

CABLES AND CONTROLS

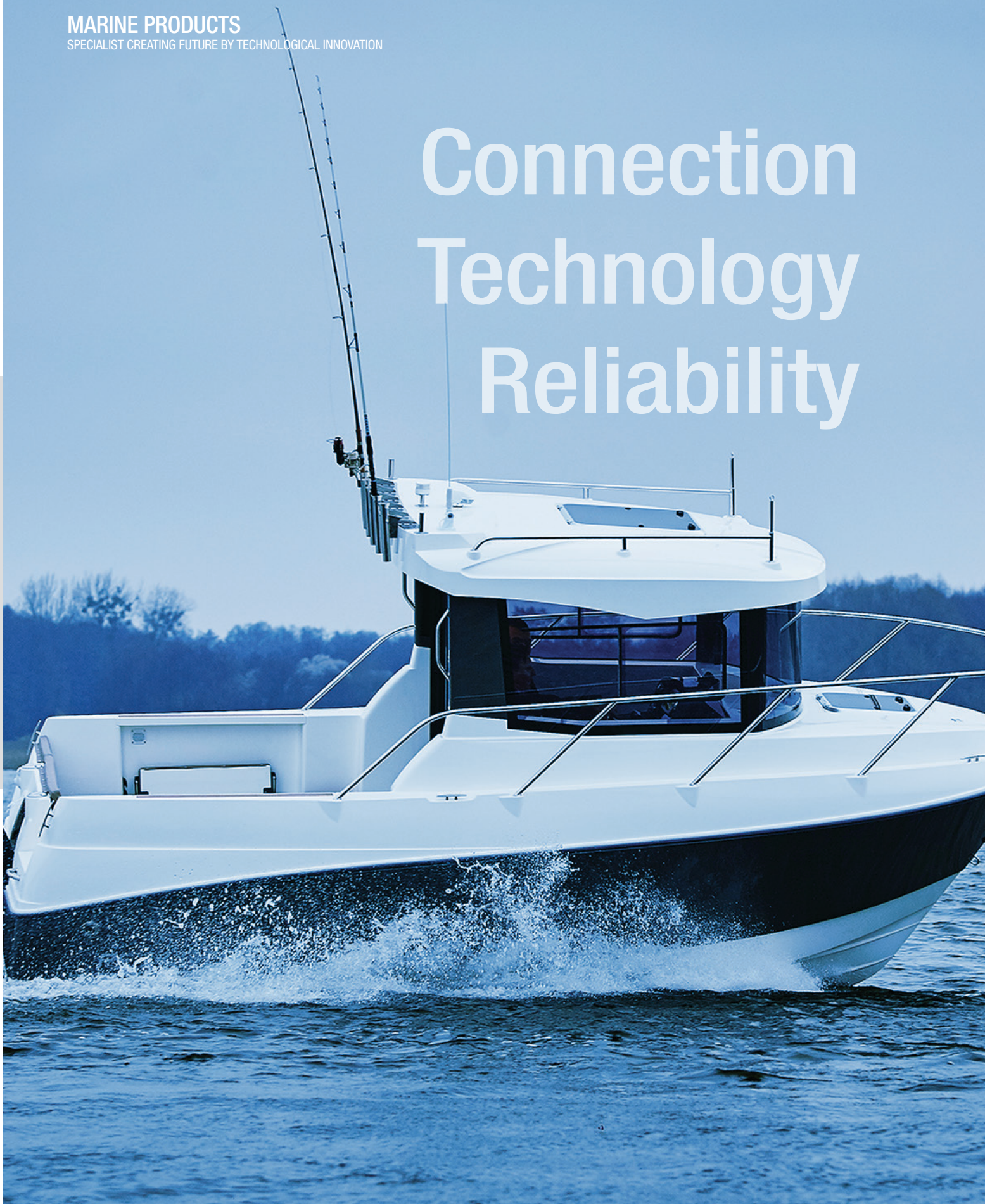
STEER YOUR WAY

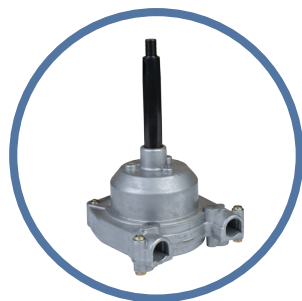


MARINE PRODUCTS

SPECIALIST CREATING FUTURE BY TECHNOLOGICAL INNOVATION

Connection Technology Reliability





PRETECH CABLES AND CONTROLS

Pretech has been the leading manufacturer and supplier of Steering Cable Systems, Control Cables, Control Levers and Accessories for over 20 years. As a premier manufacturer and supplier to the marine industry, Pretech's products are of the highest quality.

There are over 70 global Pretech distributors supplying marine and industrial products in 40 countries around the world. Hundreds of boat builders and special equipment industrial dealers have installed Pretech's steering systems, control cables and control levels in their boats and equipment.

Pretech is committed to develop new and innovative products and customer satisfaction is the highest priority.

C . O . N . T . E . N . T . S

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STEERING SYSTEM

steerflex

STEERING SYSTEM

steerflex

ZTS Rotary Steering System



3000 Rotary Steering System



LT Rotary Steering System



2000 Rack Steering System



COMPLETE STEERING SYSTEM

Components

- ZTS Rotary Steering Helm
 - a. ZTS Rotary Single Helm
 - b. ZTS Rotary Dual Helm
- Mounting Bezel
 - a. 90° Black Bezel
 - b. 20° Black Bezel
- Steering Cable
 - a. Pinnacle Rotary Steering Cable (Stainless Steel)
 - b. Rotary Steering Cable (Galvanized)
- Tilt System

Components

- 3000 Rotary Steering Helm
 - a. 3000 Rotary Single Helm
 - b. 3000 Rotary Dual Helm
- Mounting Bezel
 - a. 90° Black Bezel
 - b. 20° Black Bezel
- Steering Cable
 - a. Pinnacle Rotary Steering Cable (Stainless Steel)
 - b. Rotary Steering Cable (Galvanized)
- Tilt System

Components

- LT Rotary Steering Helm
- LT Rotary 90° Bezel Kit
- LT Rotary Steering Cable
(20° Bezel Kit is not available)

Components

- 2000 Rack Steering Helm
 - a. 2000 Rack Single Helm
 - b. 2000 Rack Dual Helm
- Mounting Bezel
 - a. 90° Black Bezel
 - b. 20° Black Bezel
- Rack Steering Cable
- Tilt System

ZTS ROTARY STEERING SYSTEM

steerflex

The Zero Torque System (ZTS) is designed to withstand the external forces such as sudden current change, propeller's torque and waves while driving the boat. ZTS eliminates torque coming from the steering cable with a uniquely patented design of the torque clutch.

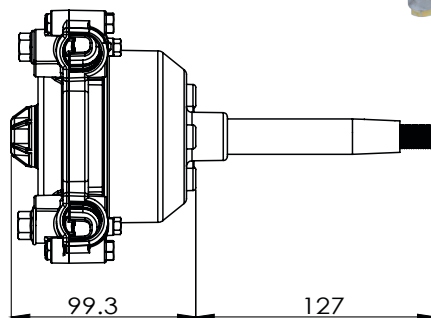
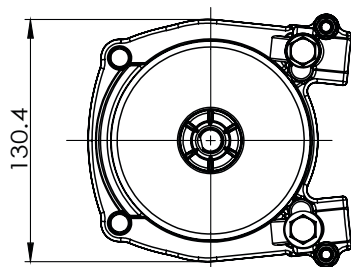
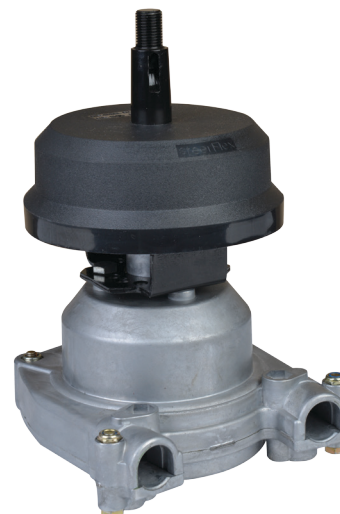
Application Guide

- Mechanical rotary steering non-power assisted outboard engine up to V-4.
- Standard 3/4" tapered shaft.
Approximately 3.8 turning revolution from lock to lock.
- Maximum wheel size : 16" (406.4 mm) diameter.
- Minimum steering cable bend radius : 8" (203.2 mm).
- Should not be used on boats equipped with engines that exceed the maximum horse power rating of the boat.
- Bolt-in replacement for our standard 3000 Rotary Steering System.
- Replace/Upgrade the following competitors' helms :
SeaStar Solutions® : Safe-T® QC, Safe-T®, NFB™ 4.2 NFB™ Safe-T™ II
Uflex® : T71FC, T73NR FC



Features & Specification

- Patented ZTS (Zero Torque Steering) System.
- ZTS system substantially minimizes torque from engine.
- Optional stainless steel steering cable construction : output ends and inner core.
- Snap-on bezel with minimum tools required.
- Compact size and easy installation.
- Bolt-in replacement (upgrade) for our standard 3000 Rotary Steering System.
- Can generally be used on boats up to 25ft. in length.
- Manufactured to meet or exceed A.B.Y.C., N.M.M.A., I.M.C.I.(CE) certification requirements.



