

# HYDRODRIVE®

## Hydraulic Steering Systems

- *Outboard Hydraulic Steering Systems*
- *Inboard Hydraulic Steering Systems*
- *Stern-Drive Systems*





## OUR TECHNOLOGY

Techno Italia is manufacturer of hydraulic steering systems branded **Hydrodrive®**. Our range has outboard applications up to 400Hp and Inboard/Stern-Drive applications for boats up to 16 m (52'). We have also hydraulic steering systems for **racing boats, sail boats and catamarans**. We do also manufacture **hydraulic stick steering** systems and we are able to manufacture special steering system upon client requirement.

Good things come in threes. And we are motivated by our **THREES** philosophy which makes Hydrodrive Hydraulic Steering Systems different from other competitors.

- **T** as technology

Hydrodrive HSS are manufactured using technology from the **aviation industry**. The pump house comes from a single aluminum block, hardened and hot-pressed. The 10 mm thickness and the special material prevent leakage or oil film/fog formation even under extremely high working pressure. The 3 ball bearings in the pump ensure the outstanding precision and exceptionally smooth, consistent functioning. Each pump house is anodized and due to the surface treatment is resistant to the highly corrosive effects of sea.

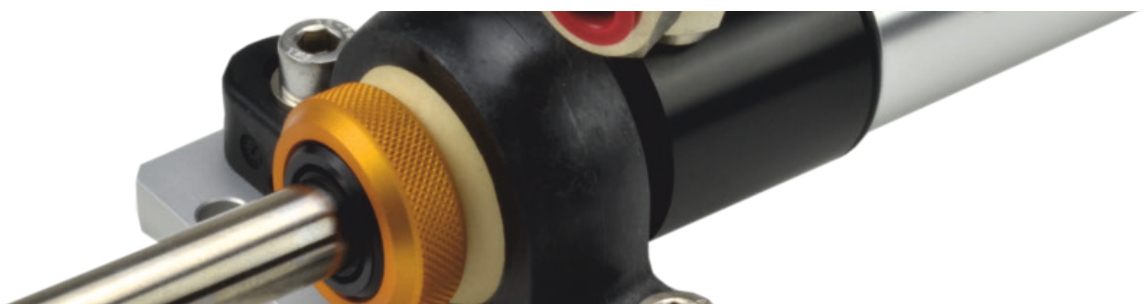
The cylinders are also made of cold drawn, hardened aluminum. The thick-walled cylinder is made of a special raw material with even higher tensile strength than the traditional bronze therefore tolerates high working pressure. As the pump house, also all the cylinders and parts are anodized and are resistant to the salt corrosion.


- **H** as history

The Gobbo family has more than 50 years of experience in the hydraulic systems. Specialized in the manufacturing of hydraulic system for the aircraft industry, the company in the past has supplied players as Fiat-Avio, Agusta and Rolls Royce. That sense of purpose and mission has been always part of the Gobbo family's culture. The years of passionate work are now the heritage for the future challenges: we look for new opportunities in technology while retaining the key traditional elements.

- **R** as reliability

There is no reliability without quality, and **quality is our benchmark**. We like to emphasize we are so sure about our quality, and we are so confident with it that we give **3 years of warranty**. Our data show the percentage of our Hydrodrive HSS replaced within the first 3 years is less than 0.1% and within the first 5 years is less than 0.3%. The **durability average** of our system **is more than 8 years without maintenance**.



- **EE** as environmentally engineered **PLASTIC FREE** 

TechnoItalia has a simple but clear purpose: to make sustainable products, generating the gratitude of the other. All the **Hydrodrive® HSS** are designed to have the less impact on environment. Have you ever wondered how many liters of oil are used filling any hydraulic steering system? And how many times do they have to be refill during their lifetime? The figure will shock you. Can you imagine what it would be like if we all could give the best of ourselves? We are convinced that if we can imagine it, then it can be done! For this **Hydrodrive® HSS** is the only steering system that after the first filling **doesn't require any refill for the entire life**. All of our helms and main parts of our HSS are plastic free and totally recyclable. Considering our average of durability, we give a concrete help to our planet. We think this should be the best long-term way for the business to grow.

- **S** as simplicity

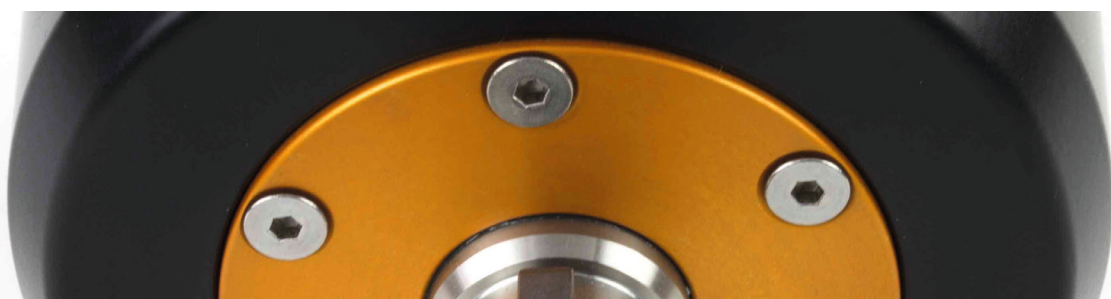
Simplicity is our mantra. More simple and easy a product is more efficient will be. All the steering kits come all in one: pump house, cylinder, oil, hose set by made on twin hydraulic high-pressure tube, already with fittings. You don't have to do anything else than just install the pump and the cylinder, fixing the hose set and fill the system; all systems are with fast-fit connection and compatible with the main applications on market.

Saving time in the installing means save money, and we like make the end user's life as easy as possible.

**Hydrodrive® HSS** stands for high level quality, and we are proud to produce one of the up-to-date hydraulic steering system. We like to emphasize that we do what we say.



Made in EU  
ISO 10592



## OUR MODELS:

Hydraulic Outboard Systems	Max power	Anti-Feedback/ Autopilot port.
MF75W	75 HP	-
MF90W	90 HP	-
MF115 MRA	120 HP	Yes
MF175W	175 HP	Yes
MF350W plus	350 HP	Yes
MF350W SP RACING	350 HP	Yes
MF255WTS-TDF	250+250 HP	Yes
MF350W-TDF	300+300 HP	Yes
MF175 WTS (Slide cylinder)	175 HP	Yes
MF255-WTS (Slide cylinder)	250 HP	Yes
MF400-WTS (Slider cylinder)	400 HP	Yes

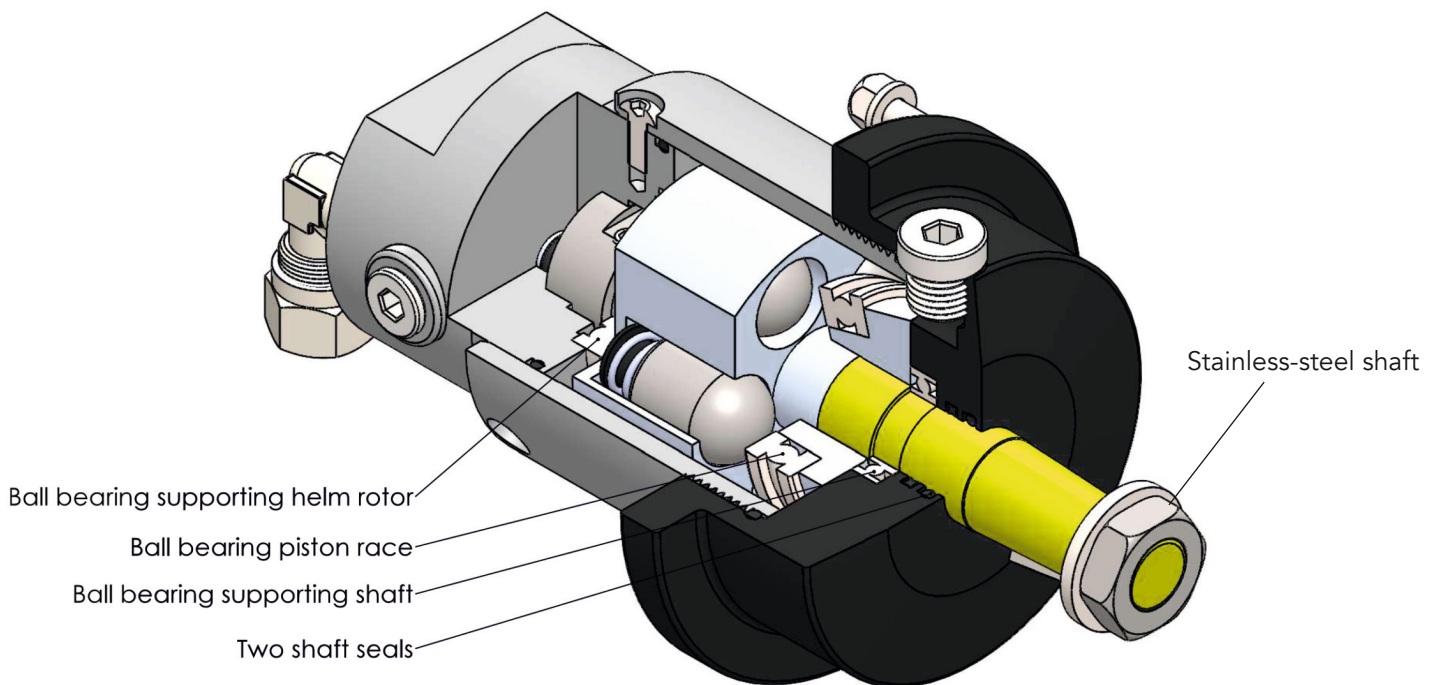
Hydraulic Inboard Systems	Max boat length	Anti-Feedback/ Autopilot port.
MU50TF	10 m. (33 ft.)	-
MU50TF-MRA	10 m. (33 ft.)	Yes
MU75TF	12 m. (40 ft.)	-
MU75TF-MRA	12 m. (40 ft.)	Yes
MU100TF	16 m. (52 ft.)	-
MU100TF-MRA	16 m. (52 ft.)	Yes
● Stern-Drive Systems		
MSD70TF	12 m. (40 ft.)	-
MSD70TF-MRA	12 m. (40 ft.)	Yes



