

HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



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HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS

INTRODUCTION

L.S Hydraulic Steering Systems

Our hydraulic steering systems for outboard motors **are perfectly adapted to the requirements of different applications**, i.e. pleasure boating, workboats, professional or amateur fishing, competition and its accompaniment.

They **are easy to install**, state of the art machine finished and **made to resist a marine environment**.

You can easily select **the best suited system for your boat** within the most comprehensive range available on the market with a guarantee of **efficiency, reliability and smoothness**.

Our systems carry a **2 year warranty** and are **CE** approved.

DESCRIPTION OF L.S HYDRAULIC STEERING SYSTEMS

As a general rule, the basic set up of a steering system includes:

- 1 Cylinder,
- 1 Manual pump,
- Fittings and tubing to connect the cylinder to the manual pump.

Other elements will be added to this basic set up in function of the number of steering stations, the number of outboard motors to be operated and the addition of a power pack for the automatic pilot.

Cylinder

The cylinder is the dictating element towards the selection of a system as it gives the power to the steering system. To select a cylinder, follow the method described on page 2.

Manual pump

The manual pump is an axial piston pump which sucks and forces back the oil contained in the circuit when the wheel is operated. Its cubic capacity determines the number of turns required for a lock to lock manoeuvre of the motor(s). The pump is fitted with lock valves to prevent inopportune motor movement when the helm is not operated. The pump is also fitted with pressure relief valves to protect the circuit against abnormal pressure increase.

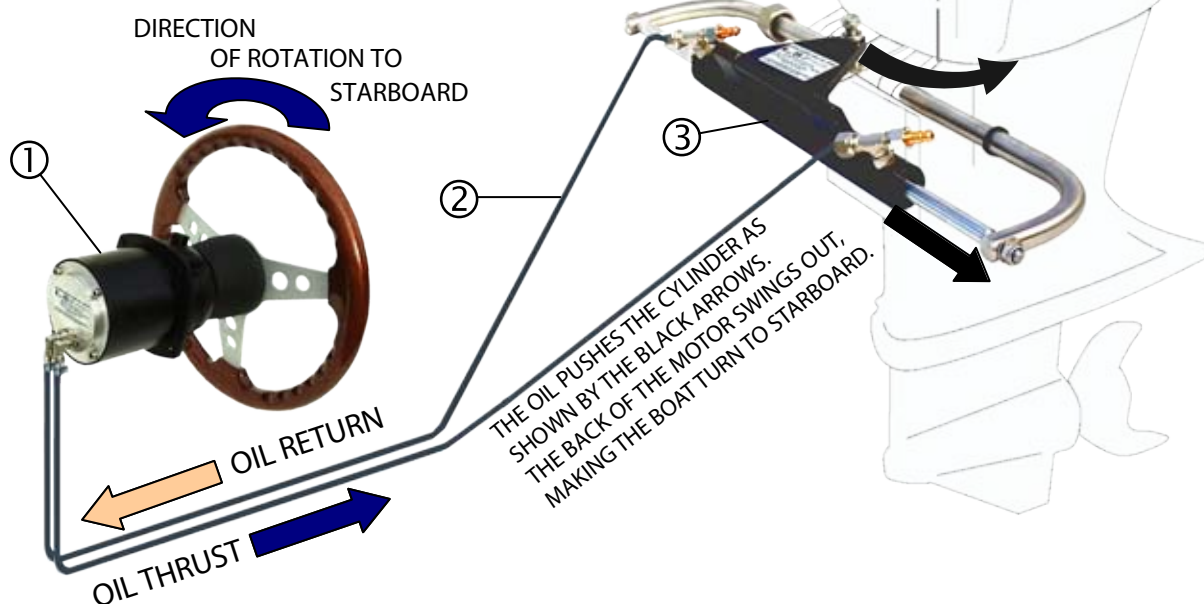
Tubing

Tubing is designed for hydraulic transfer under pressure and is easily integrated in the installation as a result of its flexibility and small bending radius. Tubing diameter is selected in function of the manual helm pump flow rate.

HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS

WORKING PRINCIPLE

- ① Manual pump
- ② Flexible tube
- ③ Cylinder



SELECTION OF THE STEERING SYSTEM

To select a steering system in our range, first determine the maximum horse power developed by the outboard motor(s) and the rotational direction of the propellers on installations with several motors.