ZTS Rotary Steering System



*Steering cable available in lengths from 5~30ft. in 1 ft. increments

① 5500XX



② 4620XX



⑦ 370297



③ 700040



⑥ 700050



④ 500012



⑤ 500014



⑧ 370002



⑨ 370004



Part No.	Description
Complete system – Include helm, cable and 90° bezel	
5600XX	ZTS Pinnacle Rotary Steering System
5100XX	ZTS Rotary Steering System (Standard)
Components	
① 5500XX	Pinnacle Rotary Steering Cable (Stainless Steel)
② 4620XX	Rotary Steering Cable (Galvanized)
③ 700040	ZTS Rotary Single Helm
④ 500012	90° Bezel Kit (Black)
500016	ZTS Rotary Single Helm + 90° Bezel Kit (Black) = [③+④]
Options	
⑤ 500014	20° Bezel Kit (Black)
⑥ 700050	ZTS Rotary Dual Helm
Accessories	
⑦ 370297	Spent Core Tube
⑧ 370002	3000/ZTS Rotary Helm Hardware Kit (5/8-18 Thread)
370002-N	3000/ZTS Rotary Helm Hardware Nut Only (5/8-18 Thread)
⑨ 370004	3000/ZTS Rotary Helm Hardware Kit (1/2-20 Thread)
370004-N	3000/ZTS Rotary Helm Hardware Nut Only (1/2-20 Thread)

3000 ROTARY STEERING SYSTEM

steerflex

COMPLETE STEERING SYSTEM

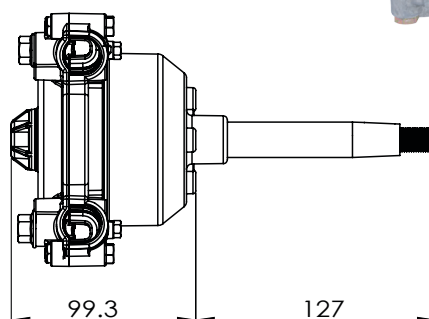
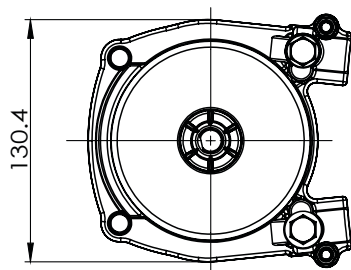
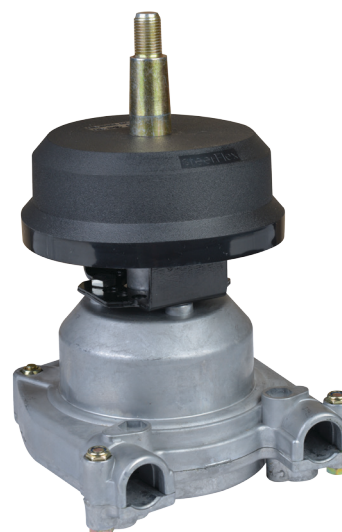
Application Guide

- Can generally be used on boats up to 25ft. in length.
- For single station use only.
- Maximum wheel size : 16" (406.4 mm) diameter.
- Should not be used on boats equipped with engines that exceed the maximum horse power rating of the boat.
- Replace/Upgrade the following competitor's helm :
SeaStar Solutions® : Safe-T® QC, Safe-T®
Uflex® : T71FC



Features & Specification

- Smoother operation and durable with planetary gear design.
- Snap-on bezel with minimum tools required.
- 3.8 turning revolutions from lock to lock.
- Standard 3/4" tapered shaft.
- Compact size with maximum performance.
- Minimal feedback.
- Manufactured to meet or exceed A.B.Y.C., N.M.M.A., I.M.C.I.(CE) certification requirements.



3000 Rotary Steering System



*Steering cable available in lengths from 5~30ft. in 1 ft. increments

① 5500XX



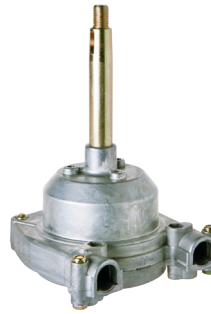
② 4620XX



⑦ 370297



③ 700010



⑥ 700020



④ 500012



⑤ 500014



⑧ 370002



⑨ 370004



Part No.	Description
Complete system – Include helm, cable and 90° bezel	
3150XX	3000 Pinnacle Rotary Steering System
3180XX	3000 Rotary Steering System
Components	
① 5500XX	Pinnacle Rotary Steering Cable (Stainless Steel)
② 4620XX	Rotary Steering Cable (Galvanized)
③ 700010	3000 Rotary Single Helm
④ 500012	90° Bezel Kit (Black)
500015	3000 Rotary Single Helm + 90° Bezel Kit (Black) = [③+④]
Options	
⑤ 500014	20° Bezel Kit (Black)
⑥ 700020	3000 Rotary Dual Helm
Accessories	
⑦ 370297	Spent Core Tube
⑧ 370002	3000/ZTS Rotary Helm Hardware Kit (5/8-18 Thread)
370002-N	3000/ZTS Rotary Helm Hardware Nut Only (5/8-18 Thread)
⑨ 370004	3000/ZTS Rotary Helm Hardware Kit (1/2-20 Thread)
370004-N	3000/ZTS Rotary Helm Hardware Nut Only (1/2-20 Thread)

LT ROTARY STEERING SYSTEM



LT Rotary Steering System is ideal for boats under 18ft. (4.74 m) with a motor not exceeding 55 horsepower

Application Guide

- Single helm with 90 degree mounting only
- Cable travel : 9" (230 mm)
- Wheel turns 2.6 lock to lock
- Maximum wheel size : 15 (381 mm) diameter
- Minimum bend radius : 8" (203.2 mm)

Features

- HD cast machined gear drive
- Friction brake is standard
- Choice of cable entry for easy installation
- Compact design for quick installation

1 2080XX



2 230301



3 230302



4 2500XX



Part No.	Description
Complete system – Include helm, cable and 90° bezel	
1 2080XX	LT Rotary Steering System Package
Components	
2 230301	LT Rotary Steering Helm
3 230302	LT Rotary 90° Bezel Kit
4 2500XX	LT Rotary Steering Cable Only
230303	LT Rotary Steering Helm with 90° Bezel Kit = [2+3]
*20 Degree Bezel Kit is not available	

2900 ROTARY STEERING SYSTEM

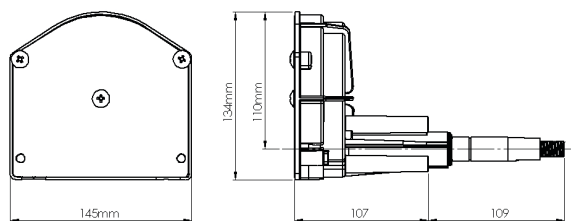
steerflex

Application Guide

- Generally 2900 Steerflex can be used on boats up to 25ft. in length.
- 2900 Steerflex should NOT be used on boats equipped with engines that exceed the maximum horsepower rating of the boat.
- Maximum allowable steering wheel diameter is 16 inch (406.4mm).

Features

- Compact, quick, and easy installation.
- 3 turning revolutions from lock to lock.
- Snap-on bezel with minimum tools required.
- Standard 3/4" tapered shaft.
- Manufactured to meet or exceed A.B.Y.C., N.M.M.A., I.M.C.I. (CE) certification requirements.



1 3080XX



2 370525



3 370559



4 4620XX



5 370561



6 370522



Part No.

Description

Complete System – Include helm, cable & 90° bezel kit

1 3080XX 2900 Steerflex Rotary Steering System

Components

2 370525 2900 Rotary Steering Helm

3 370559 2900 90° Bezel Kit

4 4620XX Rotary Steering Cable

370562 2900 Rotary Steering Helm + 2900 90° Bezel Kit = [2+3]

Options

5 370561 2900 20° Bezel Kit

Accessories

6 370522 Adjustable Brake for 2900 Rotary Helm

370005 2900 Rotary Helm Hardware Kit (1/2-20 Thread Shaft)

370297 Spent Core Tube

TILT SYSTEM

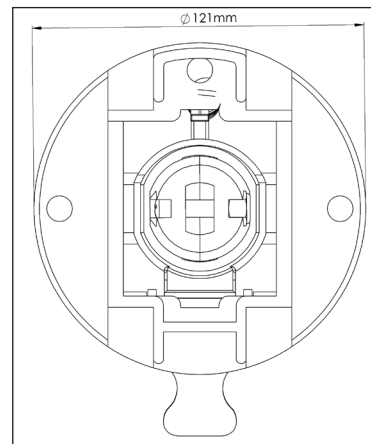
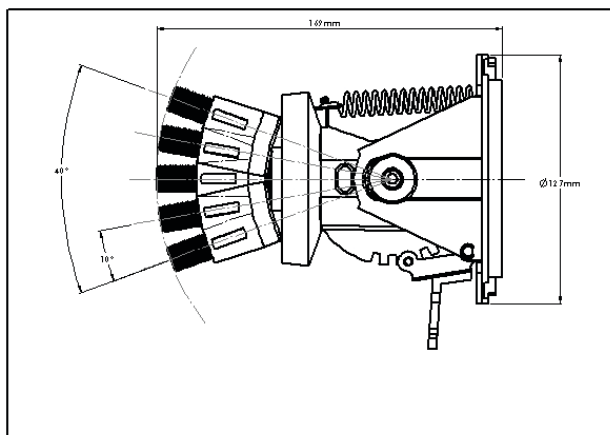
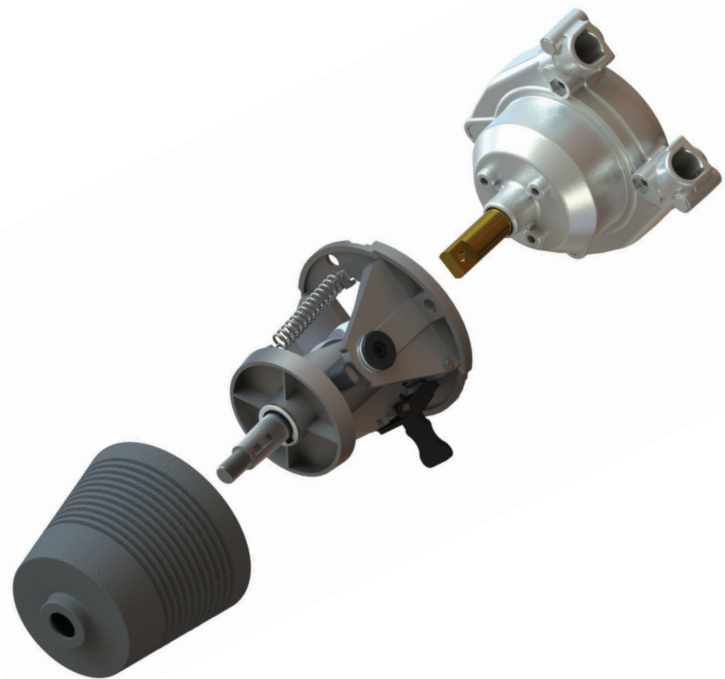
Pretech's tilt helm assembly is designed for boaters seeking what only a five way adjustable helm assembly can offer, freedom, flexibility and comfort. With it's full 40 degree range of motion, the steering wheel can now be adjusted to you, not you to the steering. Modern boat cockpit styling makes tilts a perfect blend.