Hydrodrive®

# Outboard Systems

COMFORT LINE



TL1-16 MRA Hydraulic Pump

Applications for all type of engines up to 175 HP



# MF75W

## Steering System kit up to 75Hp



New technology of Hydraulic Steering System, for small engines up to 75Hp

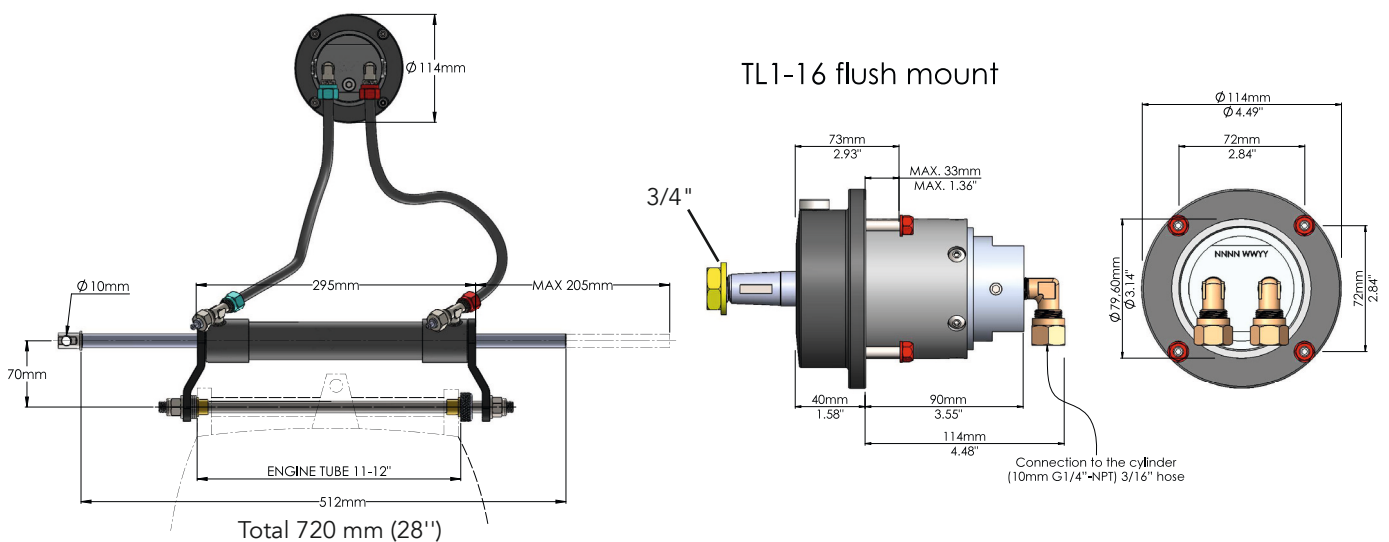
Output Force: 220 kgf. (485 lbf)  
 Torque: 46 Kgm. (333 lbf-ft)  
 Max Speed: 30 kts.  
 Turns: 4,4

- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install

Kit contains:

TL1-16 Hydraulic Pump	16cc./rev	Max 60 bar	with Fittings installed	-
MC75W Hydraulic Cylinder	68 cc.vol	Max 60 bar	with Fittings installed	Stroke 202 mm
High pressure hose set	5/16 twin	B.P. 380 bar	with Fittings installed	Twin 4+4 m (13')
HROL - Hydraulic Oil	1 L bottle	E-HVLP 46	Temp: +60/-30	-

Engine Arm not included (optional if request)





# MF90W

## Steering System kit up to 90Hp



New technology of Hydraulic Steering System, for engines up to 90Hp

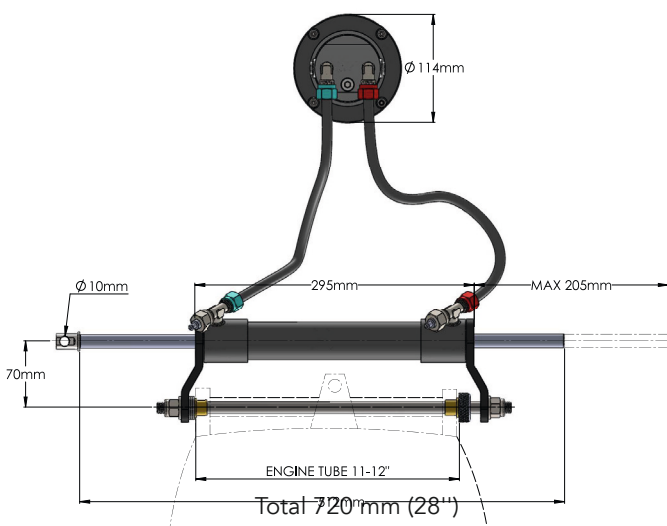
Output Force: 236 kgf. (520 lbf)  
 Torque: 50 Kgm. (362 lbf-ft)  
 Max Speed: 35 kts.  
 Turns: 4,5

- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install

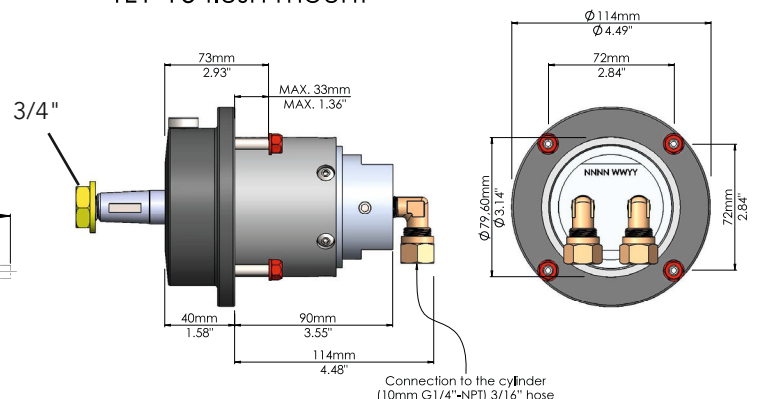
### Kit contains:

TL1-16 Hydraulic Pump	16cc./rev	Max 70 bar	with Fittings installed	-
MC90W Hydraulic Cylinder	71 cc.vol	Max 70 bar	with Fittings installed	Stroke 210 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 4,5+4.5 m (15')
HROL - Hydraulic Oil	1 L bottle	E-HVLP 46	Temp: +60/-30	-

Engine Arm not included (optional if request)



### TL1-16 flush mount





# MF115 MRA

Steering System kit up to 120Hp



New technology of Hydraulic Steering System, for engines up to 120Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

