Installatie instructies
Installation instructions
Installationsvorschriften
Instructions d'installation
Instrucciones de instalación
Istruzioni per l'installazione

Mechanische motorafstandsbediening

Mechanical remote engine control

Mechanische Motor-Fernbedienung

Télécommande mécanique pour moteur

Mando a distancia mecánico para motores

Telecomandi meccanici per motori

RCTOPB
RCTOPTB
SICO
SISCO

Introduction

With the Vetus mechanical remote engine control RCTOPB, RCTOPTB, SICO and SISCO, both the gearbox and the throttle can be controlled my means of one lever.

Installation

Pull-push cables on the mechanism

The mechanism is directly suitable for control of the:

- throttle (to accelerate) - 'pushing'
  - 'pulling'
- gearbox (to change gear)
  - 'push to go forward' and 'pull to go backward'
  - 'push to go backward' and 'pull to go forward'

When in doubt, consult the engine supplier if is it not clear how the control of the engine is arranged with regard to accelerating and changing gear ('pushing' or 'pulling').

Warning!
Always connect the cables to the mechanism first. You should only connect the cables to the gearbox and the throttle after the complete remote control mechanism has been installed.

Always remove the lever and the black part of the housing first (with RCTOPB and RCTOPTB) or the lever and the plastic plate (with SICO) of the mechanism, before the cables are mounted on the mechanism (see drawing on right-hand page).

Besides the cable type 33C supplied by Vetus and Morse, the mechanism is also suitable for use with cable type OS from OMC and cable type KM from Mercury.

The mounting holes in the mechanism are numbered. These numbers correspond with the type of cable:

Function	Type of cable	'Pushing'	'Pulling'
Acceleration	All types	①	②
Gear-change (forward)	33C OS KM	③ ⑤ ⑥	④ ⑧ ⑦

Ensure that both functions of the mechanism are in the neutral position before connecting the cables.

Connecting the gas cable:
'Pushing' accelerating : see drawing 1
'Pulling' accelerating : see drawing 2

Connecting the gear cable:
'Pushing-forward' and 'pulling-backwards' gear change: see drawing 3
'Pushing-backwards' and 'pulling-forward' gear change: see drawing 4

When installing the cables, also take note of the following points:

- Make sure you have enough (total) length of cable.
- Make as few bends in the cable as possible, and use the largest possible bending radius (at least 500 mm (20")).
- The cables must be clamped at regular distances (every 60 cm (24")).
- Do not install the cables close to heat sources, such as the various parts of the exhaust system.
- Prevent abrasion of the cable.
- After installation on the mechanism, check whether the cables can move without appreciable resistance.

Pull-push cables on the engine

Connect the cables with the gearbox and the throttle, as prescribed by the engine supplier.

Check whether the throttle lever on the engine reaches its end position when the lever is at its farthest position.

Also check to make sure the gearbox works correctly.

Neutral switch

The mechanism is also equipped with a neutral switch. The neutral switch prevents the engine from being started while the gearbox is still engaged.

If the neutral switch is to be used, connect it as shown in the electrical circuit diagrams on page 15.

Multiple remote controls

Whenever a engine is fitted out with two remote controls, differential devices should be procured.

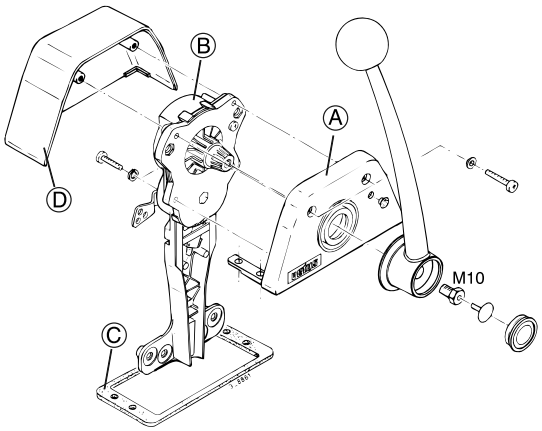
With differential devices, both remote controls can be connected to one another, so that the engine can be independently controlled from two places.