Application Guide

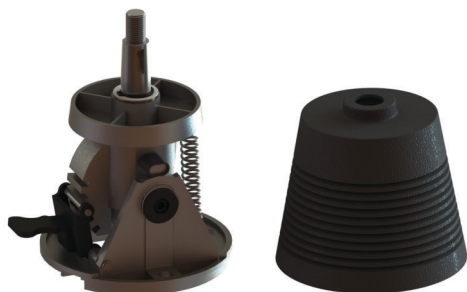
- Maximum wheel size : 16" diameter
- Shaft size : Stainless Steel 3/4" tapered shaft
- Use with ZTS Rotary, 3000 Rotary, 2000 Rack or 2900 Rotary tilt helm

Features & Specification

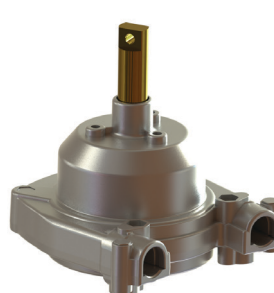
- 5 tilt positions within 40 degree range.
- 90 degree mounting allow first wheel position to be at vertical.
- Standard black boot comes with tilt mechanism.
- Meets/Exceeds applicable requirements.



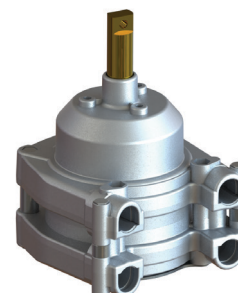
① 370979



② 700042/700012



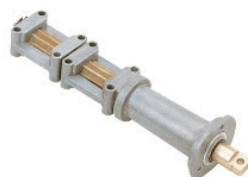
③ 700052/700022



④ 370974



⑤ 370975



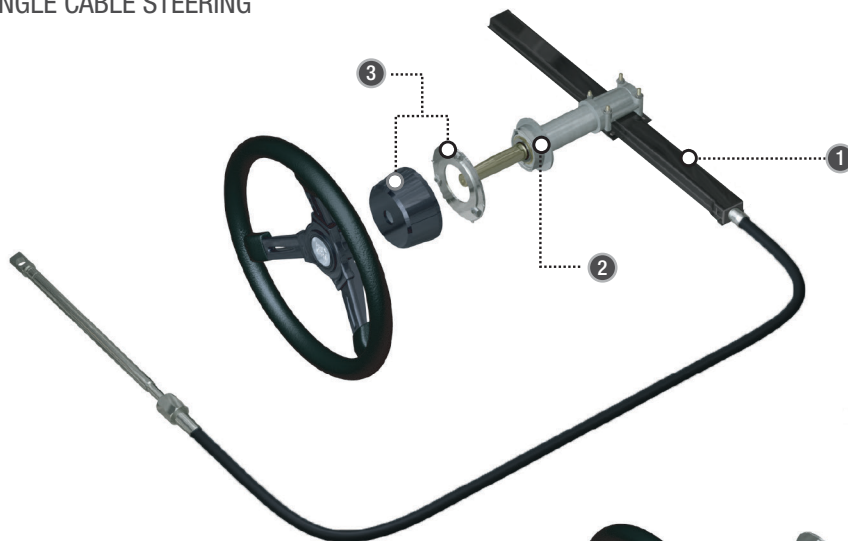
⑥ 370990



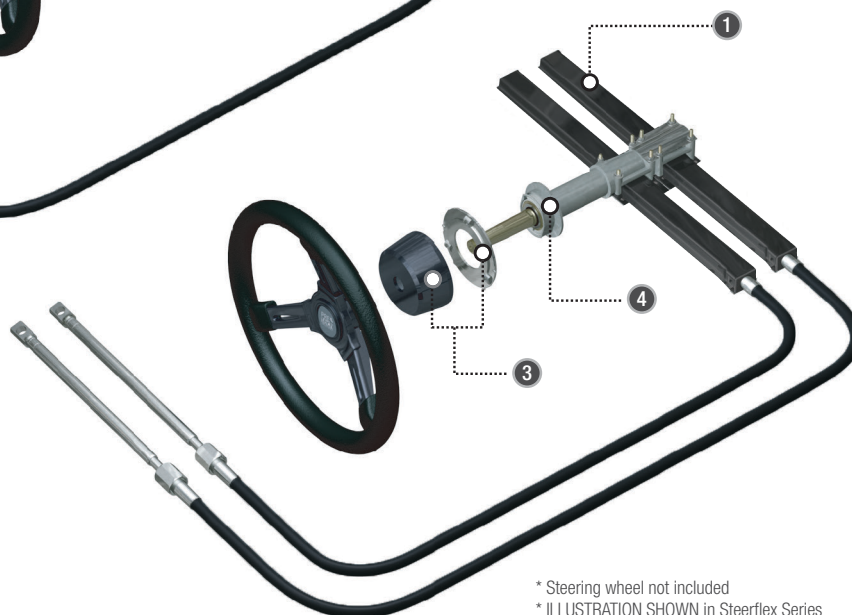
Part No.	Description
① 370979	Tilt Mechanism Unit Only (with S.S. shaft)
TILT HELM ONLY	
② 700042	ZTS Rotary Single Tilt Helm
700012	3000 Rotary Single Tilt Helm
③ 700052	ZTS Rotary Dual Tilt Helm
700022	3000 Rotary Dual Tilt Helm
④ 370974	2000 Rack Single Tilt Helm
⑤ 370975	2000 Rack Dual Tilt Helm
⑥ 370990	2900 Rotary Single Tilt Helm
Boot	
370999	Black Boot - Standard

2000 RACK & PINION STEERING SYSTEM

SINGLE CABLE STEERING



TWIN CABLE STEERING



* Steering wheel not included
* ILLUSTRATION SHOWN in Steerflex Series

Application Guide

- Can generally be used on boats up to 25ft. in length.
- Should not be used on boats equipped with engines that exceed the maximum horse power rating of the boat.
- Maximum allowable steering wheel diameter is 16" (406.4 mm) diameter.
- Dual cable system is recommended for boats whose maximum speed exceeds 50 mph.
- For single station use only.

Features

- 3.5 turning revolutions from lock to lock.
- Smoother and easier operation with less loss of motion.
- Standard galvanized steering cable.
- Standard 3/4" tapered shaft.
- Dual cable system minimize steering instability at high speed.
- Quick and easy installation.
- Manufactured to meet or exceed A.B.Y.C., N.M.M.A., I.M.C.I.(CE) certification requirements.
- Suitable for power-assisted stern drive, inboard or ski boat.

2000 Rack Steering System



*Steering cable available in lengths from 5~30ft. in 1 ft. increments

② 370252



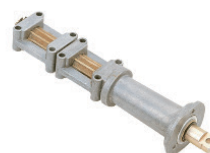
④ 370853



⑤ 370974



⑥ 370975



③ 370519



⑦ 370470



① 3500XX



Part No.	Description
Complete system – Include helm, cable and 90° bezel	
3100XX	2000 Rack Steering System 3000 Gen II Rotary Steering System
Components	
① 3500XX	Rack Steering Cable (Galvanized)
3500XX	Rack Steering Cable (Galvanized) - Requires 2 cables for Dual Helm
② 370252	2000 Rack Single Helm
③ 370519	90° Bezel Kit (Black)
Options	
*Requires tilt mechanism (370979) to complete tilt steering system installation (Page 12)	
④ 370853	2000 Rack Dual Helm
⑤ 370974	2000 Rack Single Tilt Helm *
⑥ 370975	2000 Rack Dual Tilt Helm *
⑦ 370470	20° Bezel Kit (Black)

REPLACEMENT STEERING CABLE

steerflex

Part No. Replacement Steering Cable

5090XX UR Rotary Replacement Steering Cable



5020XX UR Pinnacle Rotary Replacement Steering Cable (S.S.)



3500XX 2000 Rack Steering Cable (Galvanized)



1240XX TX Rack Single Steering Cable



1340XX TX Back Rack Steering Cable



1350XX TX Dual Back Rack Steering Cable



Suitable Helms

Pretech 3000 Rotary Single/Dual Helm (700010 / 700020)
ZTS Rotary Single/Dual Helm (700040 / 700050)

SeaStar Solutions® Safe-T® QC, NFB™ 4.2, NFB™ Safe-T II

Ultraflex® T7FC, T72FC, T73NR FC, T81FC, T82FC, T83NRFC

Suitable Helms

Pretech 3000 Rotary Single/Dual Helm (700010 / 700020)
ZTS Rotary Single/Dual Helm (700040 / 700050)

SeaStar Solutions® Safe-T® QC, NFB™ 4.2, NFB™ Safe-T II

Ultraflex® T7FC, T72FC, T73NR FC, T81FC, T82FC, T83NRFC

Suitable Helms

Pretech 370252, 370853 (2ea), 370974, 370975 (2ea)

SeaStar Solutions® Morse® Command 200 Rack
Morse® Dual Rack Cable (2ea)
300620 or 300619 Cable, SSC130XX

Suitable Helms

Pretech N/A

SeaStar Solutions® "The Rack"(Rack&Pinion) - Std.SH5098P
"The Rack" Dual Cable System - Std.SH5097P (2ea)
SSC124XX

Suitable Helms

Pretech N/A

SeaStar Solutions® "The Rack"(Back Mount) : SS141XX - Std.SH5210P,
Tilt SH91610P
NFB™ Rack(Back Mount) : SS151XX - Std.SH5230P,
Tilt SH91630P, SSC134XX, SSC154XX