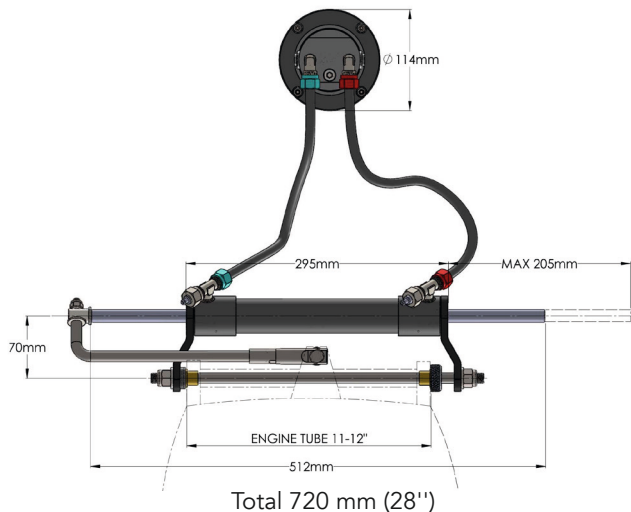
Output Force: 236 kgf. (520 lbf)  
Torque: 50 Kgm. (362 lbf-ft)  
Max Speed: 50 kts.  
Turns: 4,5

- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install

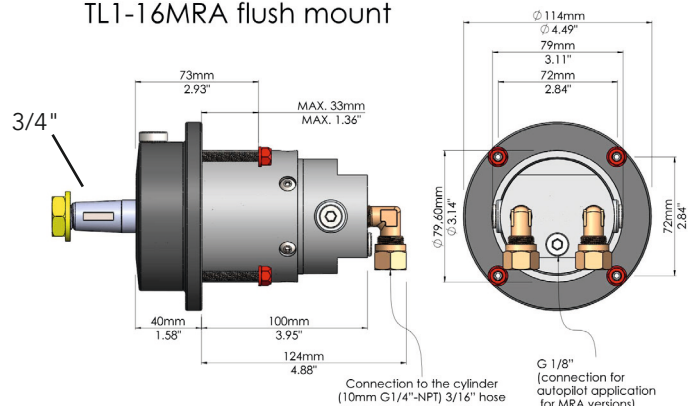
Kit contains:

TL1-16 MRA Hydraulic Pump	16cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC115W Hydraulic Cylinder	71 cc.vol	Max 80 bar	with Fittings installed	Stroke 210 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 5+5 m (16')
HROL - Hydraulic Oil	1 L bottle	E-HVLP 46	Temp: +60/-30	-

Engine Arm with fork included - Universal application - Adjustable



TL1-16MRA flush mount







# MF175W

System kit up to 175Hp

Cylinder with two position engine plate



New technology of Hydraulic Steering System, for engines up to 175Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

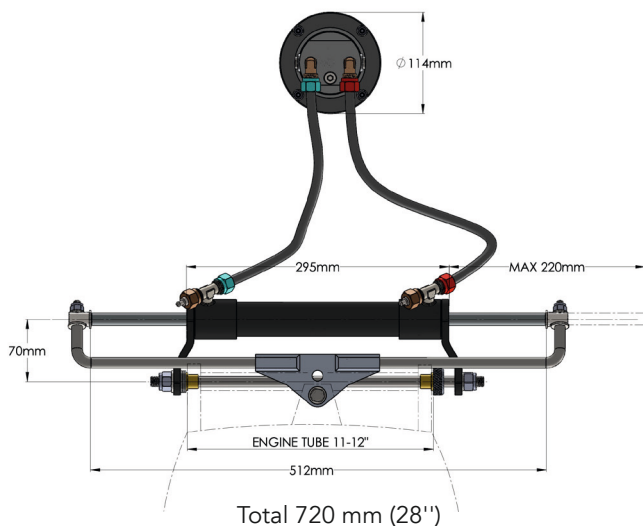
Output Force: 290 kgf. (640 lbf)  
Torque: 60 Kgm. (434 lbf-ft)  
Max Speed: 55 kts.  
Turns: 5,4

- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install

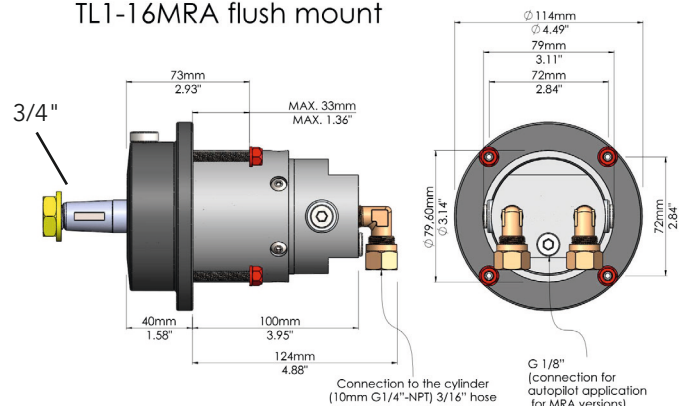
Kit contains:

TL1-16 MRA Hydraulic Pump	16cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC175W Hydraulic Cylinder	86 cc.vol	Max 80 bar	with Fittings installed	Stroke 208 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 6+6 m (20')
HROL - Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-