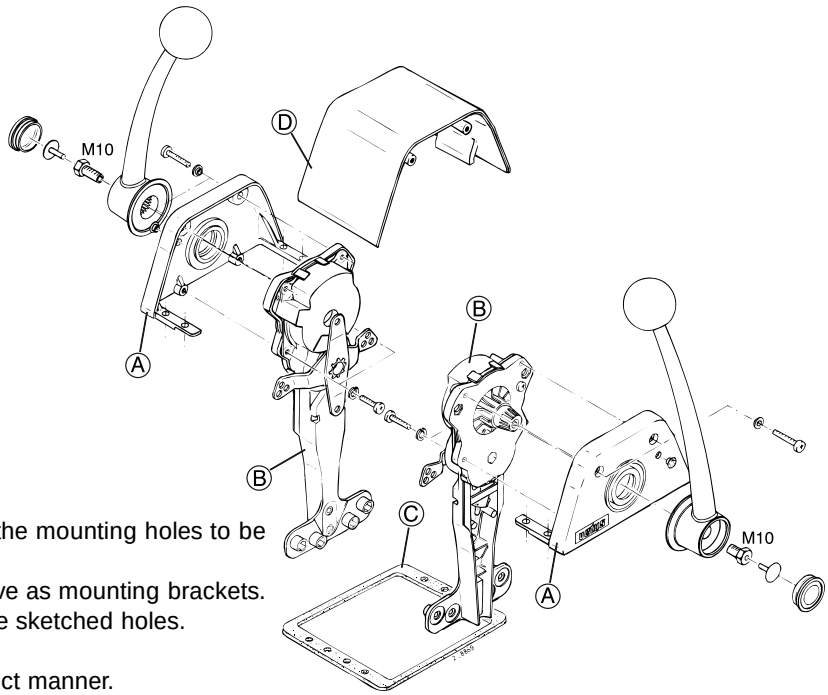
Two differential devices are needed per engine, namely one for the gearbox and one for the throttle. See drawing on page 15.

Housing and Lever

When selecting the place where the housing and lever will be mounted, account for the maximum swing that the lever can make. Also account for the total height of the mechanism. See drawing 'Principal dimensions'.

Top mounting:

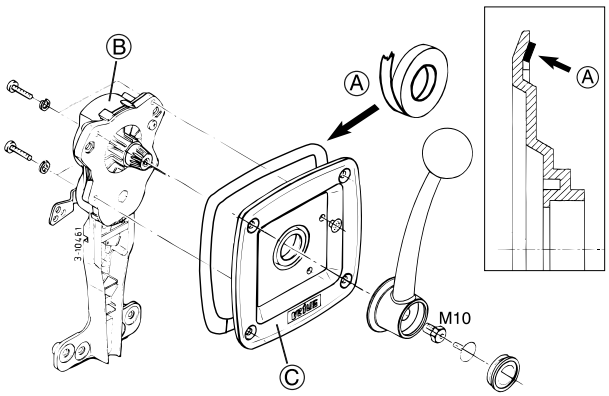




- With the help of the supplied drill pattern, sketch the mounting holes to be drilled and the opening to be sawed out.
- The two brackets on the silvery part Ⓐ should serve as mounting brackets. Make sure that the mounting holes line up with the sketched holes.
- Drill the holes and saw out the opening.
- Apply the supplied self-stick spacer © in the correct manner.
- Assemble the remote control with M5 bolts of the correct length.
- Now assemble the black part Ⓓ of the housing.
- Grease the axle of the mechanism Ⓑ, and mount the lever in the desired position (usually vertical).
  Provide the bolt M10 with a screwlock (Loctite®243).
- Check the path of the cables.