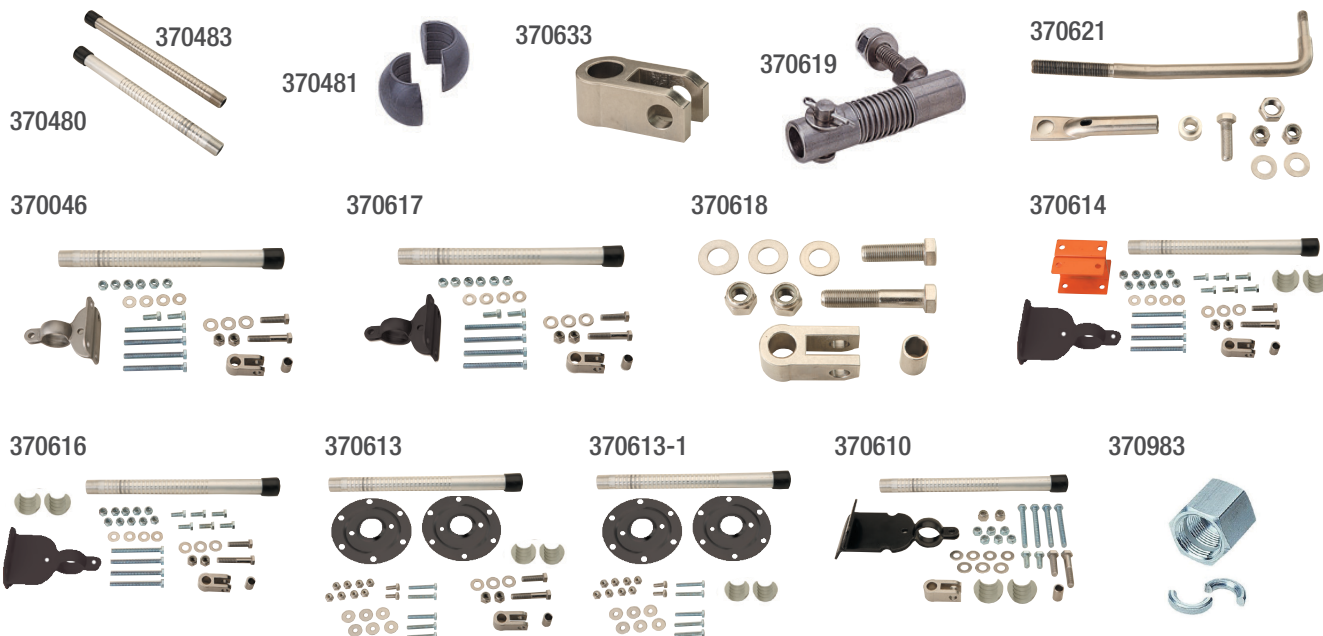
Suitable Helms

Pretech N/A

SeaStar Solutions® "The Rack" (Back Mount) 2 Cable - Std.5210P,
Tilt SH91610P
NFB™ Pro (Back Mount) Dual Cable System :
152XX - Std.SH5230P, Tilt SH91630P, SSC135XX

STEERING ADAPTER AND HARDWARE

steerflex



Part No.	Description
370480	Support Tube (290.0 mm)
370481	Half Bushing Kit
370482	Support Tube (285.5 mm)
370483	Support Tube (Stainless Steel 290.0 mm)
370609	Thru-Hinge Pin Kit for O.B.
370621	Thru-Hinge Pin Kit for O.B. (Stainless Steel)
370610	Transom Mount Front Hook Up (Galvanized)
370608	Transom Mount Front Hook Up (Stainless Steel)
370611	Splashwell Mount for O.B. (Stainless Steel)
370611-1	Splashwell Mount for O.B. (1/4-20) (Stainless Steel)
370613	Splashwell Mount for O.B.
370613-1	Splashwell Mount
370614	Inboard Transom Kit for Volvo®
370616	Inboard Tall Bracket Kit
370617	Inboard Short Bracket Kit 2" (Galvanized)
370046	Inboard Short Bracket Kit 2" (Stainless Steel)
370618	Swivel Assembly Kit (Stainless Steel)
370619	Ball Joint for Steering Cable (Stainless Steel)
370620	Short Bracket Kit (Stainless Steel)
370623	Support Tube for 12" Steering Cable
370633	Swivel Only
370983	Steering Cable Adapter (BIG-T®, SAFE-T® & 290 NFS™ HELM) to 3000 Rotary Steering Cable

STEERING WHEEL



PISMO
MF33521
13.8" (350mm)

PISMO II
MF33521S
13.8" (350mm)



HERMOSA
MF33581
13.8" (350mm)



CAMBRIA
MF3067
13.8" (350mm)



DANA POINT
MF3063
13.0" (330mm)
MF3064
13.8" (350mm)



MORRO BAY
MF4511
13.8" (350mm)



MONTEREY
MF4512
13.8" (350mm)



CORONADO
MF3511
13.8" (350mm)



REDONDO
MF3703
13.8" (350mm)



AVALON
MF3561
13.8" (350mm)



OXNARD
MF34521
13.8" (350mm)

STEERING WHEEL

steerflex



HUNTINGTON
MF3011
13.8" (350mm)



VENICE
MF3701
13.8" (350mm)

VENICE II
MF3702
13.8" (350mm)



TOPANGA
MF3705
13.8" (350mm)



CORVINA
MF3561
13.8" (350mm)



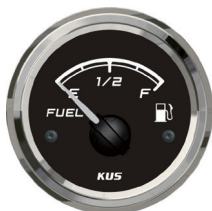
MANHATTAN
MF3541
13.8" (350mm)

MEMO



GAUGE

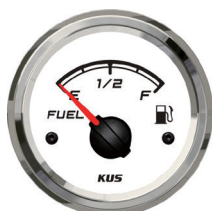
MAXFLEX SERIES



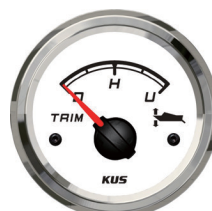
Model : FUEL LEVEL GAUGE
Part No. : PX10020
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : TRIM GAUGE
Part No. : PX09023
Signal : 0~190Ω
Indicating range : Down-UP
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : FUEL LEVEL GAUGE
Part No. : PX10114
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



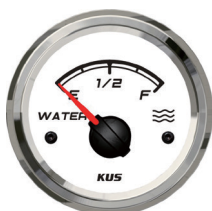
Model : TRIM GAUGE
Part No. : PX09113
Signal : 0~190Ω
Indicating range : Down-UP
Working voltage : 12V/24V
Installiong dimension : 52mm



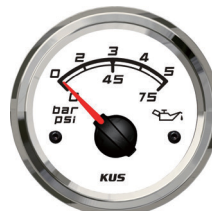
Model : WATER LEVEL GAUGE
Part No. : PX11015
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : OIL PRESSURE GAUGE
Part No. : PX15036
Signal : 10-184ohm
Indicating range : 0-5bar
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : WATER LEVEL GAUGE
Part No. : PX11110
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



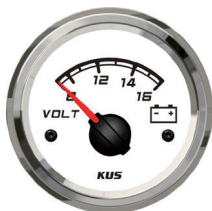
Model : OIL PRESSURE GAUGE
Part No. : PX15112
Signal : 10-184ohm
Indicating range : 0-5bar
Working voltage : 12V/24V
Installiong dimension : 52mm



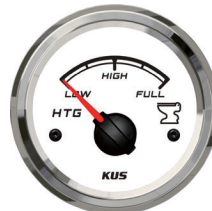
Model : VOLTMETER GAUGE
Part No. : PX13017
Signal : 8-16V
Indicating range : 8-16V
Working voltage : 12V
Installiong dimension : 52mm



Model : HOLDING TANK
Part No. : PX12010
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : VOLTMETER GAUGE
Part No. : PX13107
Signal : 8-16V
Indicating range : 8-16V
Working voltage : 12V
Installiong dimension : 52mm



Model : HOLDING TANK
Part No. : PX12106
Signal : 0~190Ω
Indicating range : Empty~Full
Working voltage : 12V/24V
Installiong dimension : 52mm



Model : HOURMETER
Part No. : PX39002
Indicating range : 0~99999
Working voltage : 12V/24V
Installation dimension : 52mm



Model : SPEEDOMETER
Part No. : PX18012
Signal : Pressure signal
Indicating range : 0-35MPH
Working voltage : 12V/24V
Installation dimension : 85mm



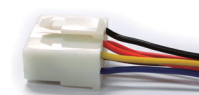
Model : HOURMETER
Part No. : PX39101
Indicating range : 0~99999
Working voltage : 12V/24V
Installation dimension : 52mm



Model : SPEEDOMETER
Part No. : PX18108
Signal : Pressure signal
Indicating range : 0-35MPH
Working voltage : 12V/24V
Installation dimension : 85mm



Model : GPS SPEEDOMETER
Part No. : PX08029
Signal : GPS
Indicating range : 0~15Knots
Working voltage : 12V/24V
Installation dimension : 85mm



Part No. : PXS0302
Connector with 400mm line, to match with MAXFLEX series gauges.



Model : GPS SPEEDOMETER
Part No. : PX08113
Signal : GPS
Indicating range : 0~15Knots
Working voltage : 12V/24V
Installation dimension : 85mm



Part No. : PXM1060
To match with the speedometer and provide the air pressure signal.