New Stainless Steel Engine Arm included - with Two Positions Engine Plate



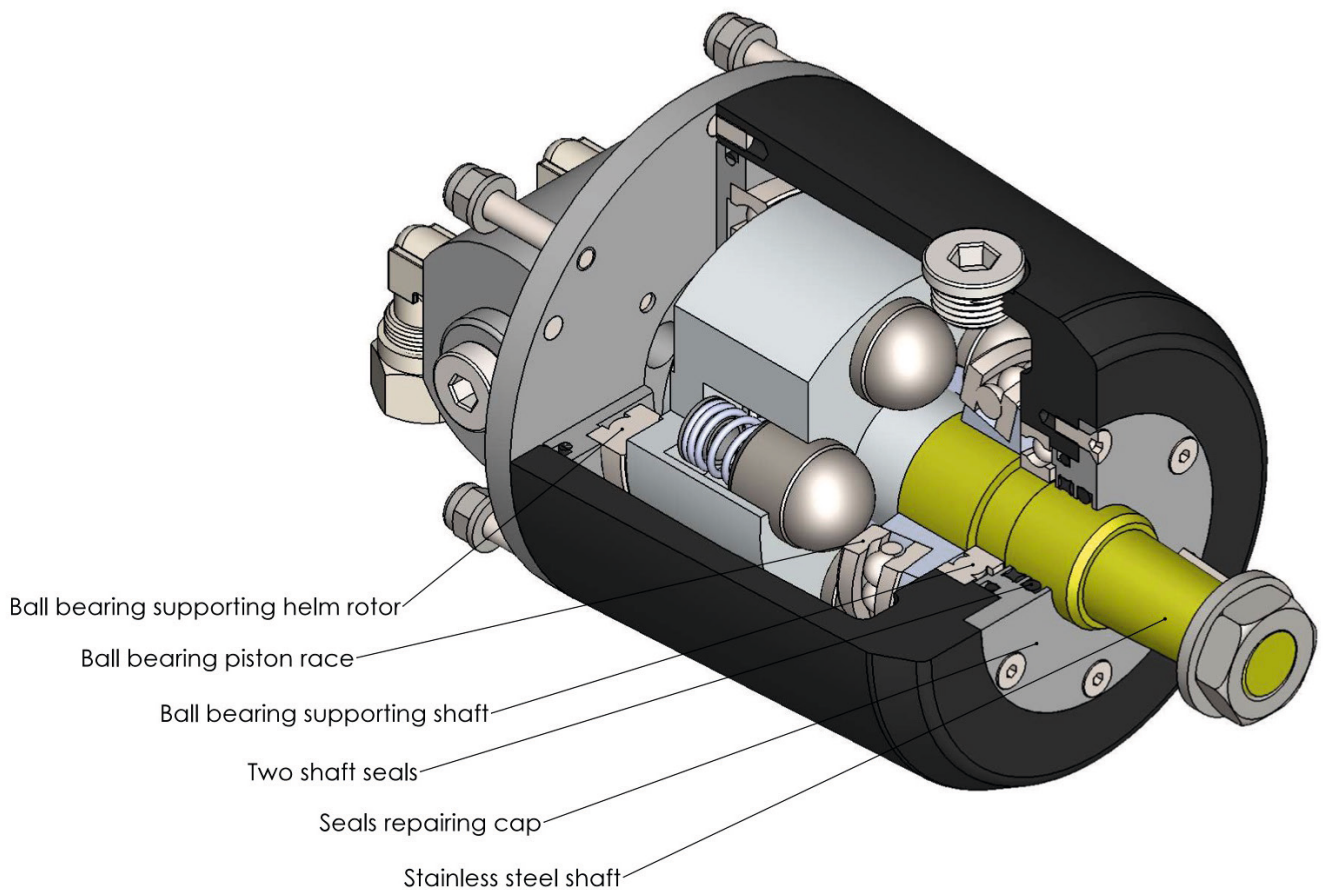
TL1-16MRA flush mount



Hydrodrive®

# Outboard Systems

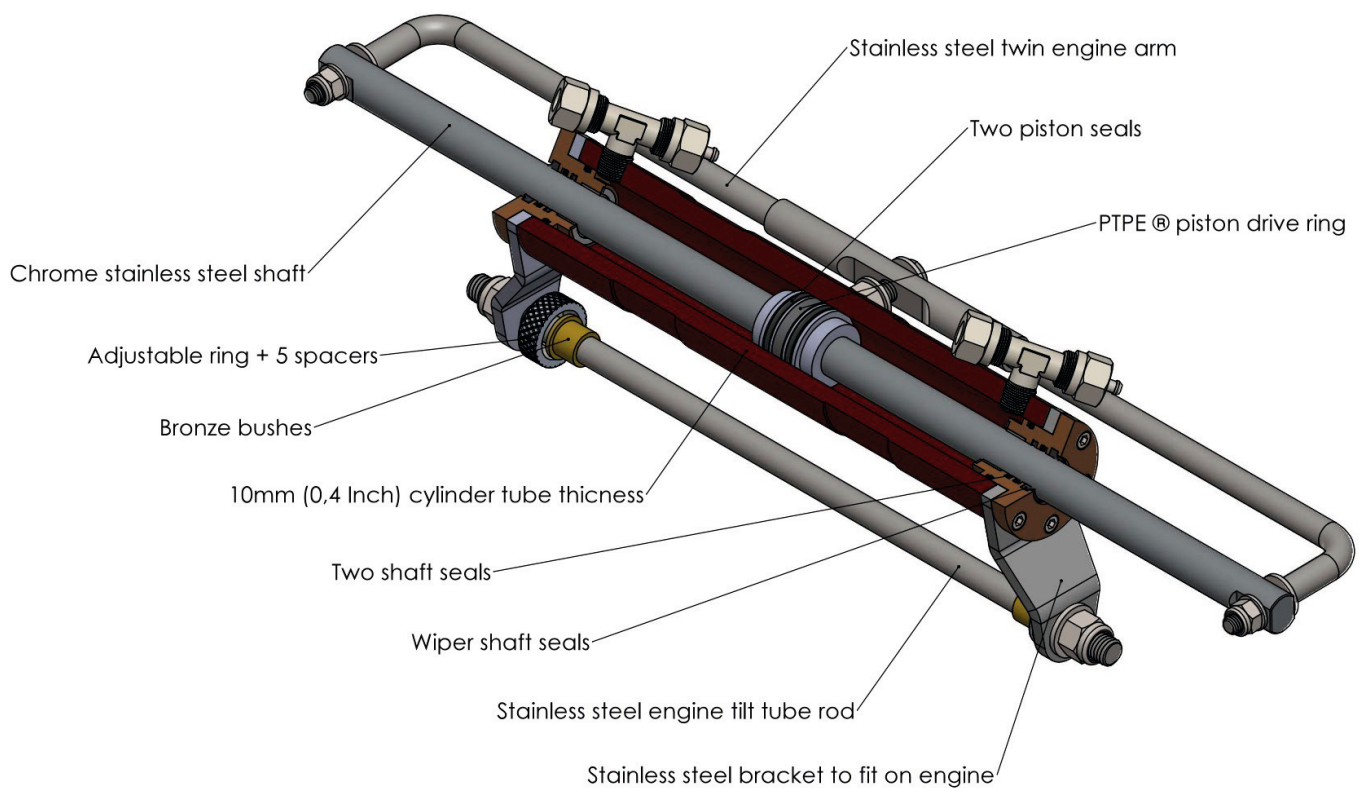
**PERFORMANCE LINE**



TL2-30 MRA Pump

Applications for all type of engines up to 400 HP

## Hydrodrive® Hydraulic Steering System is supplier of the Hungarian Powerboat Federation



MC350W Cylinder

*Hydrodrive® Hydraulic Steering System has equipped Soffio, racing boat  
Endurance Group B Class S1. Soffio is the winner of the stage Salerno-Formia  
of the race Venice-Montecarlo.*

*Arrived second at the European Championship Endurance in Chioggia.  
Arrived second at the World Championship Endurance in Forio.*



# MF175 WTS

Steering System kit up to 175Hp with slider cylinder

Steering system, compact horns mount for engines up to 175Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 290 kgf. (640 lbf)  
Torque: 60 Kgm. (434 lbf-ft)  
Max Speed: 55 kts.  
Turns: 5,4

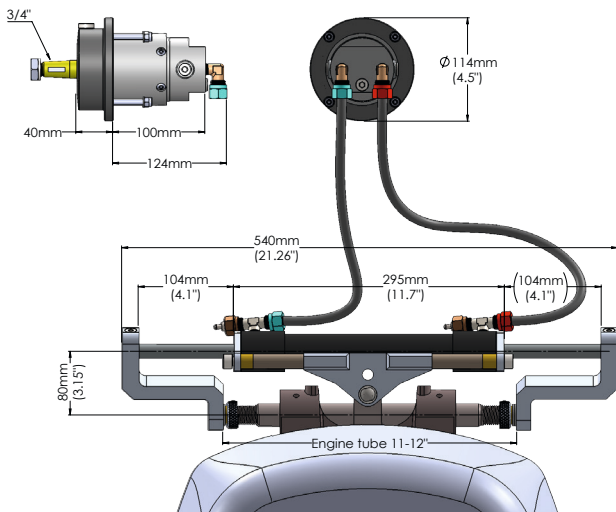


- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install
- New Cutting-Edge Technology fixing system

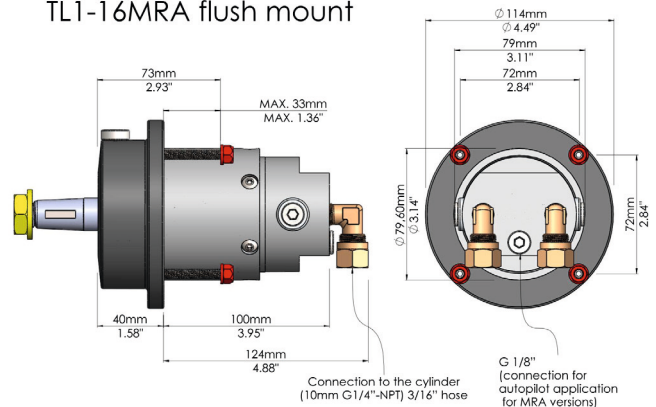
Kit contains:

TL1-16 MRA Hydraulic Pump	16 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC175WTS Hydraulic Cylinder	86 cc.vol	Max 80 bar	with Fittings installed	Stroke 208 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 6+6 m (20')
HROL - Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-

New easy mounting system - Cylinder with two position engine plate



TL1-16MRA flush mount





# MF255 WTS

Steering System kit up to 250Hp with slider cylinder

Steering system, compact horns mount for engines up to 250Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 422 kgf. (930 lbf)  
Torque: 88 Kgm. (637 lbf-ft)  
Max Speed: 55 kts.  
Turns: 4,5

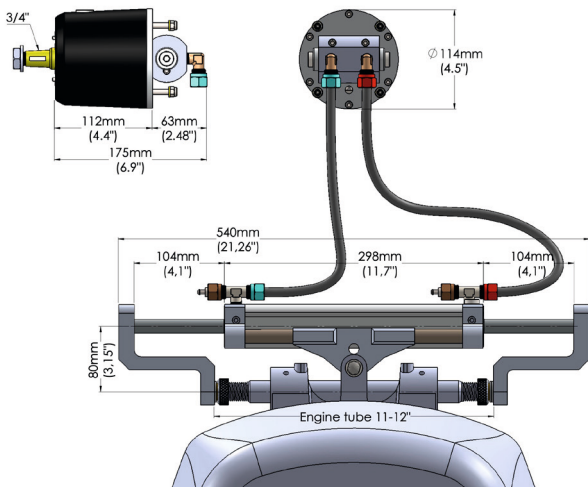


- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Application for all type of engines
- Extremely easy to Install
- New Cutting-Edge Technology fixing system

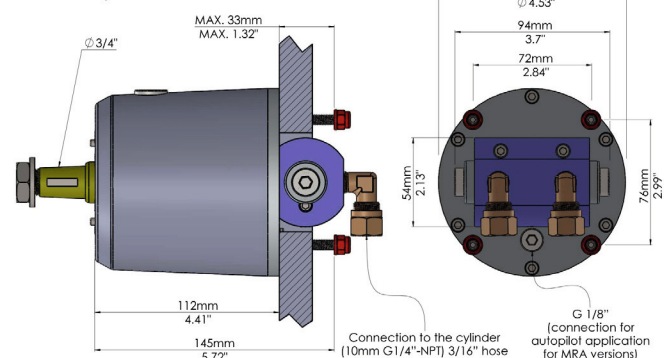
Kit contains:

TL2-30 MRA Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC255WTS Hydraulic Cylinder	125 cc.vol	Max 100 bar	with Fittings installed	Stroke 206 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 6+6 m (20')
HROL - Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-

New easy mounting system - Cylinder with two position engine plate



TL2-30F/TL2-30MRA front mount





# MF400 WTS

Steering System kit up to 400Hp with slider cylinder

Steering system, compact horns mount for engines up to 400Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 700 kgf. (1543 lbf)  
Torque: 146 Kgm. (1056 lbf-ft)  
Max Speed: 60 kts.  
Turns: 5,3

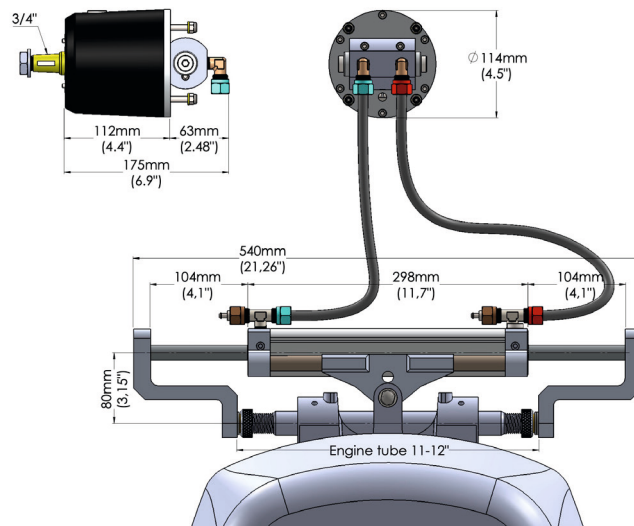


- **High Precision Pump with Purge Valve fittings**
- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Universal application for all type of engines
- Extremely easy to Install

Kit contains:

TL2-40SP MRA Hydraulic Pump	38 cc./rev	Max 100 bar	with Fittings installed	Lock-Valve
MC400WTS Hydraulic Cylinder	208 cc.vol	Max 100 bar	with Fittings installed	Stroke 208 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 7+7 m (23')
HROL - Hydraulic Oil	3x1 L bottle	E-HVLP 46	Temp: +60/-30	-

New easy mounting system - Cylinder with two position engine plate





# MF350W plus / MF350W-SP

Steering Steering System kit up to 350Hp

New technology of Outboard Hydraulic Steering System, for engines up to 350Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

**MF350W Specification:**

- Output Force: 495 kgf. (1090 lbf)
- Torque: 102 Kgm. (738 lbf-ft)
- Max Speed: 60 kts.
- Turns: 5,2

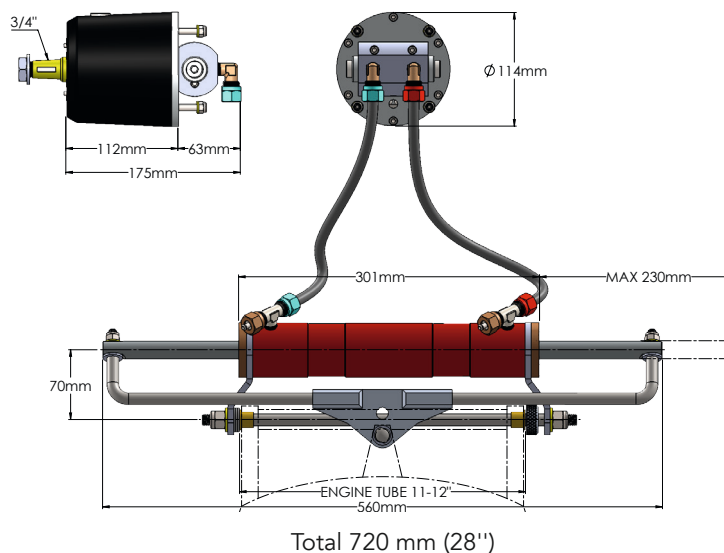
**MF350W-SP Specification (Racing):**

- Output Force: 495 kgf. (1090 lbf)
- Torque: 102 Kgm. (738 lb-ft)
- Max Speed: 75 kts.
- Turns: 3,8
- **High Precision Pump with Purge Valve fittings**
- New Stainless Steel Engine Arm included with Two Positions Engine Plate



Kit contains:

TL2-30 MRA Hydraulic Pump- for MF350W plus	28 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
TL240SP-MRA Hydraulic pump for MF350W-SP	38 cc./rev	Max 100 bar	with Fittings installed	Lock-Valve (for racing)
MC350-W Hydraulic Cylinder	146 cc.vol	Max 100 bar	with Fittings installed	Stroke 206 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 7+7 m (23')
Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-





# MF350W-TDF

Steering System kit, for double engines twin cylinder  
(max 300Hp + 300Hp)

New technology of Outboard Hydraulic Steering System, for engines up to 300Hp + 300Hp

**with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 2x495 kgf. (2x1090 lbf)  
Torque: 2x102 Kgm. (2x738 lbf-ft)  
Max Speed: 75 kts.  
Turns: 7,2

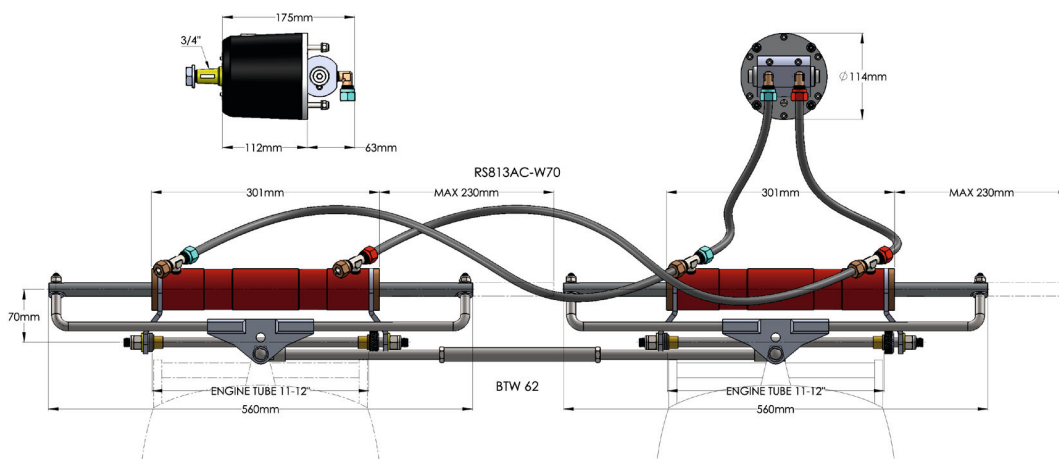


- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- Application for all type of engines
- Extremely easy to Install
- High pressure hose set (1700 PSI-120 bar)
- High precision pump with Purge Valve Fittings

*Kit contains:*

TL2-40SP MRA Hydraulic Pump	38 cc./rev	Max 100 bar	with Fittings installed	Lock-Valve
2xMC350W Hydraulic Cylinder	146 cc.vol	Max 100 bar	with Fittings installed	Stroke 206 mm
BTW 62 Adjustable Tie bar	540-620 mm	(Option BTW 70 Adjustable Tie bar 620-700 mm)		
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 7+7 m (23')
Hose set	5/16 twin	B.P. 480 bar	with fittings installed	Twin 0,75 + 0,75m (2,5')
Hydraulic Oil	3x1 L bottle	E-HVLP 46	temp: +60/-30	

