STEERING SYSTEM CONFIGURATIONS

Below you will find examples of steering systems with one or two steering positions and one or two rudders, with or without non return valves.

Single steering position base system components

1 Steering pump with or without built-in non-return valves

- 1 Cylinder
- 1 Steering pump
- Hydraulic tubing (with end fittings) and fluid
- Optional: Separate dual non-return valve or by-pass valve (see below)

Dual steering positions base system components

- Two steering pumps with built-in non-return valves
- Alternatively: two steering pumps without non-return valves, in which case a separate dual non-return valve block must be fitted
- 1 Cylinder
- 2 T- pieces
- Hydraulic tubing (with end fittings) and fluid
- Optional: By-pass valves (see below)

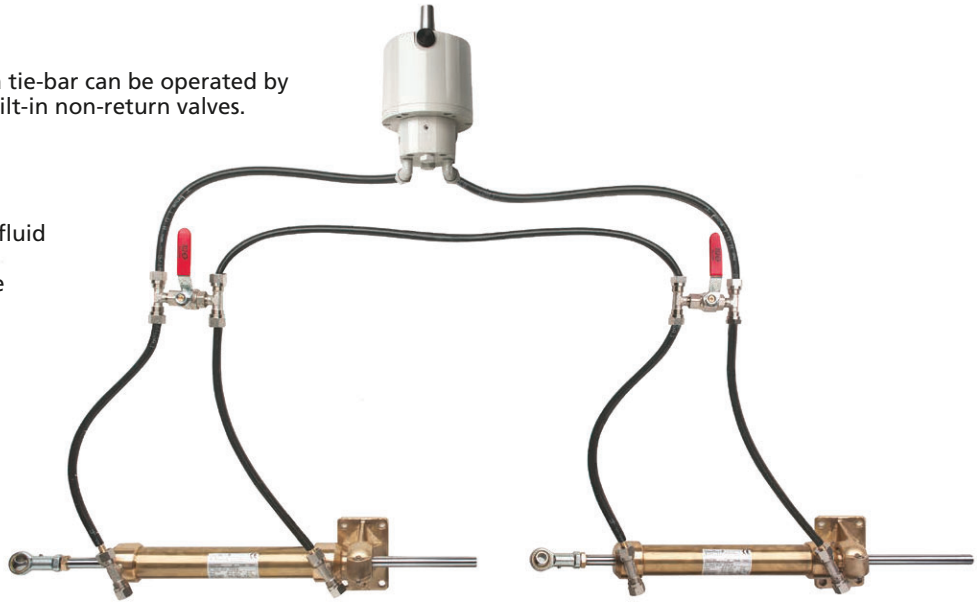
Dual rudder steering

Specifically suitable for catamarans!

Dual rudders which are not connected by a tie-bar can be operated by 2 cylinders and 1 pump with or without built-in non-return valves.

Specifications

- 2 Cylinders
- 1 Steering pump
- Hydraulic tubing (with end fittings) and fluid
- 2 By-pass valves
- Optional: Separate dual non-return valve



STEERING PUMPS

HTP and HTPR

These hydraulic steering pumps are suitable for almost all steering wheels, including VETUS wheels (see pages 239 - 243) and havea Ø ¾" shaft, tapered 1:12. Available in black or white.

Both types are supplied with
- Compression fittings (for the pressure lines) and a balance pipeline port
- Mounting studs, nuts and washers
- One vented and one un-vented filler plug

Type HTPR has in addition
- An integral non-return valve with continuous air bleeding system
- An integral pressure relief valve for protection against over pressurisation of the system

HTP..B

HTP

VETUS offers 2 different types of steering pumps

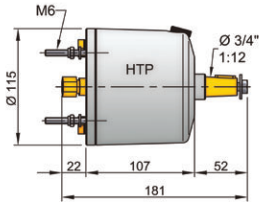
Types HTP 20/30/42

A steering pump without non-return valves.

HTP20

HTP30

HTP42



HTP

Steering pumps without non return valves

Type	Color	Ø mm tubing	Capacity cm³/rev.	Number of pistons	Weight without valve kg
HTP2010	White	10	19,7	5	3,3
HTP3010	White	10	30,0	5	3,3
HTP4210	White	10	42,0	7	3,3
HTP2010B	Black	10	19,7	5	3,3
HTP3010B	Black	10	30,0	5	3,3
HTP4210B	Black	10	42,0	7	3,3

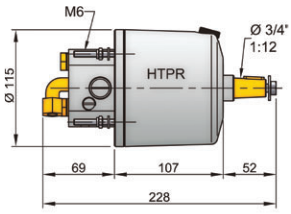
Type HTPR 20/30/42

A steering pump with integral non-return valve and pressure relief valves.