Indeed:

- **For twin motor installations working in the same rotational direction, add the power of both motors** (see example below).

Whereas:

- **For twin motor installations working in counter-rotation, take into account the power of one motor only** (see example below).

Examples:

	Maximum Power
For the installation of one single motor 1 x 240 H.P.	240 H.P.
For twin motor installation 2 x 115 H.P. (same rotational direction)	230 H.P.
For twin motor installation 2 x 115 H.P. (in counter rotation)	115 H.P.

Now select in our range the hydraulic steering which complies with the maximum power of the motor(s).

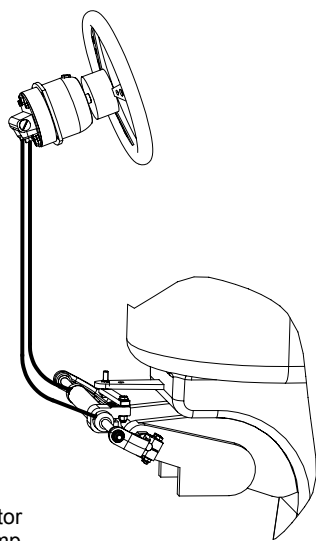
Examples:

Maximum power 115 H.P.	LS 226 (page 5)
Maximum power 230 H.P.	LS 300 PRO (page 9) or LS 232 C (page 10)

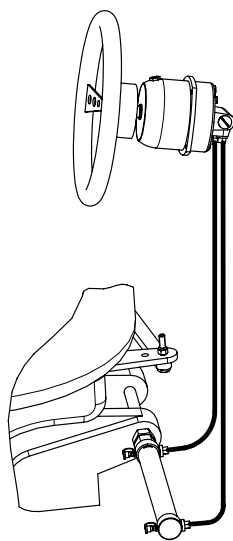
For twin motor installations when the calculated maximum power exceeds the maximum power the steering system is given for (ex.: 2 x 175 H.P. in same rotational direction = 350 H.P.), it will be necessary to install a cylinder on each motor with a parallel hydraulic circuit (see "Different types of assemblies" on page 3).