Model : TACHOMETER
Part No. : PX07018
Speed ratio : 0.5~250
Indicating range : 0~3000rpm
Working voltage : 12V/24V
Installation dimension : 85mm



Model : TACHOMETER
Part No. : PX07112
Speed ratio : 0.5~250
Indicating range : 0~3000rpm
Working voltage : 12V/24V
Installation dimension : 85mm

GAUGE

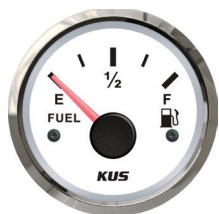
PINNACLE SERIES



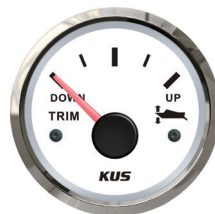
Model : FUEL LEVEL GAUGE
Part No. : MX10005
Signal : 0~190Ω
Description : Stainless steel bezel and black faceplate (52mm)



Model : TRIM GAUGE
Part No. : MX09205
Signal : 0~190Ω
Description : Stainless steel bezel and black faceplate (52mm)



Model : FUEL LEVEL GAUGE
Part No. : MX10100
Signal : 0~190Ω
Description : Stainless steel bezel and white faceplate (52mm)



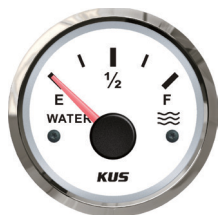
Model : TRIM GAUGE
Part No. : MX09103
Signal : 0~190Ω
Description : Stainless steel bezel and white faceplate (52mm)



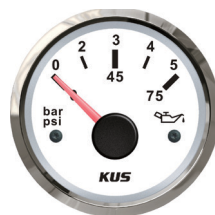
Model : WATER LEVEL GAUGE
Part No. : MX11004
Signal : 0~190Ω
Description : Stainless steel bezel and black faceplate (52mm)



Model : OIL PRESSURE GAUGE
Part No. : MX15000
Signal : 10~184Ω
Description : Stainless steel bezel and black faceplate (52mm)



Model : WATER LEVEL GAUGE
Part No. : MX11100
Signal : 0~190Ω
Description : Stainless steel bezel and white faceplate (52mm)



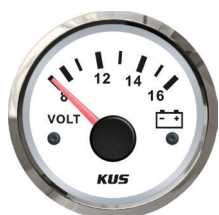
Model : OIL PRESSURE GAUGE
Part No. : MX15100
Signal : 10~184Ω
Description : Stainless steel bezel and white faceplate (52mm)



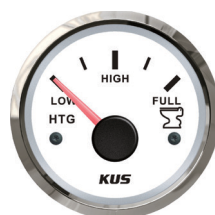
Model : VOLTMETER GAUGE
Part No. : MX13000
Signal : 8~16V
Description : Stainless steel bezel and black faceplate (52mm)



Model : HOLDING TANK
Part No. : MX12002
Signal : 0~190Ω
Description : Stainless steel bezel and black faceplate (52mm)



Model : VOLTMETER GAUGE
Part No. : MX13100
Signal : 8~16V
Description : Stainless steel bezel and white faceplate (52mm)



Model : HOLDING TANK
Part No. : MX12102
Signal : 0~190Ω
Description : Stainless steel bezel and white faceplate (52mm)



Model : HOURMETER
Part No. : MX39000
Indicating range : 0-999999
Description : Stainless steel bezel and black faceplate (52mm)



Model : GPS SPEEDOMETER
Part No. : MX08017
Signal : GPS
Description : Stainless steel bezel and black faceplate (85mm)



Model : HOURMETER
Part No. : MX39202
Indicating range : 0-999999
Description : Stainless steel bezel and white faceplate (52mm)



Model : GPS SPEEDOMETER
Part No. : MX08108
Signal : GPS
Description : Stainless steel bezel and white faceplate (85mm)



Model : DIGITAL GPS SPEEDOMETER
Part No. : MX08041
Signal : GPS
Description : Stainless steel bezel and black faceplate (52mm)



Model : TACHOMETER
Part No. : MX07025
Speed ratio : 1.0~10.0
Description : Stainless steel bezel and black faceplate (85mm)



Model : DIGITAL GPS SPEEDOMETER
Part No. : MX08120
Signal : GPS
Description : Stainless steel bezel and white faceplate (52mm)



Model : TACHOMETER
Part No. : MX07116
Speed ratio : 1.0~10.0
Description : Stainless steel bezel and white faceplate (85mm)



Model : DIGITAL GPS SPEEDOMETER
Part No. : MX08021
Signal : GPS
Description : Stainless steel bezel and black faceplate (85mm)



Model : TACHOMETER with 4 LED ALARM
Part No. : MX07046
Description : Stainless steel bezel and black faceplate (85mm)



Model : DIGITAL GPS SPEEDOMETER
Part No. : MX08109
Signal : GPS
Description : Stainless steel bezel and white faceplate (85mm)



Model : TACHOMETER with 4 LED ALARM
Part No. : MX07123
Description : Stainless steel bezel and white faceplate (85mm)

GAUGE

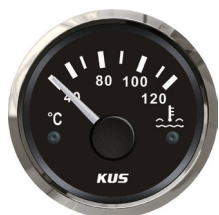
steerflex



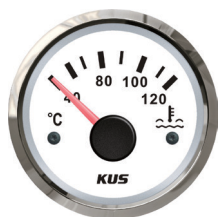
Model : SPEEDOMETER
Part No. : MX18003
Signal : Water pressure signal
Description : Stainless steel bezel
and black faceplate (85mm)



Model : SPEEDOMETER
Part No. : MX18102
Signal : Water pressure signal
Description : Stainless steel bezel
and white faceplate (85mm)



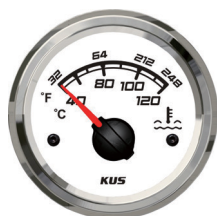
Model : WATER TEMP. GAUGE
Part No. : MX14004
Signal : Matched with KUS temperature sensor
Indicating range : 40-120°C
Working voltage : 12V/24V
Installation dimension : 52mm



Model : WATER TEMP. GAUGE
Part No. : MX14100
Signal : Matched with KUS temperature sensor
Indicating range : 40-120°C
Working voltage : 12V/24V
Installation dimension : 52mm



Model : WATER TEMP. GAUGE
Part No. : PX14024
Signal : Matched with KUS temperature sensor
Indicating range : 40-120°C
Working voltage : 12V/24V
Installation dimension : 52mm



Model : WATER TEMP. GAUGE
Part No. : PX14107
Signal : Matched with KUS temperature sensor
Indicating range : 40-120°C
Working voltage : 12V/24V
Installation dimension : 52mm

MEMO





CONTROL CABLE

Maxflex Pinnacle

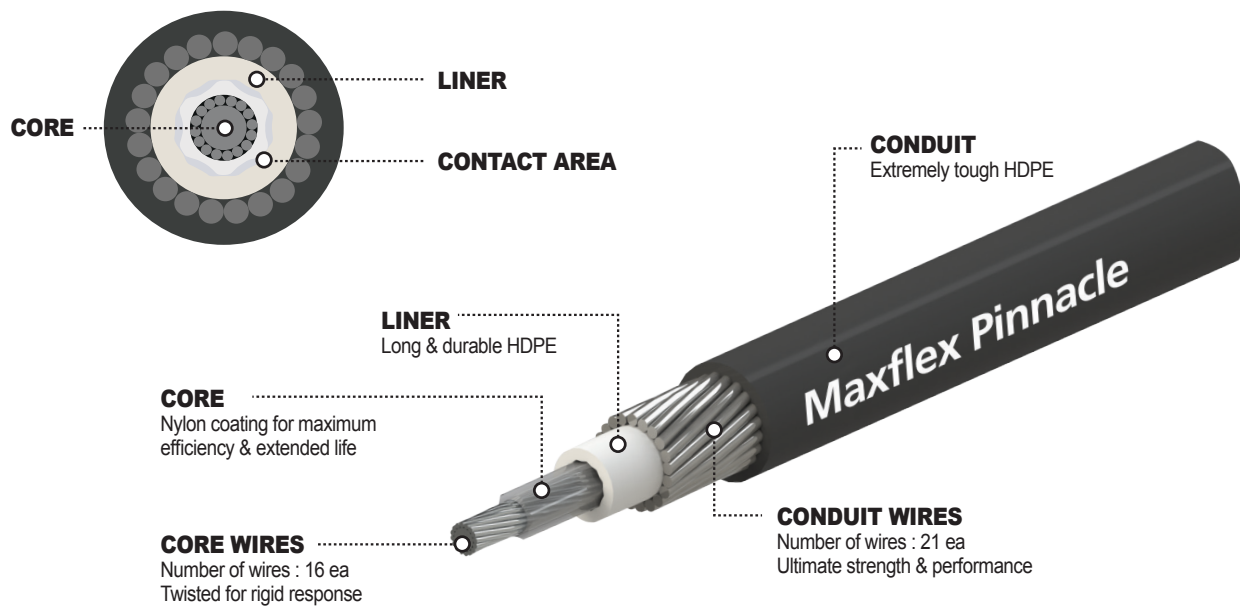
maxflex

MAXFLEX PINNACLE CABLE

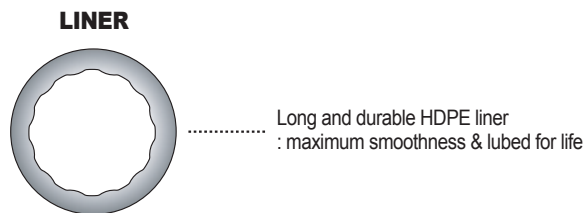
maxflex

Results in Maximum Efficiency and Reduced Backlash

Maximized the cable efficiency by reducing 50% of the contact area of core-to-liner when minimal input force is applied. Results in lower backlash at all input force by reducing clearance and contact area between core and liner.



Newly designed Maxflex Control Cable represents the superior quality to the other manufacturer's control cable. Its corrosion resistant construction and high efficiency have literally set the industry standard. It is Pretech Company's continuous goal to manufacture the best cable in the industry.



Features

- Revolutionary design of grooved both liner and inner core to minimized friction.
- Unique core design to minimize lost motion.
- Durable UV resistant HDPE outer casing resistant to salt water, chemicals, petrol & oil and other environmental elements.
- All stainless steel end fittings.
- High efficiency with smooth operation.

MAXFLEX PINNACLE CABLE

maxflex

Pinnacle Engine Control Cable - Throttle & Shift

Part No.

Specification

639XX

KM Maxflex Pinnacle - Mercury®, Mercruiser®, Mariner® (except pre-1993 40HP and lower models)



610XX

OC Maxflex Pinnacle - Mariner® (pre-1993 low HP engine : 40 HP and below)



530XX

Gen II Maxflex Pinnacle - Mercury® Gen II Platinum cable for 4000/4500 Gen II remote controls



695XX

KB Maxflex Pinnacle - Mercury®, Mercruiser®, Mariner® (except pre-1993 40HP and lower models : 10-32 threaded)



395XX

MC Maxflex Pinnacle - OMC®/Johnson®/Evinrude® (1979-date)



419XX

VO Maxflex Pinnacle - Volvo® engines using OMC® controls : OMC® turbo jet (gate controls)



Pinnacle Control Cable

Part No.