HTP20R

HTP30R

HTP42R



HTPR

Steering pumps with non return valves

Type	Color	Ø mm tubing	Capacity cm³/rev.	Number of pistons	Weight with valve kg
HTP2010R	White	10	19,7	5	4,1
HTP3010R	White	10	30,0	5	4,1
HTP4210R	White	10	42,0	7	4,1
HTP2010RB	Black	10	19,7	5	4,1
HTP3010RB	Black	10	30,0	5	4,1
HTP4210RB	Black	10	42,0	7	4,1

CYLINDERS

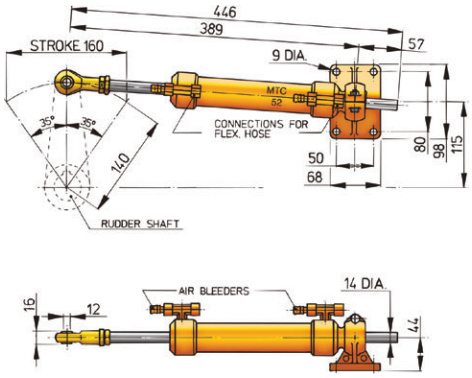
The cylinders below are supplied as standard with zinc plated steel rod ends. Stainless steel (AISI 316) rod ends are available as an option. For accessories see page 253.

Type	Ø mm tubing
MTC5210	10
MTC7210	10

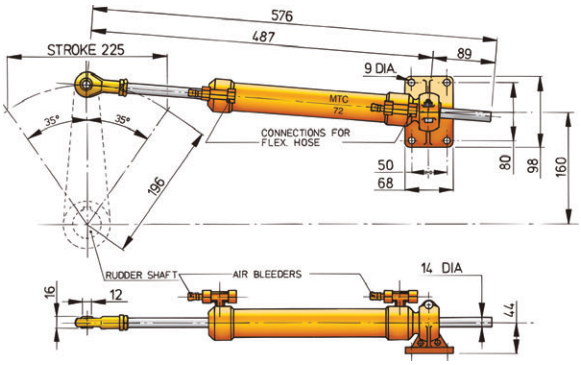
MTC5210

MTC7210

MTC5210



MTC7210



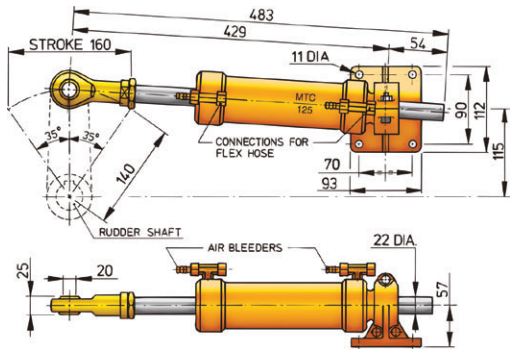
The cylinders below are supplied as standard with zinc plated steel rod ends. Stainless steel (AISI 316) rod ends are available as an option. For accessories see page 253.

Type	Ø mm tubing
MTC12510	10
MTC17510	10

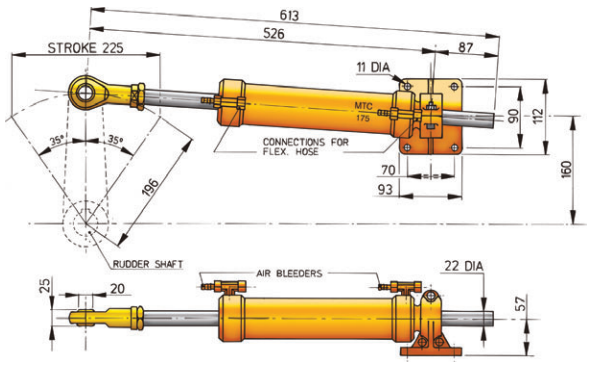
MTC12510

MTC17510

MTC12510



MTC17510



STEERING PUMPS AND CYLINDERS

This table shows combination of pumps and cylinders.



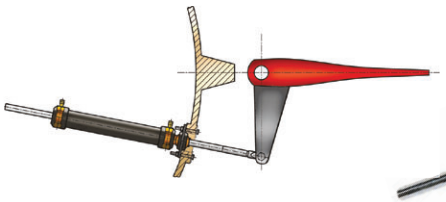
Cylinder type MTC5210	Pump type 20	Pump type 30	Pump type 42
	Wheel turns 5.3	**Wheel turns 3.5**	
• Stroke 160 mm • Volume 104 cm³ • Length of tiller arm 140 mm • Weight 3.4 kg 	• Max. Torque **510**Nm (**52**kgm) (376ft.lbs). • Torque at 35° and 56kg/cm² 412Nm (42kgm) (304ft.lbs) • Tubing nylon hose Ø 6 x Ø 10mm copper Ø 8 x Ø10 mm	• Max. Torque **510**Nm (**52**kgm) (376ft.lbs). • Torque at 35° and 56kg/cm²: 412Nm (42kgm) (304ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm copper Ø 8 x Ø 10mm	N/A
Cylinder type MTC7210			
	Wheel turns 7.5	**Wheel turns 4.9**	**Wheel turns 3.5**
• Stroke 225 mm • Volume 146 cm³ • Length of tiller arm 196 mm • Weight 3.8 kg 	• Max. Torque: **706**Nm (**72**kgm) (521ft.lbs). • Torque at 35° and 56kg/cm²: 589Nm (60kgm) (434ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or copper Ø 8 x Ø 10mm	• Max. Torque **706**Nm (**72**kgm) (376ft.lbs). • Torque at 35° and 56kg/cm²: 589Nm (60kgm) (434ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm or copper Ø 8 x Ø 10mm	• Max. Torque **706**Nm (**72**kgm) (376ft.lbs). • Torque at 35° and 56kg/cm²: 589Nm (60kgm) (434ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm or copper Ø 8 x Ø 10mm
Cylinder type MTC12510			
		Wheel turns 8.5	**Wheel turns 6.1**
• Stroke160 mm • Volume253 cm³ • Length oftiller arm 140 mm • Weight 7.1 kg 	N/A	• Max. Torque **1226**Nm (**125**kgm) (904ft.lbs). • Torque at 35° and 56kg/cm2: 981Nm (100kgm) (723ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm or copper Ø 8 x Ø 10mm	• Max. Torque **1226**Nm (**125**kgm) (904ft.lbs). • Torque at 35° and 56kg/cm²: 981Nm (100kgm) (723ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm or copper Ø 8 x Ø 10mm
Cylinder type MTC17510			
			Wheel turns 8.5
• Stroke 225 mm • Volume 356 cm³ • Length of tiller arm 196 mm • Weight 8 kg 	N/A	N/A	• Max. Torque **1717**Nm (**175**kgm) (1266ft.lbs). • Torque at 35° and 56kg/cm²: 1373Nm (140kgm) (1013ft.lbs) • Tubing: nylon hose Ø 6 x Ø 10mm or Ø 8 x Ø 12mm or copper Ø 8 x Ø 10mm