Side mounting:

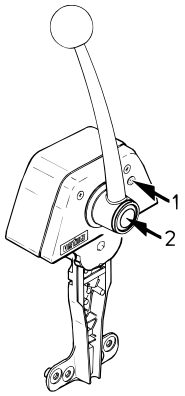
The remote control for side mounting requires a space of at least 180 mm (7") behind the shot in order to assemble the entire mechanism.



- With the help of the supplied drill pattern, sketch the mounting holes to be drilled and the opening to be sawed out.
- Drill the holes and saw out the opening.
- Apply the supplied inseal Ⓐ correctly on the back of the plastic plate ©. See inset.
- Attach the mechanism Ⓑ to the plastic plate ©.
- Then attach the entire mechanism to the shot with bolts.
- Grease the axle of the mechanism, and mount the lever in the desired position (usually vertical).
  Provide the bolt M10 with a screwlock (Loctite®243).
- Check the path of the cables.

Adjustments

Screw 1 can be adjusted to set the friction for the gas mechanism, depending on the counter pressure of the throttle.



Control

Button 2 can be used to turn off the control of the gearbox, so that gas can only be given. (For example, for starting and warming up the engine.)

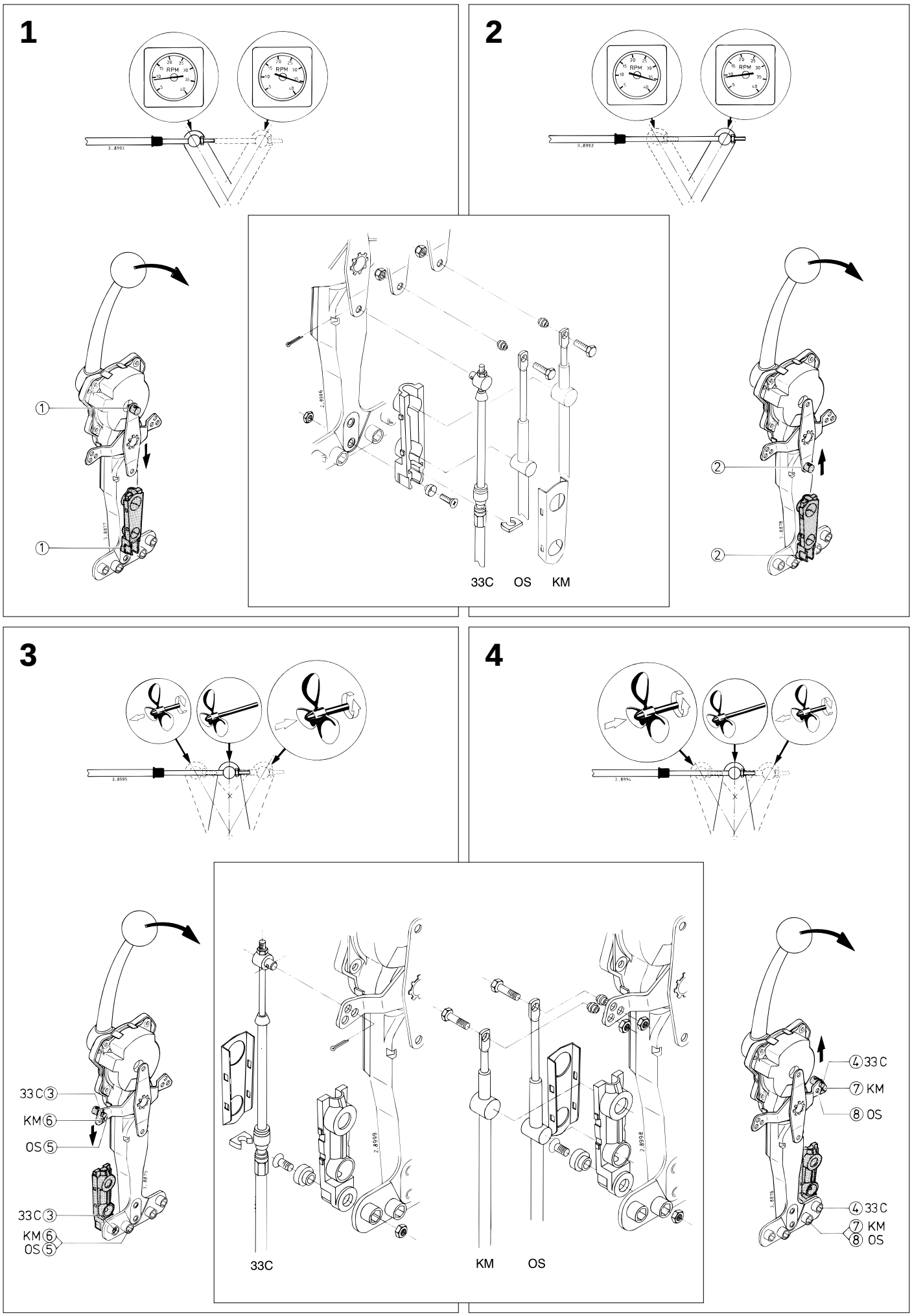
When the lever is returned to the neutral position, the button will pop back out, and the remote control is ready for normal use.