Specification

630XX

3300S Maxflex Pinnacle - 3" travel 10-32 threaded



MAXFLEX CABLE



Engine Control Cable - Throttle & Shift

Part No.	Specification
637XX	KM Maxflex - Mercury®, Mercruiser®, Mariner® (except pre-1993 40HP and lower models)
310XX	OC Maxflex - Mariner® (pre-1993 low HP engine : 40 HP and below)
535XX	Gen II Maxflex - Mercury® Gen II Platinum cable for 4000/4500 Gen II remote controls
635XX	KB Maxflex - Mercury®, Mercruiser®, Mariner® (except pre-1993 40HP and lower models : 10-32 threaded)
305XX	MC Maxflex - OMC®/Johnson®/Evinrude® (1979-date)
307XX	ME Maxflex - OMC®/Johnson®/Evinrude® (1979)
410XX	VO Maxflex - Volvo® engines using OMC® controls : OMC® turbo jet (gate controls)

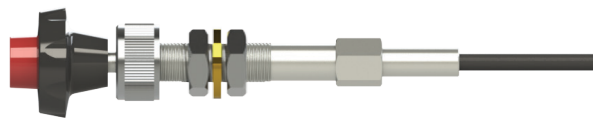
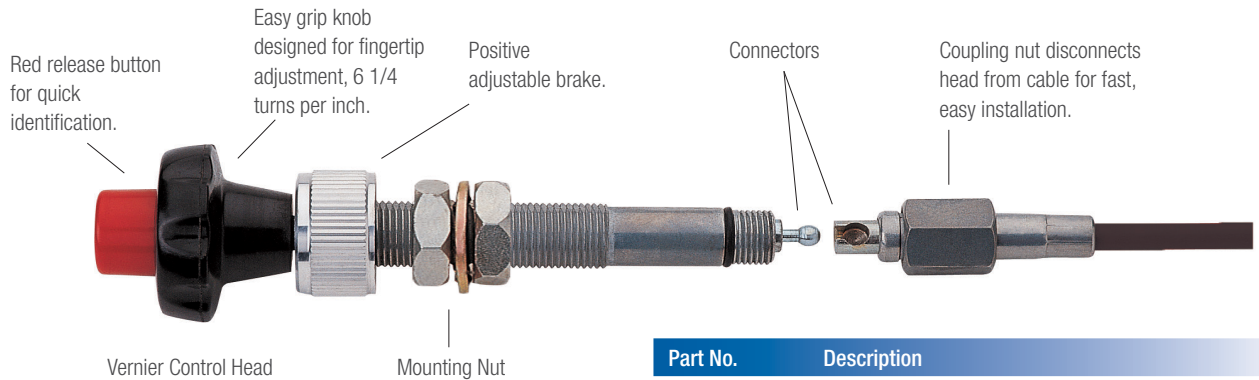
Control Cable

Part No.	Specification
330XX	3300C Maxflex - 3" travel 10-32 threaded
230XX	2300C Maxflex - 3" travel 10-32 threaded
460XX	4300BC Maxflex - 3" travel 1/4-28 threaded
650XX	4300C Maxflex - 3" travel 1/4-28 threaded
690XX	6400BC Maxflex - 4" travel 5/16-24 threaded
680XX	6400C Maxflex - 4" travel 5/16-24 threaded

UTILITY CABLE

Vernier Control Head And Cable

Vernier Control is ideal for remote manual operation of engine RPM setting (throttles), chokes, valves or application requiring coarse or fine adjustment.

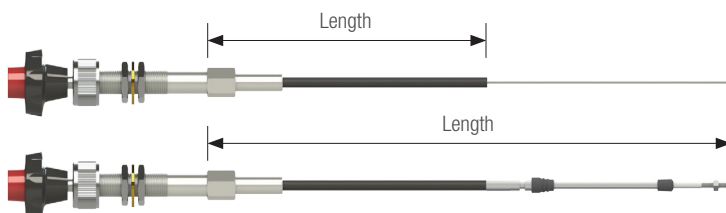


- Vernier head only : Part No. 377941
- Vernier head non-detachable : Part No. 377942

Part No.	Description
900XX	No end fitting
901XX	Clamp end fitting
902XX	Bulkhead fitting (7/16-20)
902XXR	Bulkhead fitting (M8)
903XX	3300C support tube and end rod
932XX	Bulkhead and 3300C support tube (7/16-20)

How To Measure

All utility cables are measured to the point where the core wire exits the cable conduit. Cables with rod-type end fittings are measured to the rod end.



T-Handle Utility Cable

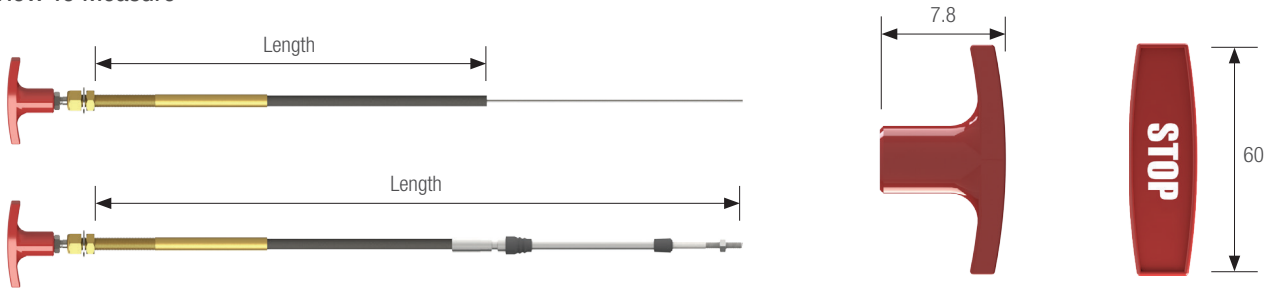
T-Handle Utility Cables are ideal for a variety of control needs such as chokes, switches, throttles, valves, latches, etc. with a light or "pull only" load.



• T-Handle only : Part No. 31780

Part No.	Description
318XX	No end fitting
315XX	Clamp end fitting
316XX	Bulkhead fitting (7/16-20)
316XXR	Bulkhead fitting (M8)
31533XX	3300C support tube and end rod
317XX	Bulkhead and 3300C support tube (7/16-20)

How To Measure



31780



377910RF



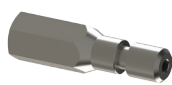
377910BP



331702



332758



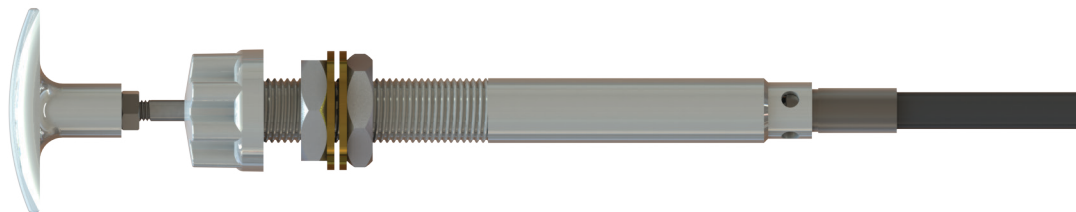
Part No.	Description
Utility Cable T-Handles	
31780	Red T-Handle, STOP
377910RF	Red T-Handle, Flame
377910BP	Black T-Handle, Petro Pump
Utility Cable Hardware	
331702	Bulkhead Adapter Kit
332758	Clamp Adapter Kit

UTILITY CABLE

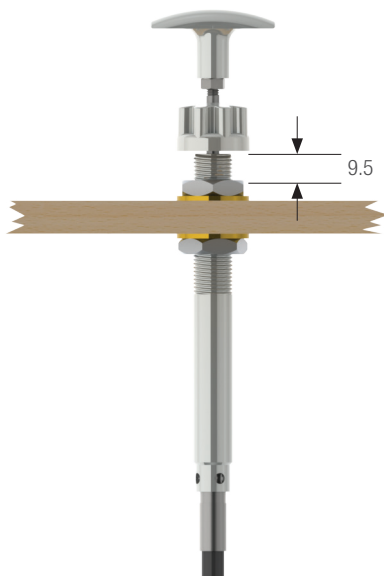


SD Control

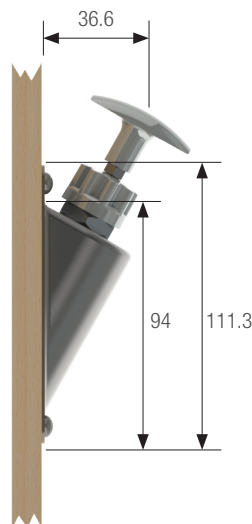
SD Control is ideal for throttle, choke, air or fuel shutdown. It also uses for governor or valve control using 3300C control cable.