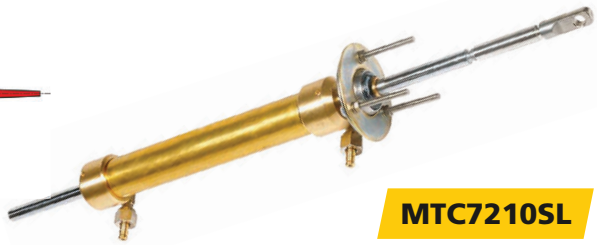
CYLINDERS

Hydraulic steering cylinder

For transom hung rudders

Specifications
- Stroke 225 mm
- Volume 146 m³
- Length of arm 196 mm





MTC7210SL

Type	
MTC7210SL	Cylinder type MTC72SL for transom hung rudders

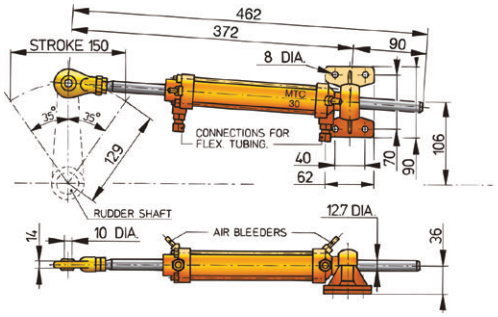
Hydraulic steering kit

An attractive solution for smaller boats

This kit includes:
- Pump type HTP2010 (white)
- Cylinder type MTC3008
- Nylon hose 15 mtr type HS04N
- Hydraulic steering oil 1 ltr type VHS1
- All required fittings

Specifications
- Max. torque 294Nm (30 kgm, 216 ft.lbs)
- Wheel turns 3,4
- Stroke 150 mm
- Volume 67 m³
- Length of tiller arm 129 mm

MTC30KIT



Type	
MTC30KIT	Hydraulic steering kit including cylinder (MTC30), pump (HTP2008), nylon tubing (15 metres), fittings and oil

STEERING PUMPS

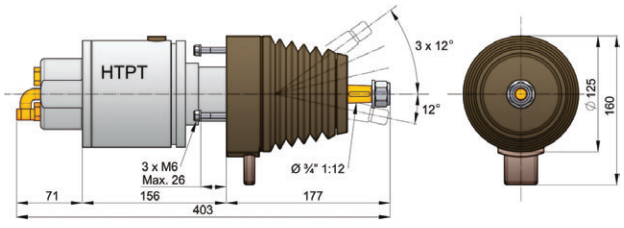
Tilting steering pumps type HTPT

For both seated and standing steering positions

Type HTPT has a tilt mechanism which allows the steering wheel to be locked in 5 different positions with a total tilt range of 48°. The steering wheel shaft is made of stainless steel (AISI 316) and all other visible parts are made of black rubber and synthetic material. These pumps are supplied with built-in non-return valves, a pressure relief valve and feature the same specifications as steering pump type HTPR.

HTP..T

Type	Colour	Ø mm tubing	Capacity cm³/rev.	Number of pistons
HTP2008T	Black	8	19,7	5
HTP2010T	Black	10	19,7	5
HTP3008T	Black	8	30,0	5
HTP3010T	Black	10	30,0	5
HTP4210T	Black	10	42,7	7



Type MT0230B / MT0345B / MT0455B / MT0600B / MT0900B / MT1200B

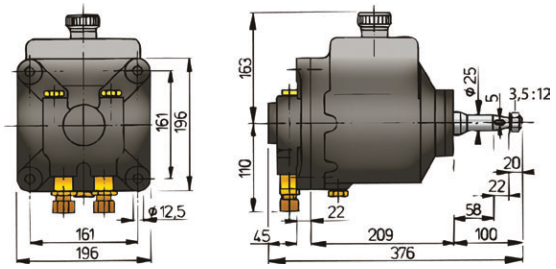
The best possible combination

Choosing the right combination of pump and cylinder can be quite difficult. VETUS pumps and cylinders are fully compatible, enabling the builder and owner to choose the best combination of price and number of wheel turns lock to lock.
The smaller the pump unit, the lower the price but also the higher the number of turns. However, the choice of cylinder is always determined by the rudder torque. Please see tables below for determination of the wheel turns.

