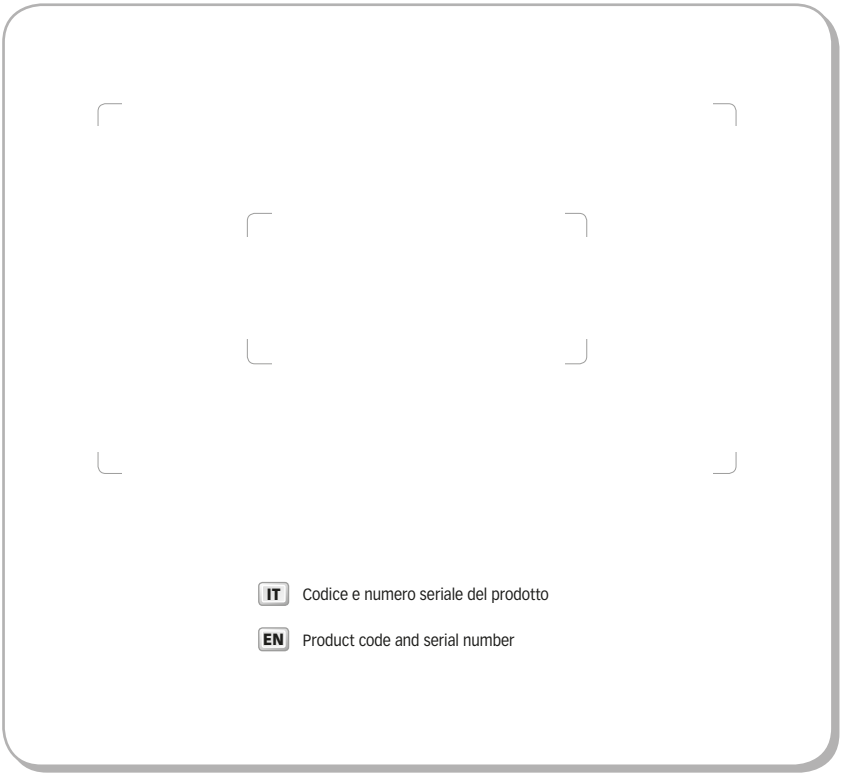
* NEGATIVO DEI GRUPPI BATTERIA IN COMUNE.
COMMON NEGATIVE FOR THE BATTERY GROUPS.

** **ATTENZIONE:** IN CASO DI SOVRATEMPERATURA LA PROTEZIONE TERMICA SUL MOTORE SI APRIRÀ E INTERROMPERÀ IL CONTATTO NEGATIVO SUL TELERUTTORE. ATTENDERE IL TEMPO NECESSARIO ALLA RIATTIVAZIONE.
WARNING: IN CASE OF OVERTEMPERATURE, THE THERMAL PROTECTION ON THE MOTOR WILL OPEN AND INTERRUPT THE NEGATIVE CONTACT ON THE SOLENOID UNIT. WAIT AS LONG AS THE SYSTEM NEEDS TO REACTIVATE.

BOW THRUSTERS

R006c

BTQ140 - BTQ185 SINGLE AND DOUBLE PROPELLER



IT Codice e numero seriale del prodotto

EN Product code and serial number

Quick®
Nautical Equipment

QUICK® S.P.A. - Via Piangipane, 120/A - 48124 Piangipane (RAVENNA) - ITALY
Tel. +39.0544.415061 - Fax +39.0544.415047
www.quickitaly.com - E-mail: quick@quickitaly.com