DIFFERENTS TYPES OF ASSEMBLIES

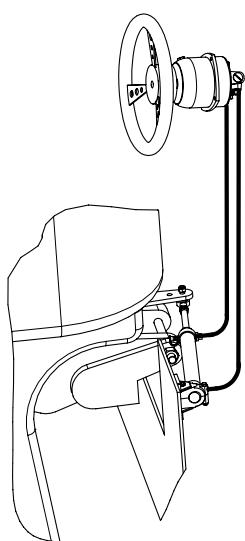
Single-motor installations



1 motor
1 pump
1 front mount cylinder

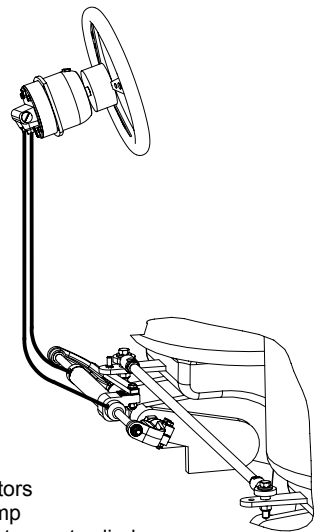


1 motor
1 pump
1 side mount cylinder

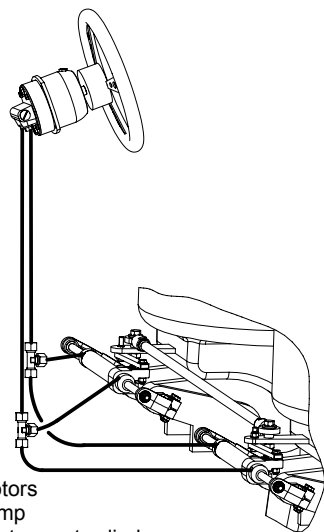


1 motor
1 pump
1 side mount cylinder on panel

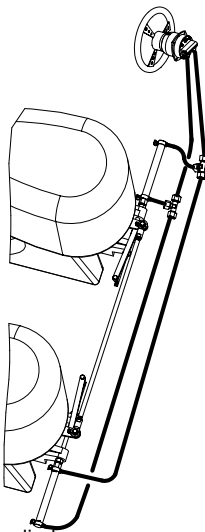
Twin-motor installations



2 motors
1 pump
1 front mount cylinder
1 tie rod



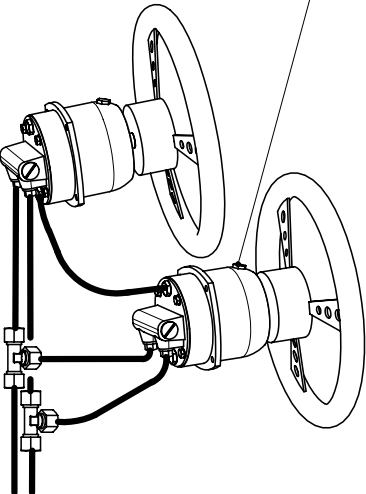
2 motors
1 pump
2 front mount cylinders
1 tie rod



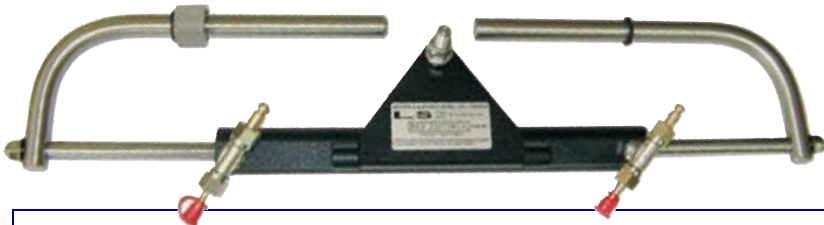
2 motors
1 pump
2 side mount cylinders
1 tie rod

Installation for double steering station

Non vented plug compulsory



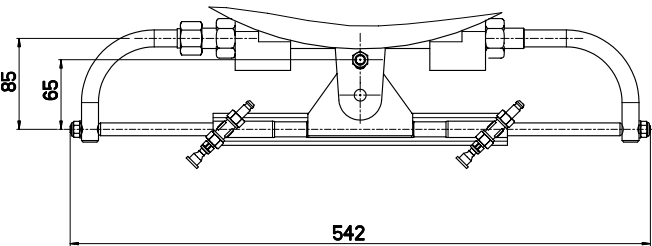
HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



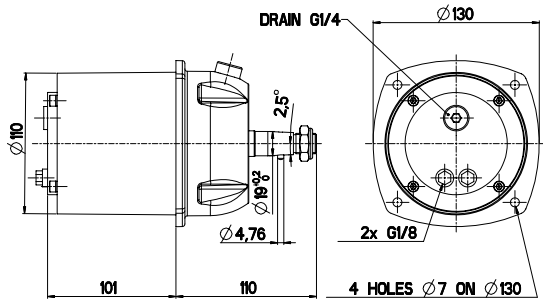
FOR OUTBOARD MOTORS UP TO 75 H.P.
(contact us for boat speed exceeding 40 knots)

LS 2024 2201982 Pump 201 HB with lock valve + fittings + cylinder VHM 224 + fittings + 10 m of flexible tube

PORT TO STARBOARD 3.6 turns



2201981 VHM 224 **Weight: 2 kg**

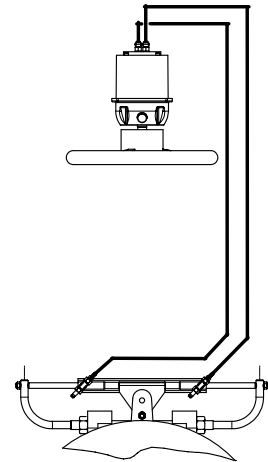


2201980 201 HB with lock valve **Weight: 2.7 kg**

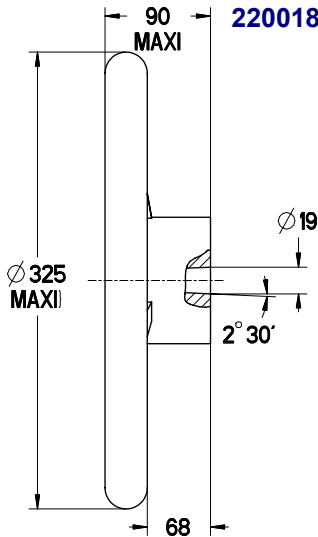
Code of elements that can make up a complete kit