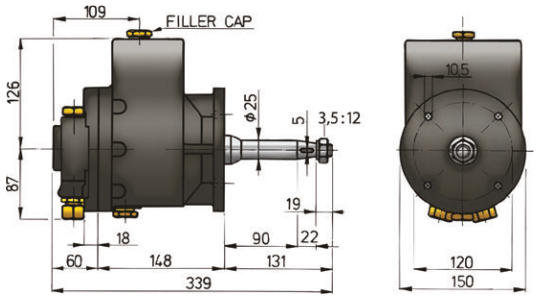
Specifications
- Available for single and dual station control
- Cylinders are supplied with flexible hose tails, bleed nipples (which accept a quick-release coupling for rapid bleeding) and a base plate with universal joint and a swivelling rod end
- Axial plunger plumps with 7 plungers
- 25 mm / 1" diameter Stainless steel (AISI 316) steering wheel shaft (extra strong for large steering wheels)
- Cylinder and pump can be supplied separately

MTP151B
MTP191B

MTP089B



MTP0151B
MTP191B



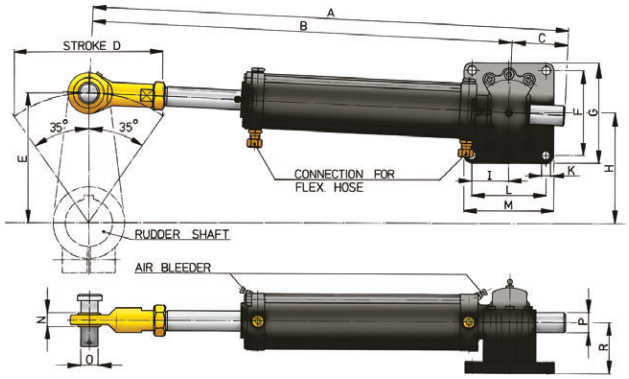
MTP089B

Specifications pump units	MTP089B	MTP151B	MTP191B
Capacity of pump unit	89 cm³/rev.	151 cm³/rev.	191 cm³/rev.
Number of pistons	7	7	7
Maximum pressure	63 kg/cm² (6178 kPa) (896 lbs/sq. inch)		
Dimensions of tubes	Ø 18 x 15 mm		
Connections	G ½ female pipe thread		
Weight of pump unit	9,1 kg	23 kg	23 kg
Min. steering wheel diameter	65 cm	110 cm	135 cm

STEERING SYSTEMS FOR COMMERCIAL CRAFT

MT1200B

MT0230B



MT0230B -MT1200B

Cylinder	A	B	C	D	E	F	G	H	I	K	L	M	N	O	P	R
MT0230B	733	607	127	200	175	112	140	143	36	11	72	100	31	25	28	55
MT0345B	933	757	177	300	260	112	140	215	36	11	72	100	31	25	28	55
MT0455B	1133	907	227	400	350	112	140	286	36	11	72	100	31	25	28	55
MT0600B	735	695	40	200	175	160	198	143	71,5	18,5	143	182	25	35	40	102
MT0900B	935	845	90	300	260	160	198	215	71,5	18,5	143	182	25	35	40	102
MT1200B	1135	995	140	400	350	160	198	286	71,5	18,5	143	182	25	35	40	102

Theoretical number of steering wheel turns from starboard to port

Pump unit	Cylinder					
	MT0230B	**MT0345B**	**MT0455B**	**MT0600B**	**MT0900B**	**MT1200B**
MTP089B	5.6	8.4	11.2	14.8	22.2	29.6
MTP151B	3.3	5.0	6,6	8.8	13.1	17.5
MTP191B	2.6	3.9	5.2	6.9	10.4	13.8

Technical data cylinders	MT0230B	MT0345B	MT0455B	MT0600B	MT0900B	MT1200B
Max torque at 35° rudder angle	2207 Nm (225 kgm)	3335 Nm (340 kgm)	4415 Nm (450 kgm)	5886 Nm (600 kgm)	8829 Nm (900 kgm)	11772 Nm (1200 kgm)
Cylinder stroke	200 mm	300 mm	400 mm	200 mm	300 mm	400 mm
Max. pressure	6178 kPa (63 kg/cm²) (896 lbs/sq.inch)					
Cylinder volume	500 cm³	750 cm³	1000 cm³	1319 cm³	1978 cm³	2638 cm³
Total rudder angle	70°					
Length of tiller arm	175 mm	260 mm	350 mm	175 mm	260 mm	350 mm
Weight of cylinder	13,8 kg	15,9 kg	18 kg	35,1 kg	38,8 kg	42,5 kg
Dimensions of tubes	Ø 18 x 15 mm					
Connections	All connections are provided with G ½ female pipe thread.					