31916



Flush Mount



Side Mount



31917

Part No.	Description
31916	SD Control compatible with 3300C and/or Pinnacle series cables
31917	Mounting Bracket (Stainless Steel)

CONTROL CABLE ADAPTER AND HARDWARE



Part No.	Description
Control Adapter Kits	
30107	Mercury® Control Adapter
30493	OMC® Control Adapter
Cable Adapter Kits	
30055	OMC® Sterndrive Cable Adapter
30172	Johnson®/Evinrude® Outboard Cable Adapter
30190	Mercury® Outboard Cable Adapter
30212	Mercruiser® Sterndrive Cable Adapter

30107



30493



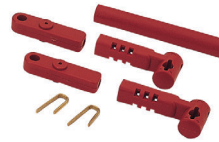
30055



30172



30190



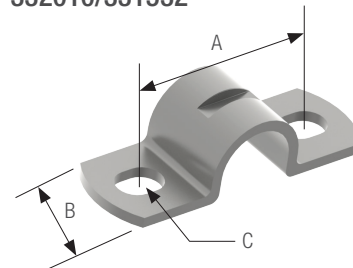
30212



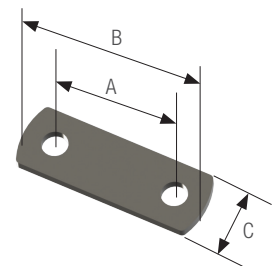
Clamp & Shim

Part No.	Description (mm)		
	A	B	C
332010	3000 Series Clamp (Stainless Steel)		
	25.5	12.9	5
331532	4000 Series Clamp (Stainless Steel)		
	25.5	12.9	5
331538	Shim (Stainless Steel)		
	25.5	38.4	13.1
331804	3000 Series Clamp & Shim Kit (Stainless Steel)		
332756	4000 Series Clamp & Shim Kit (Stainless Steel)		

332010/331532



331538



331804/332756

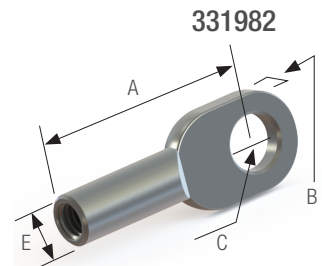
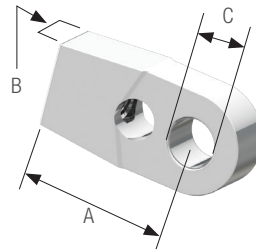


CONTROL CABLE ADAPTER AND HARDWARE

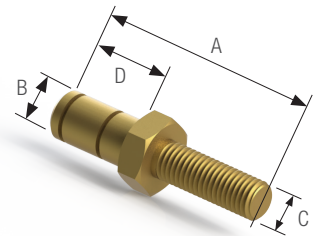
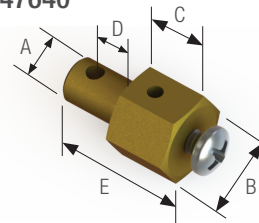
Terminal Eye & Stop Collar

Part No.	Description (mm)				
	A	B	C	D	E
331980	3000 Series Terminal Eye				
	25	7.9	7.9	-	-
331134	4000 Series Terminal Eye				
	25	7.9	7.9	-	-
331982	3000 Series Terminal Eye Stainless Steel				
	26.5	2.7	6.5	16.9	6.3
47640	Core Fitting				
	6.3	11.1	9.5	6.2	19.6
30965	Terminal Eye Pin Only				
	44	8.0	1/4-28	21	-
30966	Terminal Eye Pin Kit				
337963	Stop Collar				
	9.5	9.5	2.3	-	-

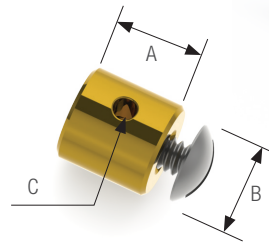
331980/331134



47640



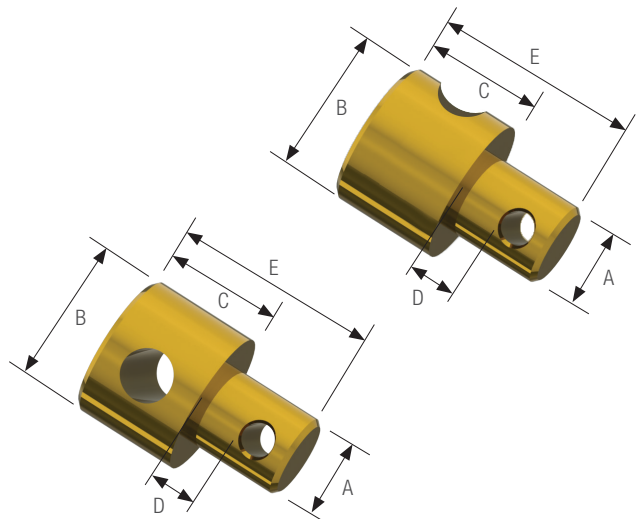
30965



337963

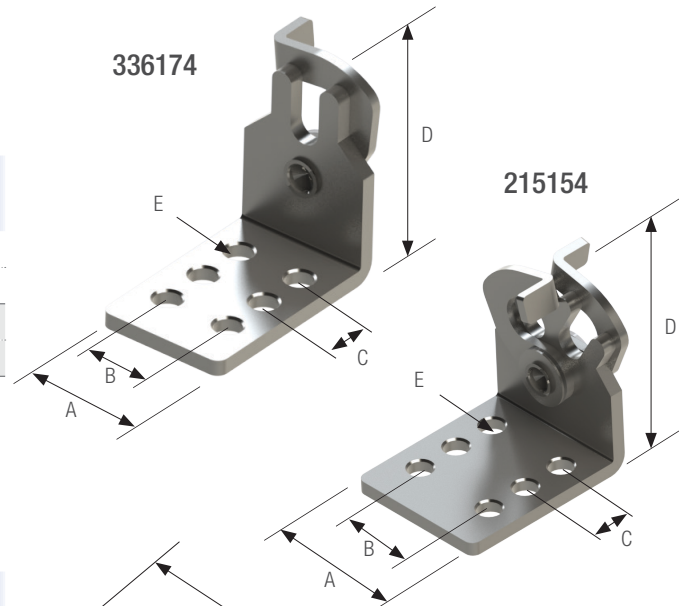
Pivot

Part No.	Description (mm)				
	A	B	C	D	E
308650	3000 Series (#10-32 Thread)				
	6.4	11.0	8.3	3.6	15.9
308790	3000 Series (#10-32 Thread)				
	7.9	11.0	9.5	4.0	17.6
302392	4000 Series (#10-32 Thread)				
	6.4	11.0	8.3	7.5	19.8
308729	4000 Series (1/4-28 Thread)				
	6.4	11.0	8.3	3.6	15.9
309790	4000 Series (1/4-28 Thread)				
	7.9	11.0	9.5	4.0	17.6



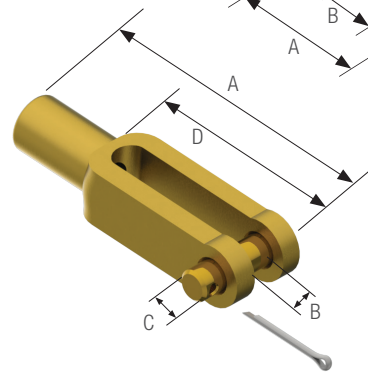
Hook Clip

Part No.	Description (mm)				
	A	B	C	D	E
336174	3000 Series Stainless Steel Hook Clip				
	25.2	12.7	9.5	38.0	5.1
215154	3000 Series Stainless Steel Double Hook Clip				
	32	19.0	9.5	38.0	5.1



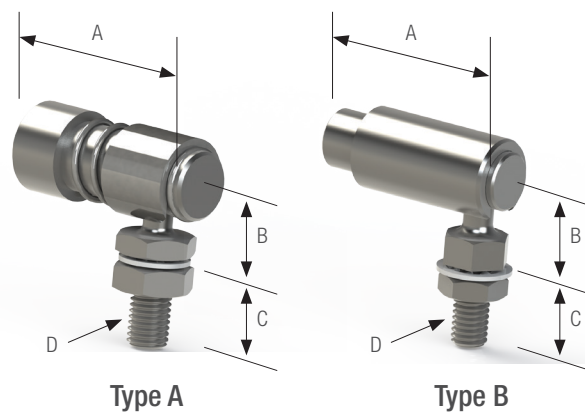
Clevis

Part No.	Description (mm)			
	A	B	C	D
331125	3000 Series clevis (10-32)			
	50.8	7.2	6.4	31.8
339025	4000 Series clevis (1/4-28)			
	50.8	7.2	6.4	31.8



Ball Joint

Part No.	Description (mm)				
	A	B	C	D	Type
31799	3000 Series S.S. Ball Joint (10-32)				
	23.0	11.9	11.1	10-32UNF	B
31126	3000 Series S.S. Ball Joint (10-32)				
	24.6	11.9	14.3	1/4-28UNF	A
29104	4000 Series S.S. Ball Joint (1/4-28)				
	24.6	11.9	14.3	1/4-28UNF	A
098444	S.S. Quick-Release Type Ball Joint (3/8-24)				
	53	25.4	31.8	3/8-24UNF	A
098444S	S.S. Quick-Release Type Ball Joint (1/2-20)				
	53	25.4	31.8	3/8-24UNF	A
100623	S.S. Quick-Release Type Ball Joint (3/8-24)				
	53	25.4	31.8	1/2-20UNF	A
100623S	S.S. Quick-Release Type Ball Joint (1/2-20)				
	53	25.4	31.8	1/2-20UNF	A



CONTROL CABLE ADAPTER AND HARDWARE



DST Control

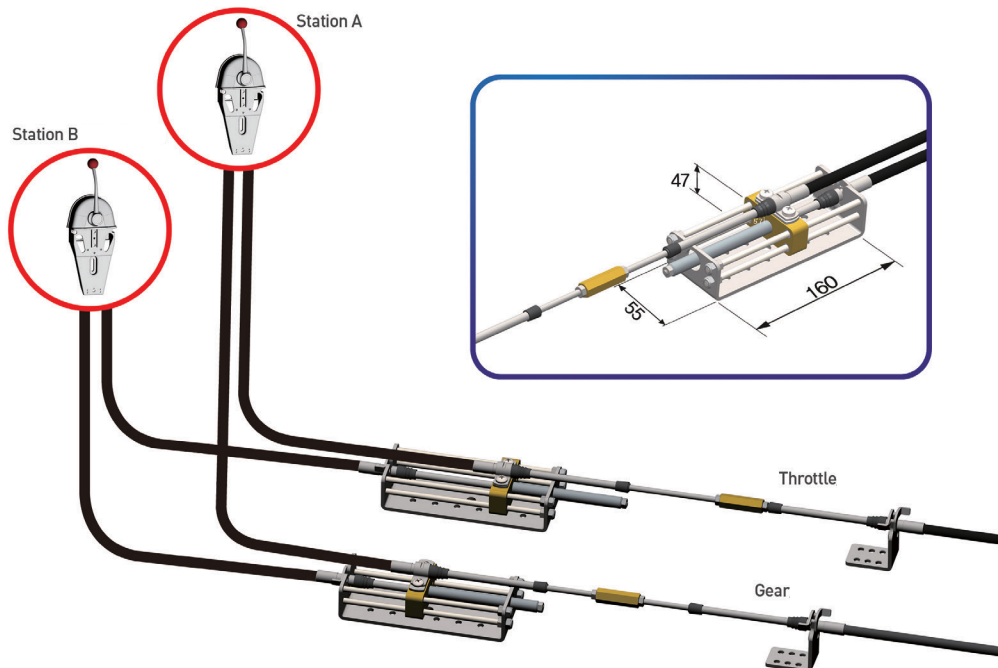
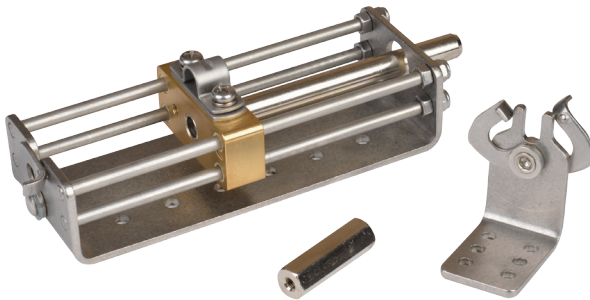
Part No.	Description
WQ41	DST Control (including Coupling Nut & Hook clip)
WQ412	Coupling Nut
WQ413	Hook Clip for DST Control

Features

DST Control can be used in a dual station boat.