Maintenance

Clean, as necessary, the lever and the housing with freshwater.

Check the mechanism for loose components and for wear of the moving parts on a regular basis.
Apply a water-resistant lubricant to the moving parts routinely.

Check the cables and the cable connections for wear and corrosion on a regular basis.

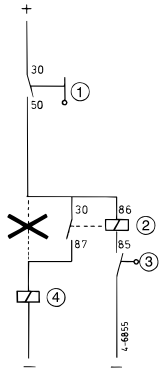

1
2
3
4
RPM
33C
OS
KM
33C ③
KM ⑥
OS ⑤
④ 33C
⑦ KM
⑧ OS

Elektrisch schema's
Electrical circuit diagrams

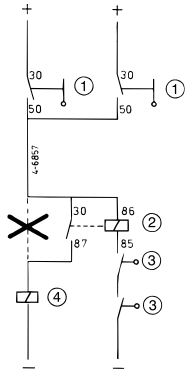
Elektrischer Schaltpläne
Schémas électrique

Esquemas eléctricos
Schemi elettrici

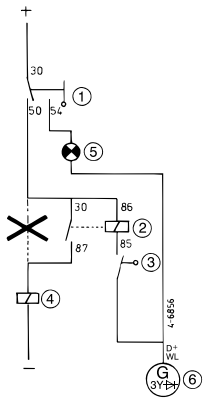
A



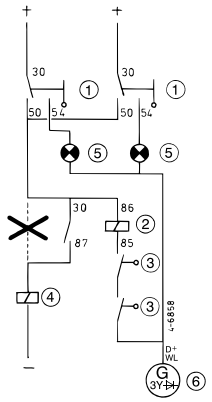
B



C



D



NEDERLANDS

A Enkele bedieningsstuurstand
B Twee bedieningsstuurstanden
C Enkele bedieningsstuurstand met herstart beveiliging
D Twee bedieningsstuurstanden met herstart beveiliging
① Startslot
② Relais
③ Neutraal schakelaar
④ Startrelais
⑤ Laadcontrole lamp
⑥ Dynamo (Aansluiting D⁺/ WL)

DEUTSCH

A Einzelbedienungssteuerstand
B Doppelbedienungssteuerstand
C Einzelbedienungssteuerstand mit Neustartsicherung
D Doppelbedienungssteuerstand mit Neustartsicherung
① Zündschloss
② Relais
③ Leerlaufschalter
④ Zündrelais
⑤ Vorglüh-Kontrolllampe
⑥ Dynamo (Anschluss D⁺/WL)

ESPAÑOL

A Única posición de navegación para activación
B Dos posiciones de navegación para activación
C Única posición de navegación para activación con protector de rearranque
D Dos posiciones de navegación para activación con protector de rearranque
① Dispositivo de arranque
② Relé
③ Interruptor neutral
④ Relé de arranque
⑤ Lámpara de control de carga
⑥ Dinamo (Conexión D⁺/WL)