Also available for single and dual steering

Type	Description
HS81B	Dual non-return valve (G1/2) (incl. tube connectors Ø 18 mm)
HS74B	Single non-return valve (G1/2) with by-pass valve (incl. tube connectors Ø 18 mm) (suitable for single and dual station)
HS42B	Pressure relief valve (G1/2) (incl. tube connectors Ø 18 mm)

STEERING SYSTEMS FOR OUTBOARD ENGINES/Z-DRIVES

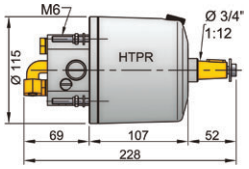
A VETUS outboard engine/Z-drive steering system consists of a steering pump with non-return and pressure relief valves and a cylinder. The cylinder is connected to the pump with nylon hydraulic hose. VETUS offers 5 different types of hydraulic cylinders suitable for outboard motors with an output of 90 KW (125hp) up to 220 KW (300hp).

OBC cylinders

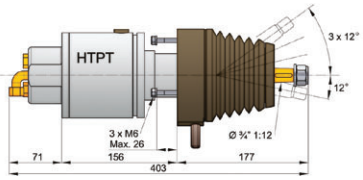
Specifications
- Balanced cylinder
- Supplied with combined Ø10 mm hose connections and bleed nipples
- Piston rod with scraper seals preventing damage from salt and dirt and T-pieces to connect the cylinders

Required components to order separately
- 1 or 2 cylinders type OBC or MTC (see page 252 for max. engine hp possibilities)
- 1 or 2 steering pumps with built-in non-return valves, type HTPR
- Length of hydraulic hose Ø 8 x 12 mm, type HHOSE8
- Straight or right angle hose connectors
- Hydraulic fluid
- T-pieces for Ø 10 mm pipe (when more than 1 pump or cylinder is installed)

Type	Max. hp
OBC125	125
OBC150	150
OBC225	225
OBC275	300
MTC100Z	300



HTP2010R / RB
HTP3010R / RB
HTP4010R / RB



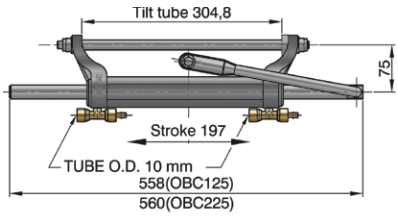
HTP2010T
HTP3010T
HTP4010T

OB1000 Tie bar

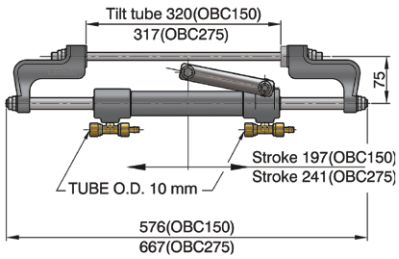
For connecting 2 outboard motors up to 300 hp each

The tie bar has adjustable ends and connection bolts ($^3/_8$"UNF). The maximum centre-to-centre distance between the steering arms is 915mm. The bar can be easily cut to the required length. All components of the tie bar are made of stainless steel (AISI 316).

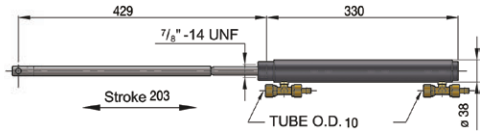
OB1000



OBC125
OBC225



OBC150
OBC275



MTC100Z

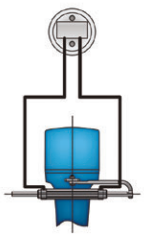
STEERING SYSTEMS FOR OUTBOARD ENGINES/Z-DRIVES

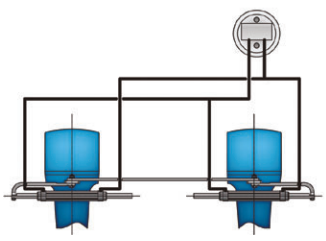
Specifications
- Maximum operating pressure 70 bar
- Connections G 1/4- Ø 10mm
- Nylon hose Ø 8 x Ø 12mm
- Pump fitting Front Mount

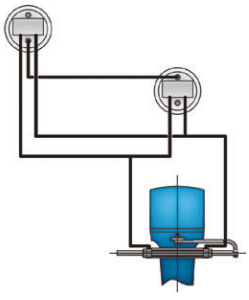
	HTP2010R	HTP3010R	HTP4210R
	• Capacity 19,9 cm³/rev. • Number of pistons 5 • Weight 4,1kg	• Capacity 30,0 cm³/ rev. • Number of pistons 5 • Weight 4,1kg	• Capacity 42,0 cm³/ rev. • Number of pistons 7 • Weight 4,1kg
			
OBC125 • Maximum rudder torque 643 Nm • Volume 108,3 cm³ • Maximum output 90 kW (125 hp) • Maximum speed 85 km/h (45 knots)		Wheels turns port - starboard: 5,5	Wheels turns port - starboard: 3,6	N/A
	OBC125 the piston rod moves inside the cylinder		
OBC225 • Maximum rudder torque 1026 Nm • Volume 172,6 cm³ • Maximum output 165 kW (225 hp) • Maximum speed 85 km/h (45 knots)		Wheels turns port - starboard: 8,8	Wheels turns port - starboard: 5,8	Wheels turns port - starboard: 4,1
	OBC225 the piston rod moves inside the cylinder		
OBC150 • Maximum rudder torque 643 Nm • Volume 108,3 cm³ • Maximum output 110 kW (150 hp) • Maximum speed 85 km/h (45 knots)		Wheels turns port - starboard: 5,5	Wheels turns port - starboard: 3,6	N/A
	OBC150 the cylinder moves over the piston rod		
OBC275 • Maximum rudder torque 788 Nm • Volume 132,6 cm³ • Maximum output 220 kW (300 hp) • Maximum speed: 110 km/h (60 knots)		Wheels turns port - starboard: 6,8	Wheels turns port - starboard: 4,4	Wheels turns port - starboard: 3,2
	OBC275 the cylinder moves over the piston rod		
MTC100Z • Maximum rudder torque 989 Nm • Volume 132 cm³ /163,3 cm³ • Maximum output 220 kW (300 hp) • Maximum speed: 95 km/h (50 knots)		Wheels turns port - starboard: 8,3	Wheels turns port - starboard: 5,4	Wheels turns port - starboard: 3,9
	MTC100Z for Z-drives and outboard engines		