- All components made from stainless steel and brass.
- Easy installation and maintenance.
- Use 3300C Maxflex Pinnacle cable for maximum efficiency.
- Suits all outboards*, inboards and sterndrives*.

* Some outboard engines require engine adapter kits to use with 33C type cable.



MEMO



A speedboat is shown on a lake, moving towards the right. The boat is white with a dark hull. A person is visible at the helm. In the foreground, a stainless steel steering wheel with two red spherical knobs is shown. The background consists of a dense forest of trees. The entire image has a blue color cast.

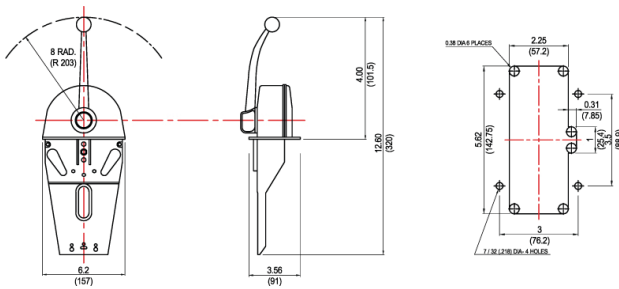
CONTROL

maxflex

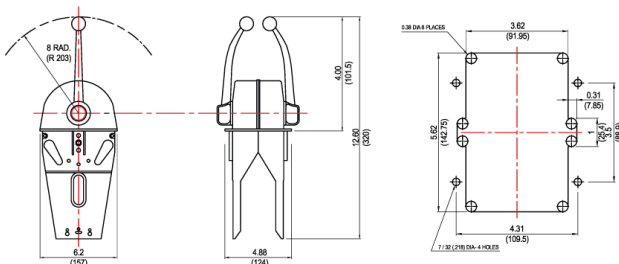
TS CONTROL



TS Single Control



TS Twin Control



TS Controls were developed to make it suitable for the latest engines and gearboxes in the market.

It operates both shift and throttle with one handle.

Function

- Single lever dual function

Features

- Easy instinctive action with crisp detents in FWD/NEU/REV
- Handle pulls out to operate neutral throttle.
- Can be mounted left or right handed.
- Optional neutral safety switch to ensure engine only starts when in neutral.
- Chrome housing gives quality look to your cabin.
- 3 Shift adjustment position.

Specification

- Suits all outboards, inboards and sterndrives.
- Suits hydraulic gearboxes (not mechanical).
- Not suitable for engines with heavy governor load.

Cables

- Uses 3300C Maxflex, Maxflex Pinnacle or 4300C Maxflex series cables.
- Fitting for these cables supplies as standard with the control.

! Note

4300 Maxflex series cable not to be used on TS Twin control as interference will occur because of internal space limitation.

Part No.	Description
308601	TS Single Engine Control
308602	TS Twin Engine Control
308603	TS Single Lever Throttle/Shift with Conversion Kit
308604	TS Dual Lever Throttle/Shift with Two Neutral Safety Switch
308113	Single Lever 3300C Cable Kit for TS Control
308114	Twin Lever 3300C Cable Kit for TS Control
378742	Heavy Duty Conversion Kit for TS Control (Single Only)

TC CONTROL

maxflex

TC Controls is a heavy-duty lever control with positive brake and shut off position for heavy throttles (governor).

The throttle lever, a red knob, can activate the brake by turning in a clockwise direction. The clutch lever, a black knob, has a detent function so that an operator can feel the position of neutral, forward and reverse.

Function

- Single designated function control.
- For throttle, clutch and hydraulic application

Features

- Available as throttle or clutch only, or clutch and throttle, or twin throttle, or twin clutch.
- The throttle brake is simply applied by twisting the lever once the desired setting has been established.
- Can be used for dual station where both stations move together. Care must be taken to avoid operating one station if the other one is firmly dampened down.
- Chrome plated handle shafts and housing.

Specification

- Suits all outboards, inboards and sterndrives.
- Suits hydraulic gearboxes (concrete mixer).

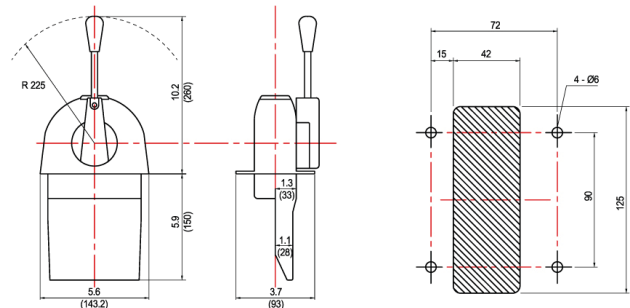
Cables

- Uses 3300C Maxflex, Maxflex Pinnacle or 4300C Maxflex series cables.
- Fitting for these cables supplies as standard with the control.

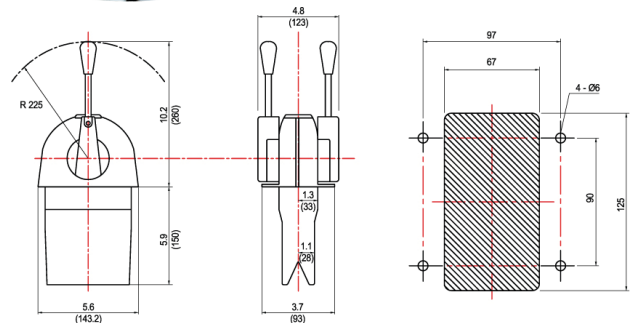
Part No.	Description
31001	TC Single Lever Throttle
31002	TC Single Lever Clutch
36468	TC Twin Lever Throttle & Clutch
36469	TC Twin Lever Throttle & Throttle
36470	TC Twin Lever Clutch & Clutch
308210	Single Lever 3300C Cable Kit for TC Control
308213	Twin Lever 3300C Cable Kit for TC Control



TC Single Control



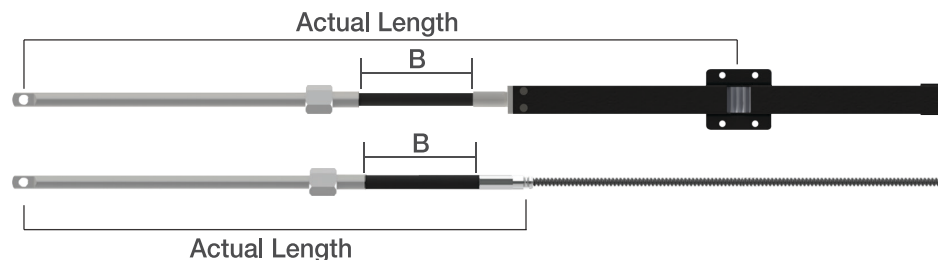
TC Twin Control



HOW TO MEASURE CABLE



Steering Cable Measurement



"B" Measurement = _____
 Add 30" = 30"
 Total = =====
 Divide Total by 12 = _____ . ____
Round up to next whole foot measurement which is _____ feet

Order this length of cable

"B" Measurement = 152"
 Add 30" = 30"
 Total = 182"
 Divide Total by 12 = 15.2
Round up to next whole foot measurement which is 16 feet

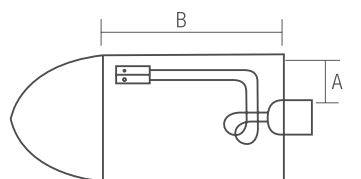
EXAMPLE

When replacing your existing cable, you can usually find a part number and/or length stamped on the outer jacket. If it is not legible, it will be necessary to make careful examination of your system to determine what type of cable you need and then to actually measure the length required for proper cable replacement of selection and installation.

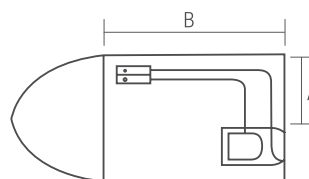
Follow the above quick method for measuring all steering cables to determine the correct length you will need. Simply measure the length of the "B" requirement as indicated below. Then add 30 inches. Divided the total by 12. Your answer will probably be xx.x. Whatever the number before the decimal is the whole foot conversion. Take the number and round up to the next whole foot measurement. This work for either rack (shown above) or rotary steering cable.

Steering Cable Measurement

If you are installing a cable in a new installation, plan the cable routing carefully. Always make it the shortest route with the least bends, from the control to the device you are controlling (i.e. throttle, transmission). After you have determined the route of your cable, simply measure the complete distance from control to the device, then round up to the nearest whole foot measurement.



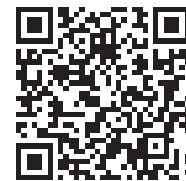
OUTBOARD
 Typical Outboard Cable Routing : A+B+3'=L



INBOARD / STERN DRIVE
 Typical Stern Drive / Inboard Control Cable Routing : A+B+ Round up to next even foot



E-BOOK



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