New Stainless Steel Engine Arm included - with Two Positions Engine Plate

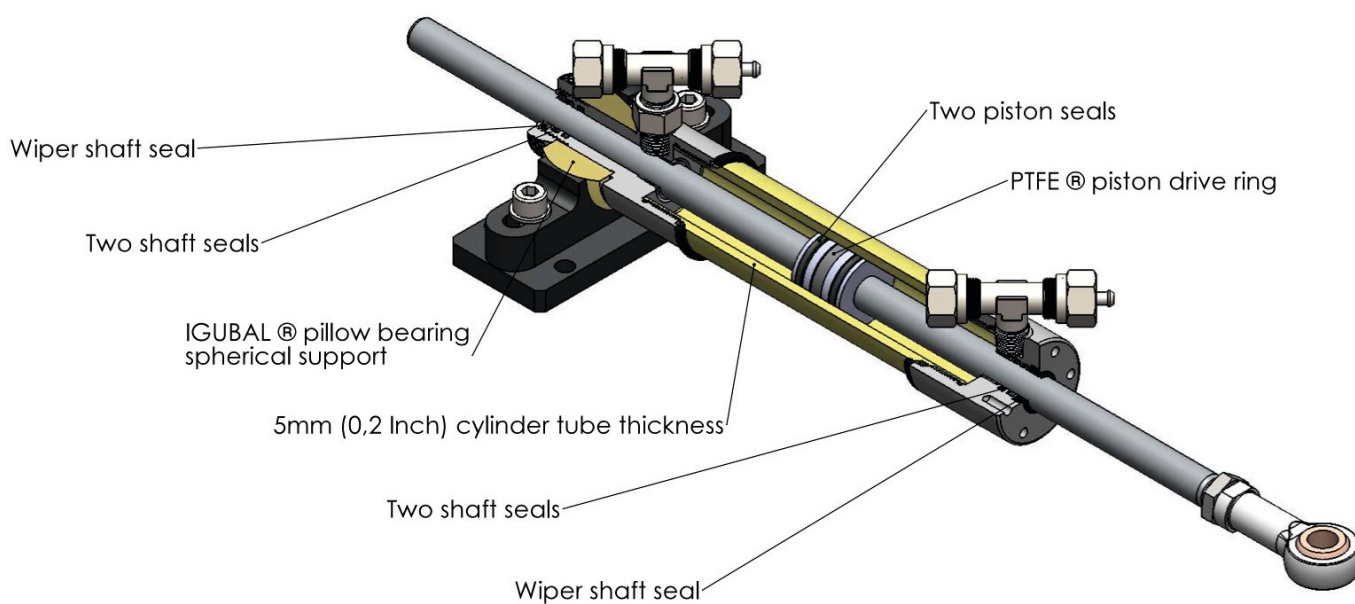




Hydrodrive®

# Inboard Systems

Complete range for boats up to 16 m (52 ft)



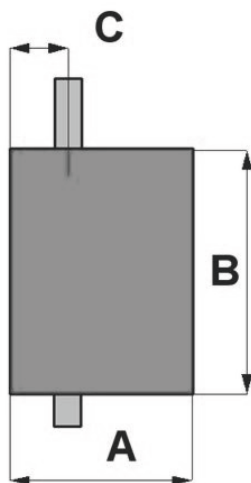
## Calculation of the rudder torque M (kg./m)

$$M = F \times D$$

(Kg./Mt.)

$$D = (0,4 \times A) - C$$

$$F = 2,3 \times S \times V^2$$



B= rudder height  
A= rudder length  
C= rudder compensation

V= speed (km/h)  
S= rudder surface

(1 knot=1,852 km/h)  
(AxB in m)



# MU50TF / MU50TF-MRA

Steering System kit for boats up to 10 m (33Ft)



New technology of Inboard Hydraulic Steering System, for boats up to 10 m (33Ft)

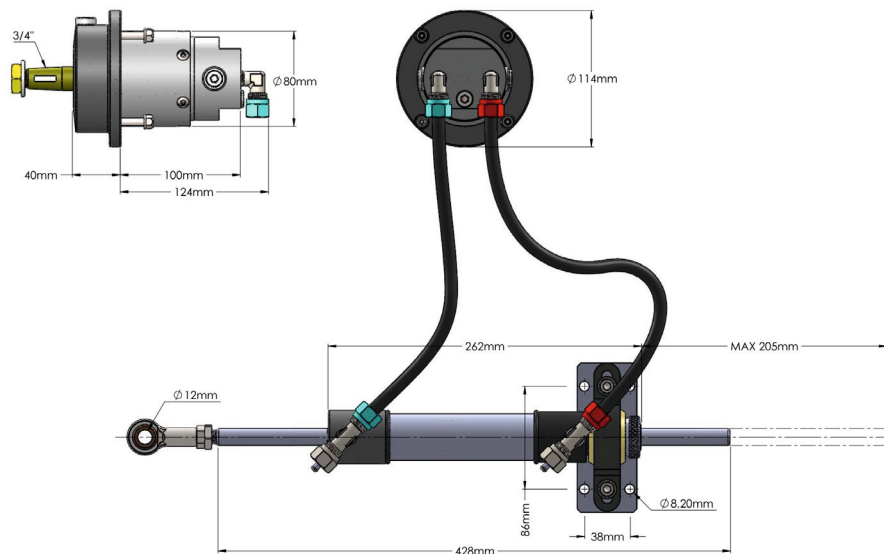
**MRA version is:  
with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 387 kgf. (853 lbf)  
Torque: 58 Kgm. (420 lbf-ft)  
Max Speed: 35 kts.  
Turns: 5

- Auto lubricating IGUBAL® Spherical bearing support
- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High pressure hose set (1700 PSI-120 bar)
- Universal application
- Extremely easy to Install

*Kit contains:*

TL1-16 Hydraulic Pump	16 cc./rev	Max 70 bar	with Fittings installed	-
TL1-16 MRA Hydraulic Pump	16 cc.vol	Max 70 bar	with Fittings installed	Lock-Valve
MC50 Hydraulic Cylinder	83 cc vol.	Max 70 bar	with Fittings installed	Stroke 150 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 5+5 m (16')
Hydraulic Oil	1 L bottle	E-HVLP 46	temp: +60/-30	-





# MU75TF / MU75TF-MRA

Steering System kit for boats up to 12 m (40Ft)

New technology of Inboard Hydraulic Steering System, for boats up to 12 m (40Ft). Universal application,

**MRA version is:  
with Anti-Feedback Valve  
Automatic Pilot Connection Port**

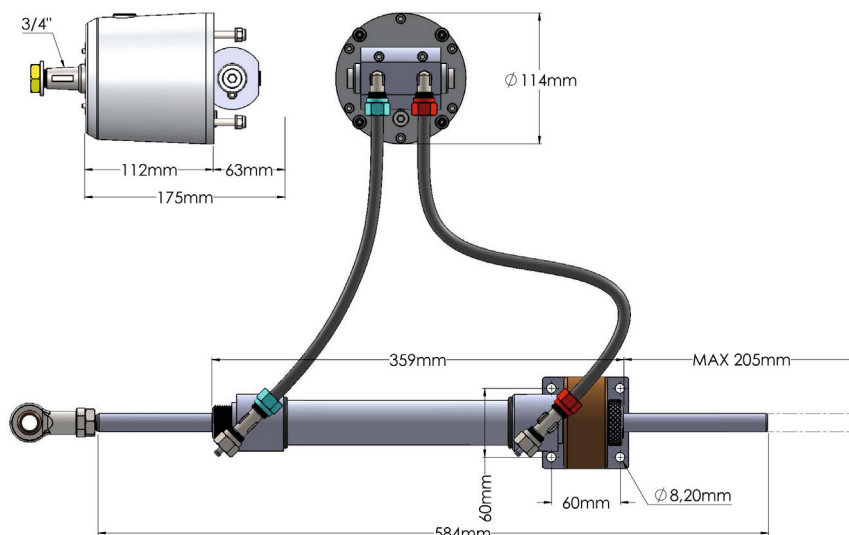
Output Force: 354 kgf. (780 lbf)  
Torque: 80 Kg.m. (579 lbf-ft)  
Max Speed: 45 kts.  
Turns: 4

- Auto lubricating IGUBAL® Spherical bearing support
- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Extremely easy to install



Kit contains:

TL2-30 Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	-
TL2-30 MRA Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC75 Hydraulic Cylinder	114 cc.vol	Max 80 bar	with fittings installed	Stroke 225 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 7+7 m (23')
Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-





# MU100TF / MU100TF-MRA

Steering System kit for Sailing boats up to 16 m (52Ft)



Special Hydraulic Steering System for Sailing boats up to 16 m (52Ft). High precision, not back-lash on wheel.