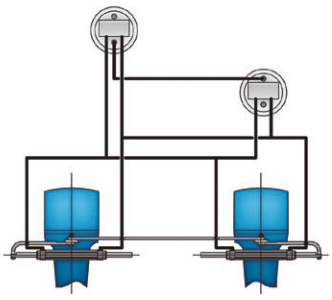
For accessories see page 253.

A single cylinder can operate a **twin** outboard motor installation. If both propellers rotate in the same direction, the total engine output may not exceed the maximum capacity of the selected cylinder. If the motors have handed (counter-rotating) propellers, the total combined output may be twice the rated capacity of the chosen cylinder.


Single steering position for 1 engine


Single steering position for 2 engines

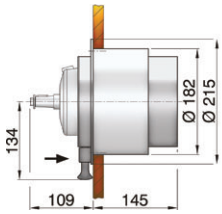

Dual steering position for 1 engine

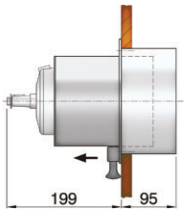

Dual steering position for 2 engines

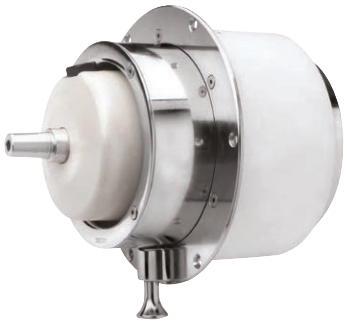
Telescopic steering wheel adjuster type HS

Enhancing your steering comfort

This telescopic steering wheel adjuster is suitable for hydraulic steering pumps type HTP and HTPR. It is fitted to the steering pump, enhancing your steering comfort in both seated and standing positions. Maximum travel of 90 mm (adjustable in 3 steps of 30 mm).







HS1000

Type	Description
HS1000	Telescopic steering wheel adjuster for HTP type pumps (excl. pump)

Pump flanges type HTPF

Embellishment for your pump

These polished stainless steel (AISI 316) flanges can be used to fit pump type HTP (or to replace older type MTP) and to recess your pump by 38 mm (type HTPF) or 74 mm (type HTPF2). It can also be used to give your pump a more refined look.

On an outside helm station, with a pump mounted on an inclined bulkhead or sloping dashboard, the housing of the telescopic wheel adjuster may catch water. To prevent this water entering the boat, a seal set is recommended (Type HTPF3).

Type	Description
HTPF	Adaptor flange, stainless steel (AISI 316) for HTP pump, 38 mm depth
HTPF2	Adaptor flange, stainless steel (AISI 316) for HTP pump, 78 mm depth
HTPF3	Waterproof seal kit for HTP pump in a HTPF flange

HTPF

HTPF2

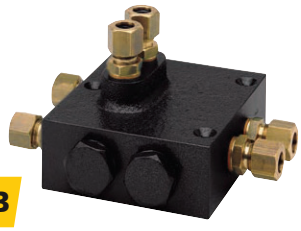
HTPF3

ACCESSORIES FOR STEERING SYSTEMS

Dual non-return valve

This dual non-return valve block has to be installed when dual station steering is required and the pumps do not have integral non-return valves. Alternatively, you can use 2 steering pumps with built-in non-return valves type HTPR. This is also the case when an electro-hydraulic pump needs to be installed when fitting an autopilot and the installed steering pumps do not have integral non-return valves.

The connection kit must be ordered separately and is not included with the K30/140B.



K30/140B

Type	Description
K30/140B	Dual non-return valve block without fittings used with cylinders MTC3008 to MTC17510
KITK30	Connection kit, 8 mm, to be used with K30/140B and MTC3008
KITK52175	Connection kit, 10 mm, to be used with K30/140B and MTC5210 - MTC17510

KITK30

KITK52175

By-pass valve

If a quick change-over to tiller steering has to be done in case of an emergency, installation of a by-pass valve is necessary.