ENGLISH

A Single command station
B Two command stations
C Single command station with restart protection
D Two command stations with restart protection
① Starter switch
② Relay
③ Neutral switch
④ Starter relay
⑤ Charging light
⑥ Alternator (Connection D⁺/ WL)

FRANÇAIS

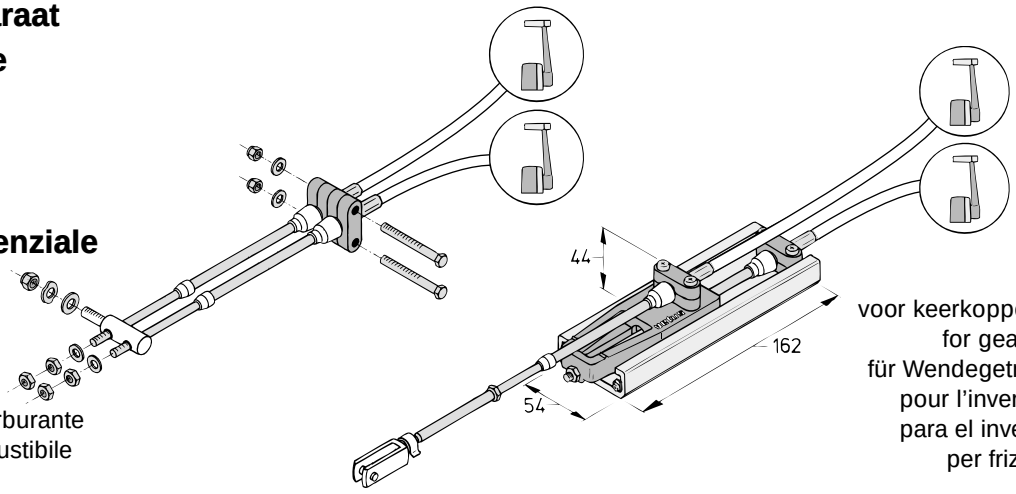
A Commande mono levier
B Commande double levier
C Commande mono levier avec protection anti-redémarrage
D Commande double levier avec protection anti-redémarrage
① Verrou de démarrage
② Relais
③ Sécurité point mort
④ Relais de démarrage
⑤ Témoin de contrôle de charge
⑥ Dynamo (Branchement D⁺/WL)

ITALIANO

A Posizione di governo singolo
B Posizione di governo doppio
C Posizione di governo singolo con dispositivo di protezione di riavviamento
D Posizione di governo doppio con dispositivo di protezione di riavviamento
① Contatto a chiave
② Relè
③ Dispositivo di protezione
④ Relè di avviamento
⑤ Spia di carica
⑥ Dinamo (Collegamento D⁺/WL)

Differentiaal apparaat
Differential device
Differenzial
Différentiel
Diferencial
Dispositivo differenziale

voor brandstofpomp
for throttle
für Treibstoffpumpe
pour l'accélérateur
para la bomba de carburante
per pompa del combustibile

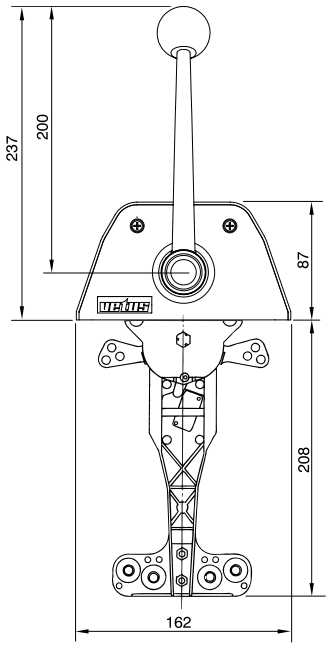


voor keerkoppeling
for gearbox
für Wendegetriebe
pour l'inverseur
para el inversor
per frizione