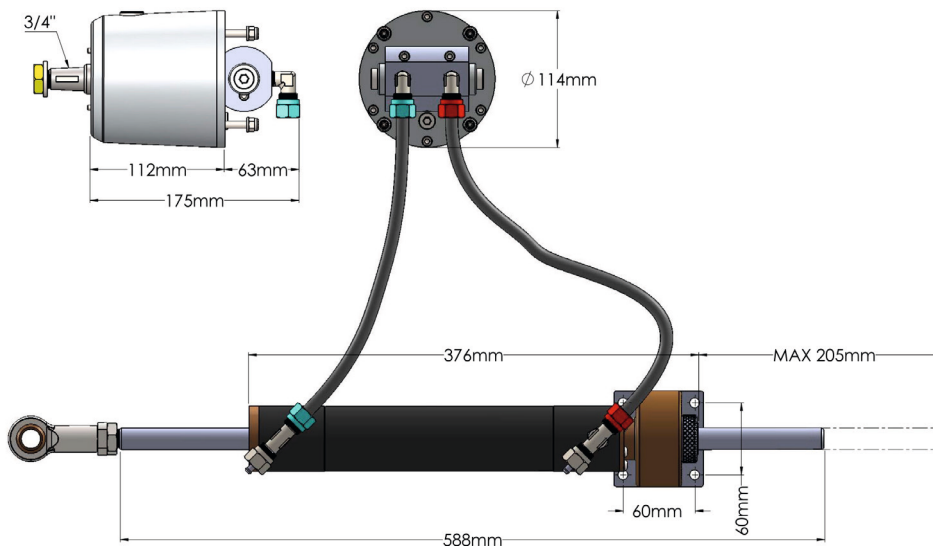
**MRA version is:  
with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 495 kgf. (1091lbf)  
Torque: 112 Kgm. (810 lbf-ft)  
Max Speed: 45 kts.  
Turns: 5,7

- Auto lubricating IGUBAL® Spherical bearing support
- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)

Kit contains:

TL2-30 Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	-
TL2-30 MRA Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC1000 Hydraulic Cylinder	160 cc.vol	Max 100 bar	with fittings installed	Stroke 225 mm
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 8+8 m (26')
Hydraulic Oil	3x1 L bottle	E-HVLP 46	Temp: +60/-30	-





# MSD70TF / MSD70TF-MRA

Steering System kit for boats up to 12 m (40Ft)

● Stern-Drive application



New technology of Inboard Hydraulic Steering System, for boats up to 12 m (40Ft)

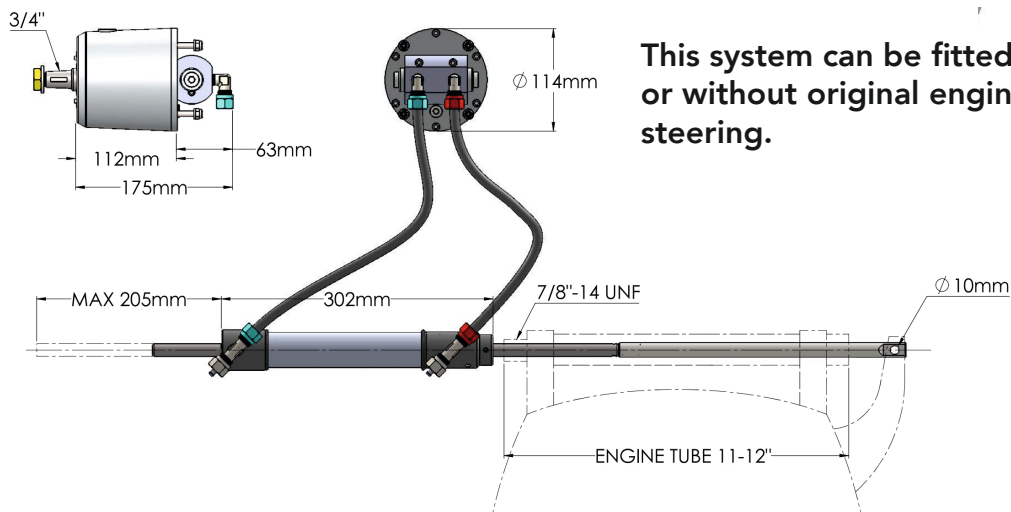
**MRA version is:  
with Anti-Feedback Valve  
Automatic Pilot Connection Port**

Output Force: 387 kgf. (853 lbf)  
Torque: 78 Kgm. (564 lbf-ft)  
Max Speed: 55 kts.  
Turns: 4

- Pump made from full block hardened aluminium
- Cylinder made from cold drawn, hardened aluminium
- High Pressure Hose Set (1700 PSI-120 bar)
- Universal application
- Stainless-Steel fixing system
- One side hose fittings

Kit contains:

TL2-30 Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	-
TL2-30 MRA Hydraulic Pump	28 cc./rev	Max 80 bar	with Fittings installed	Lock-Valve
MC70 Hydraulic Cylinder	112 cc.vol	Max 80 bar	with fittings installed	Stroke 202 mm
Extension Rod	1x 320 mm (12,6")	1x 400 mm (13,7")	-	-
High pressure hose set	5/16 twin	B.P. 480 bar	with Fittings installed	Twin 6+6 m (20')
Hydraulic Oil	2x1 L bottle	E-HVLP 46	Temp: +60/-30	-



**This system can be fitted with or without original engine servo steering.**

## Hydraulic Pumps

TL1-16



TL1-16 MRA



TL2-30



TL2-30 MRA



TL2-40SP MRA






Pumps:	Description:	Application:		Lock-Valve/ Auto Pilot port:
		Outboard	Inboard	
TL1-16	16 cc pump	MF75W, MF90W	MU50TF	No
TL1-16 MRA	16 cc pump	MF115 MRA, MF175W, MF175WTS	MU50TF-MRA	Yes
TL2-30	28 cc High precision pump	-	MU75TF, MU100TF, MSD70TF	No
TL2-30 MRA	28 cc High precision pump	MF255WTS, MF350W	MU75TF-MRA MU100TF-MRA MSD70TF-MRA	Yes
TL2-40SP MRA	38 cc High precision pump	MF350W-SP MF350W-TDF MF400 WTS	-	Yes


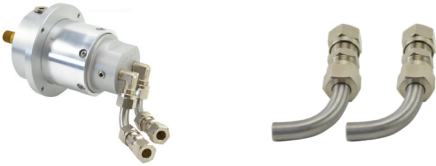

## Hydraulic Cylinders


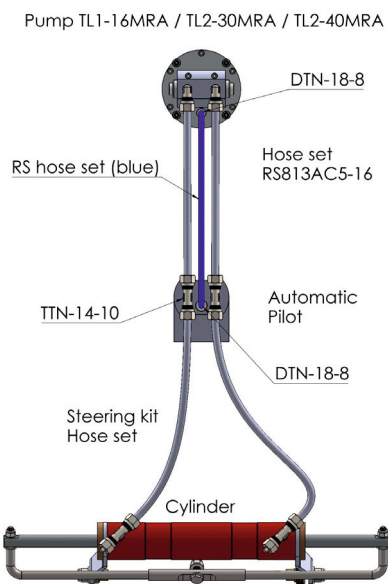


Cylinders:	Stroke:	Application:		Volume:
		Outboard	Inboard	
MC75W	202 mm	MF75W	-	68 cc.
MC90W	210 mm	MF90W	-	71cc.
MC115W (single engine)	210 mm	MF115 MRA	-	71 cc.
MC175W (Twin Arm)	208 mm	MF175W	-	86 cc.
MC175 WTS (Horns)	208 mm	MF175 WTS	-	86 cc.
MC255 WTS (Horns)	206 mm	MF255 WTS	-	125 cc.
MC400 WTS (Horns)	208 mm	MF400 WTS	-	208 cc.
MC350W (Twin Arm)	206 mm	MF350W, MF350W-SP, MF350W-TDF	-	146 cc.
MC50	150 mm	-	MU50TF, MU50TF-MRA	83 cc.
MC70	202 mm	-	MSD70TF, MSD70TF-MRA	112 cc.
MC75	225 mm	-	MU75TF, MU75TF MRA	114 cc.
MC1000	225 mm	-	MU100TF, MU100TF-MRA	160 cc.