Type	Tubing Ø mm
BYPASS8	8
BYPASS10	10
BYPASS18	18

BYPASS

Nylon hose

Type	Internal Ø mm	External Ø mm	Length in rolls of (m)	Required connection parts
HS04N	6	8	15	HS1011S Sleeve insert (20 pieces)
HHOSE6015	6	10	15	HS145S Sleeve insert (20 pieces)
HHOSE6030	6	10	30	HS145S Sleeve insert (20 pieces)
HHOSE6050	6	10	50	HS145S Sleeve insert (20 pieces)
HHOSE6100	6	10	100	HS145S Sleeve insert (20 pieces)

HHOSE

Type	Internal Ø mm	External Ø mm	Length in rolls of (m)	Required connection parts
HHOSE8015	8	12	15	HS1031MS (straight, set of 2 pieces) / HS1037MS (angled, set of 2 pieces)
HHOSE8030	8	12	30	HS1031MS (straight, set of 2 pieces) / HS1037MS (angled, set of 2 pieces)
HHOSE8050	8	12	50	HS1031MS (straight, set of 2 pieces) / HS1037MS (angled, set of 2 pieces)
HHOSE8100	8	12	100	HS1031MS (straight, set of 2 pieces) / HS1037MS (angled, set of 2 pieces)

ACCESSORIES FOR STEERING SYSTEMS

Connection parts

When using compression fittings supplied as standard with non-commercial pumps and cylinders, a brass sleeve must be inserted into each end of the nylon hose in order to maintain hose circularity. An alternative connection method for 8 x 12 nylon hose is to use barbed connections HS1031MS and HS1037MS.

Type	Description
HS10131	Sleeve insert Ø 6 mm and olive, Ø 8 mm for use with HS04N nylon hose, pack of 10 pcs
HS1011S	Sleeve insert, Ø 6 mm, for use with HS04N, pack of 20 pcs
HS145S	Sleeve insert, Ø 6,5 mm, for use with nylon hose (HHOSE6...), pack of 20 pcs
HS1031MS	Straight brass hose connector for nylon hose Ø 8 x 12 mm (HHOSE8..), pack of 2 pcs
HS1037MS	Right angle brass hose connector for nylon hose Ø 8 x 12 mm (HHOSE8..), pack of 2 pcs

HS1011S

HS145S

HS10131

HS1031MS

HS1037MS

Copper tubing

Copper tubing is available per roll in 3 different sizes.

Type	Internal Ø mm	External Ø mm	Length m	Required connection parts
COPPER08	6	8	16	MTC610 Flexible hose tail set
COPPER10	8	10	20	MTC810 Flexible hose tail set
COPPER18	15	18	10	N/A

COPPER

VETUS hydraulic steering oil type VHS1

Optimal functioning in all temperatures

For more information see page 409.

VHS

Hydraulic fluid header tank type HTANK

This transparent tank can be installed with all VETUS steering pumps up to 89 cm^3 per revolution.
It is also recommended for electro-hydraulic hatch lifters when operating more than 1 cylinder.
By installing this tank, the breather plug in the steering pump can be replaced with the supplied solid plug, eliminating the possibility of steering fluid dribbling from the breather in big seas.

Specifications
- Capacity 200 cm^3
- Supplied with a large mounting bracket
- Comes with 1mtr of Ø 8 mm hose, 2 matching hose clips, 1 G¼ and 1 $G^3/_8$ nylon hose pillar

Type	Description
HTANK	Expansion tank kit for hydraulic steering systems

HTANK

Type RUDS

These rudders with stainless steel (AISI 316) blade come complete with a rudder arm to which a VETUS hydraulic steering cylinder can be connected. The blade sides are polished and need no additional finishing. The stainless steel (AISI 316) rudder stock is provided with a hole to facilitate the fitting of an emergency tiller. Type RUDS comes in 2 heights.

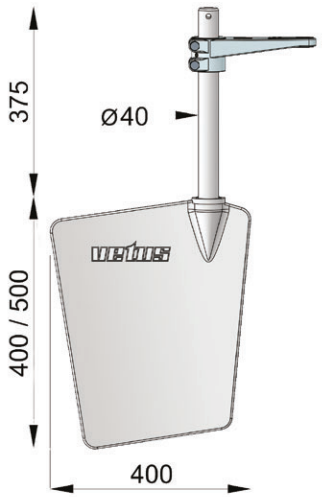
Specifications type RUDS4040
- Dimensions w 400 x h 400 mm (excluding rudder arm)
- Speed with cylinder MTC30 30 knots, MTC52 42 knots

Specifications type RUDS5040
- Dimensions w 400 x h 500 mm (excluding rudder arm)
- Speed with cylinder MTC30 27 knots, MTC52 34 knots

A rudder gland may be supplied as an extra (type HENKO only)

RUDS4040

RUDS5040



Type	Width mm	Height mm
RUDS4040	400	400
RUDS5040	400	500

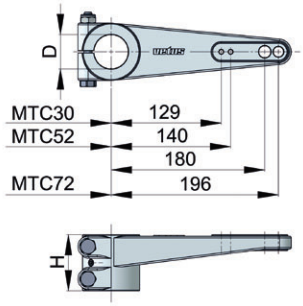
	RUDS4040	RUDS5040
With cylinder MTC30	30 knots	27 knots
With cylinder MTC52	42 knots	34 knots

The indicated speed figures are the maximum permissible speeds.