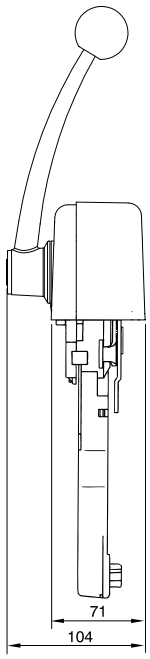
Hoofdafmetingen
Principal dimensions

Hauptabmessungen
Dimensions principales

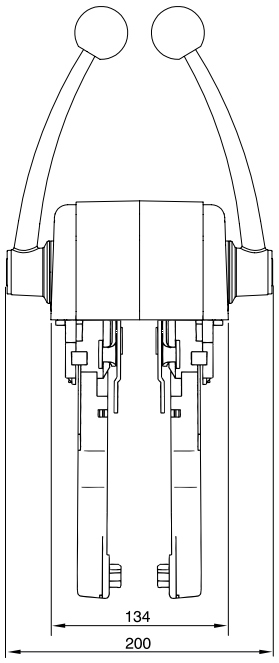
Dimensiones principales
Dimensioni principali



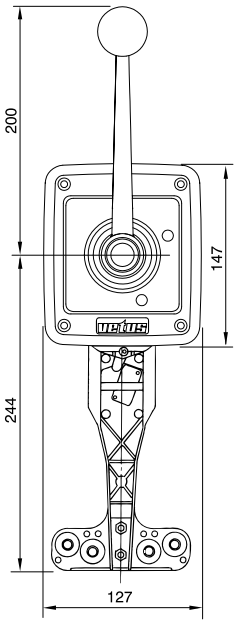
RCTOPB
RCTOPTB



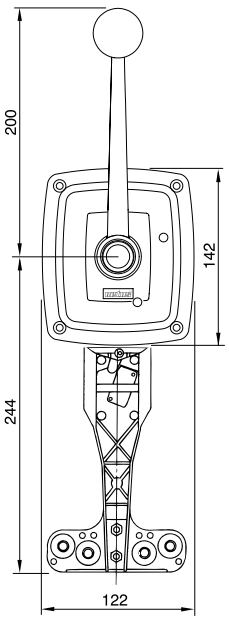
RCTOPB



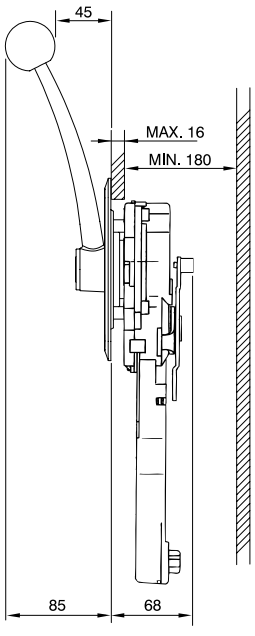
RCTOPTB



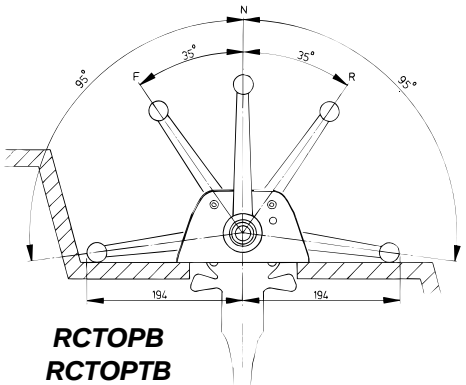
SICO



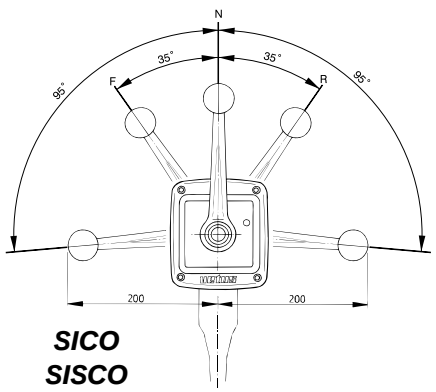
SISCO



SICO
SISCO



RCTOPB
RCTOPTB



SICO
SISCO

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