## **Fittings and Accessories**





Seals repairing kit for TL1 pumps series	Seals repairing kit for TL2 pumps series	Seals repairing kit for Cylinders
<p>Kit includes: All seals, ball bearings, bushes, screws, nut and all parts needed to repair the pump.</p> 	<p>Kit includes: All seals, ball bearings, bushes, screws, nut and all parts needed to repair the pump.</p> 	<p>Kit includes: All seals, bushes, screws, nut and all parts needed to repair the cylinder.</p> 

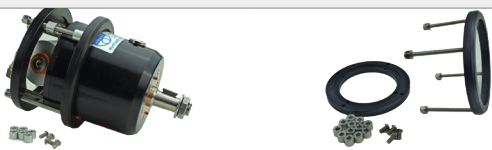

EBE-01	EXTGTN-14-10	RT68BU6
 <p>Engine bracket extension for all outboard engines. Screws included</p>	 <p>90° elbow extension fitting for TL1 and TL2 pumps series. 1/4" fittings</p>	 <p>Hose set for Autopilot connection and for double station pumps length: 6 m (20')</p>

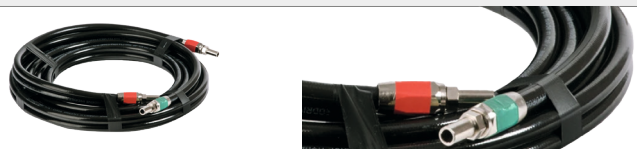

<b>APMF - Automatic Pilot Application kit</b>	
<p>Universal Application Available for pump: TL1-16 MRA, TL2-30/40 MRA</p> <p>Kit includes: All needed to connect the Hydraulic Steering System to the main Autopilot brand in the market.</p> 	 <p>The diagram illustrates the installation of the APMF kit. It shows a pump at the top, connected via a DTN-18-8 fitting to a blue RS hose set (RS813AC5-16). This hose set connects to a TTN-14-10 fitting, which is part of the Automatic Pilot system. From there, a steering kit hose set connects to another DTN-18-8 fitting, which finally connects to a cylinder at the bottom.</p>

 **Fittings and Accessories**

<b>724.0014</b>	<b>TTN-10/TTN-8</b>	<b>TTN-14-10/TTN-18-8</b>	<b>GTN-14-10/GTN-18-8</b>
			
Tee fitting 1/4-10 mm Purge Valve Cylinder application	Tee Fitting 3 ways 10 mm tube 8 mm tube Hose connection	Tee fitting 1/4-10 mm, 8 mm Cylinder application Autopilot application	Elbow fitting (90°) 1/4-10 mm Pump application G1/8-8 mm tube Autopilot Application

<b>AC516</b>	<b>DTN-14-10/DTN-18-8</b>	<b>9460.00.004</b>	<b>97.40.00</b>
			
5/16-10 mm Hose set application Hose set end fitting	Straight fittings DTN-14-10: G 1/4"-10 mm tube DTN-18-8: G 1/8"-8 mm tube	10 mm straight connection fitting Hose extension appli- cation (AC516)	Olive 10 mm fittings application 98.40.00: 8 mm

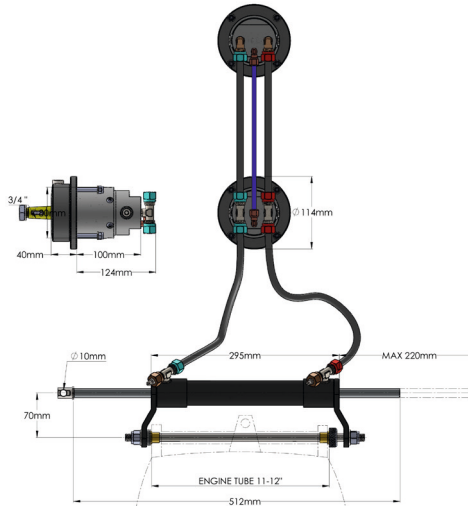
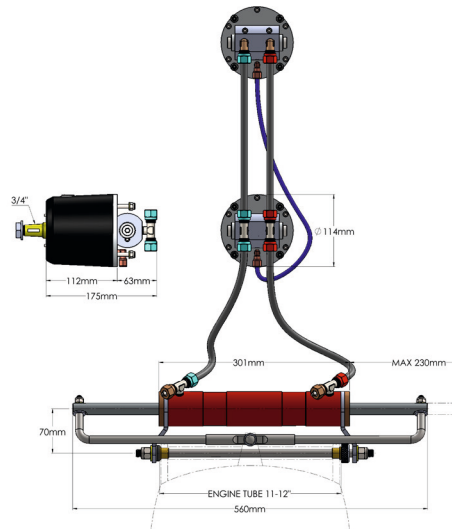
<b>FR10+PL140+AD10</b>	<b>MBY4 By-Pass Valve</b>
	
Fixing ring/flange for TL2 Flush mount Spacers 10-30 mm (0,4"-1,2")	Twin hose set of 2 m (6,5 Ft) and fittings inclu- ded



<b>Twin hose set</b> (with fittings)	
Personalized lenght on request	
Standard sets:	
<ul style="list-style-type: none"> <li>• RS813AC-W70, twin 0,75 m</li> <li>• RS813AC4-13, twin 4 m (13')</li> <li>• RS813AC5-15, twin 4,5 m (15')</li> <li>• RS813AC5-16, twin 5 m (16')</li> <li>• RS813AC6-20, twin 6 m (20')</li> <li>• RS813AC7-23, twin 7 m (23')</li> <li>• RS813AC8-26, twin 8 m (26')</li> <li>• RS813AC10-33, twin 10 m (33')</li> </ul>	<b>Extension twin hose set</b> (to extend the hose set lenght)
	
	Hose set supplied with 2 x 9460.00.004 (stra- ight connector fittings) and personalized hose lenght





## Fittings and Accessories











<p><b>TL1-16 MRA-DS</b> Second station kit</p>	<p><b>TL2-30/40 MRA-DS</b> Second station kit</p>
<p>TL1-16 MRA-T Pump with Tee Fittings 5 m (16') twin hose set Fittings 1/8" 1 l bottle of Hydraulic Oil Pumps connection Hose set</p> 	<p>TL2-30/40 MRA-T Pump with Tee Fittings 7-8 m (23Ft-26Ft) twin hose set Fittings 1/8" 2 l bottles of Hydraulic Oil Pumps connection Hose set</p> 

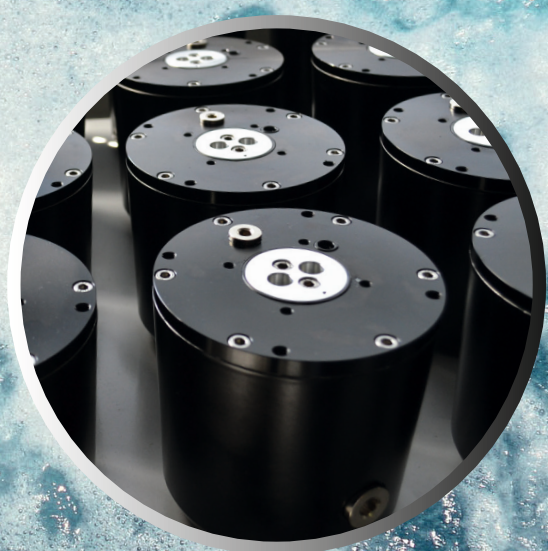
<p><b>BTW62, BTW70 Adjustable Tie Bar</b></p>	<p><b>BR72 Adjustable Engine Arm</b></p>
 <p>Suitable for MF350W-TDF or twin engine application BTW62: 540-620 mm, BTW70: 620-700 mm</p>	 <p>Fork connection Standard on the model MF115 MRA Option for MF75W and MF90W</p>

<p><b>MRA Line</b></p>	<p><b>SYN-MRA Line</b></p>
 <p>Lock-Valve for In line mounting applications, kit includes twin hose set of 0,75m+0,75m and fittings</p>	 <p>Synchronization and Lock-Valve for Catamarans - two cylinders, kit includes twin hose set of 0,75m+0,75m and fittings</p>



## Steering Wheels

16000-VOB (black)	16000-VOR (red)	Description:
		<ul style="list-style-type: none"> <li>• Material: Megol leather effect</li> <li>• Spokes: PP Carbon effect</li> <li>• Diameter: 280 mm (11")</li> </ul>
16020-VRB (black)	16010-VRW (white)	Description
		<ul style="list-style-type: none"> <li>• Megol-Polished Stainless Steel spokes</li> <li>• Aluminium hub</li> </ul> <p>16020-VRB: 350 mm (13,8") black            16020-VRW: 350 mm (13,8") white            16020-VRB: 400 mm (15,8") black            16020-VRW: 400 mm (15,8") white</p>
16100-HDS37, 16100-HDS42		Description
		<ul style="list-style-type: none"> <li>• Material: Stainless-Steel</li> <li>• Aluminium hub</li> <li>• Diameter: 370 mm (13,4")</li> <li>• Diameter: 420 mm (16,5")</li> <li>• Connection: Standard 3/4" taper</li> <li>• Shape: 15 Degree</li> <li>• Grip: Stainless Steel</li> </ul>
16121-VSB		Description
		<ul style="list-style-type: none"> <li>• Material: Polyurethane - Polished Stainless-Steel</li> <li>• Aluminium hub</li> <li>• Diameter: 350 mm (13,8")</li> <li>• Polished Stainless steel spokes</li> </ul>
16100-HEE		Description
		<ul style="list-style-type: none"> <li>• Material: Anodized Aluminium soft PU foam</li> <li>• Aluminium hub</li> <li>• Diameter: 350 mm (13,4")</li> <li>• Soft grip for control and comfort</li> </ul>



**HYDRODRIVE®**



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