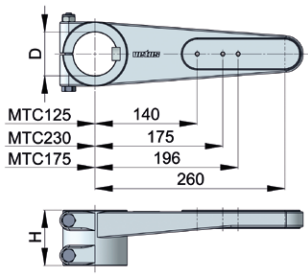
Aluminium rudder arms type HELM

These rudder arms are available for Ø 30, 40, 50 or 60 mm rudder stocks. They are connected by 2 clamp bolts. The Ø 30 and 40 mm rudder arms have 2 locking grub screws onto the shaft and feature 4 attachment points for the steering cylinder making them suitable for VETUS hydraulic cylinders type MTC30/52 and 72. The Ø 50 and 60 mm rudder arms have a stainless steel (AISI 316) key and feature 3 attachment points which match type MTC125/175 and 230. For connecting VETUS cylinder types MTC30/175 matching bolt sets are available.

Type	Ø D	H
HELM30	30	56
HELM40	40	66



Type	Ø D	H
HELM50	50	66
HELM60	60	76



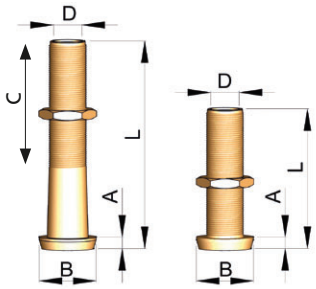
HELM

RUDDERS

Rudder gland type HENKO

This bronze rudder gland is available in 2 different lengths for Ø 30 or Ø 40 mm rudder stocks.

Type	Ø D mm	L mm	A mm	Ø B mm	C mm
HENKO30	30	175	15	65	-
HENKO30L	30L	275	15	65	160
HENKO40	40	205	17	80	-
HENKO40L	40L	305	17	80	160



HENKO..L HENKO

REMOTE CONTROL STEERING

Follow-up steering

Suitable for boats of 6-20 metres LOA

Many pleasure craft are equipped with a manual hydraulic steering system. The VETUS follow-up steering system can be added to enable remote control from any position on board without the need to mount and connect a steering wheel. This greatly facilitates adding an inside steering station in a finished and furnished space. This system comes from a type of steering that is in common use with professional waterways vessels. By simply turning the steering handle, the rudder will follow the exact angle of the handle and by returning the handle to the mid-position, the rudder will return to mid-ships. Manual steering can be resumed at any time by switching the system off. VETUS' follow-up steering meets the EMC requirements.

Type FUHANDLE with control box type FU1224

Steering from any convenient place on board!

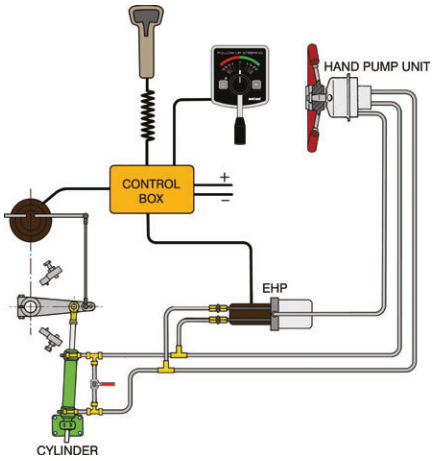
The fixed control handle can operate any type of hydraulic steering system with an electro-hydraulic pump, by means of the control box. It can be mounted on the dashboard or fixed to the helmsman's seat. This type of remote control can be used as the main steering device instead of the steering wheel, or as second or even third steering option.

Specifications
- Panel dimensions 110 x 120 mm
- Dimensions incl. handle 110 x 190 mm
- Height 45 mm

Type	Description
FUHANDLE	Dash mount control handle for follow-up system
FU1224	Control box for follow-up system, 12/24 Volt

FUHANDLE

FU1224



Follow-up control type FUREM

Mobile hand held control

Type FUREM has the same function as fixed control handle type FUHANDLE. However, the control is supplied with a 3 mtr spiralled cable with connection plug and socket. Type FUREM can only be used in addition to the fixed control.

Type	Description	Dimensions control box (mm)
FUREM	Hand operated remote control for follow-up system	258 x 114 x 52

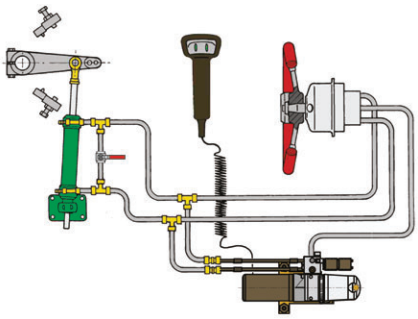
FUREM

Electric remote control type RECON

Easy and affordable expansion of your steering system

Conventional wheel operated hydraulic systems can be easily and cheaply equipped with this electrically operated remote control unit from virtually any point on board. Type RECON consists of a rocker switch, a 3,5 mtr spiralled wire with watertight plug and deck contact. An electro hydraulic pump is fitted in the hydraulic system and connected to the DC power supply. The hand held remote control is then used to operate the pump in the required direction.

Required components to order separately
- Electro hydraulic pump
- Hydraulic fitting set for pump
- Hydraulic tubing of the required length
- 1 or more hand held controls with spiralled wire
- 2 Limit switches for the hydraulic cylinder



RECON

Type	Description
RECON	Hand held remote control for operation of: bow and stern thrusters, windlasses, etc.

Set of limit switches

To avoid damage to the steering system components, the action of any electronic or electrical steering system should be tempered by limit switches located at the rudder stops.

EHPESSET

Type	Description
EHPESSET	Set of limit switches (2 pieces)