2201980	Pump 201 HB with lock valve
2201981	Cylinder VHM 224 + fittings
2201989	Set of fittings for pump 201 HB
2200810	Ø 6 mm flexible tube (per metre)
2200017	Oil (2 litre can)

1 motor
1 cylinder
1 pump



2200181 Plastic wheel



2200182 Imitation leather/anodised aluminium wheel



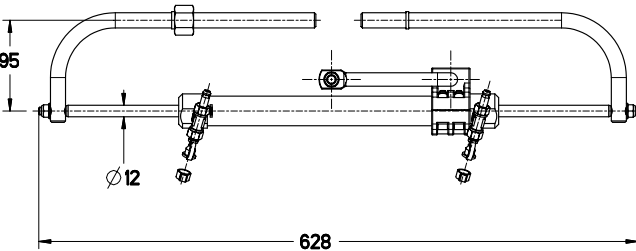
HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



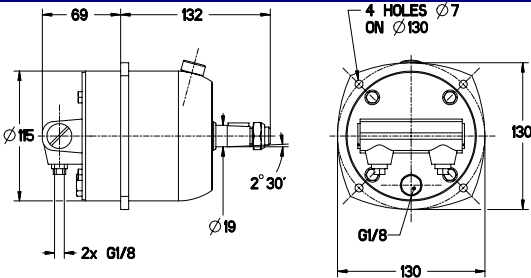
FOR OUTBOARD MOTORS UP TO 115 H.P. (180 H.P. for two motors working in counter-rotation)

LS 226 **2201757** Pump 20 HB with lock valve + fittings + cylinder VHM 226 + non-oxidizing fittings + 10 m of flexible tube

PORT TO STARBOARD 4.5 turns



2200830 VHM 226 + fittings **Weight: 3 kg**



2200804 20 HB with lock valve **Weight: 2.3 kg**

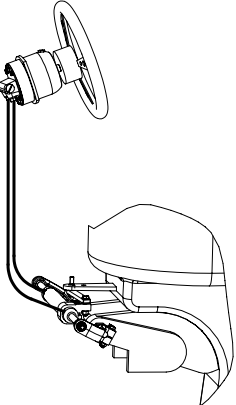
Code of elements that can make up a complete kit

2200804	Pump 20 HB with lock valve
2200830	VHM 226 + fittings
2200807	Set of pump fittings
2200809	Set of tees for Ø6 mm flex tube
2200810	Ø6 mm flexible tube (per metre)
2200017	Oil (2 litre can)
2202041	Tie rod length 470 – 710 mm

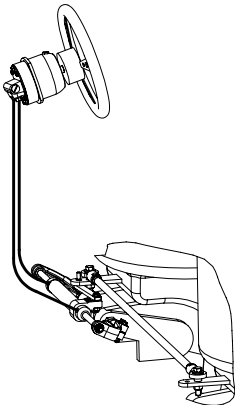
We recommend oil type **DEXRON II** or oil viscosity **ISO 22**



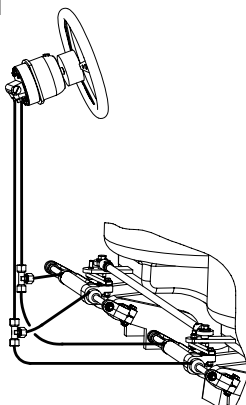
1 motor
1 cylinder
1 pump



2 motors
1 cylinder
1 pump
1 tie rod

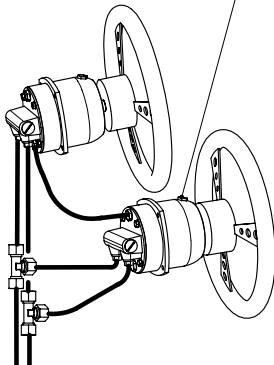


2 motors
2 cylinders
1 pump
1 tie rod



Double station

CAUTION
Non vented plug



HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



**FOR OUTBOARD MOTORS UP TO 150 H.P.
(230 H.P. for two motors working in counter-rotation)
Contact us for boat speed exceeding 40 knots**

LS 2428

2202274

Pump 201 HB with lock valve +
fittings + cylinder VHM EX 281
+ fittings + 10 m flexible tube

PORT TO STARBOARD 4.8 turns

**Code of elements that can
make up a complete kit**

2201980

Pump 201 HB with lock valve

2202275

Cylinder VHM EX 281 + fittings

2201989

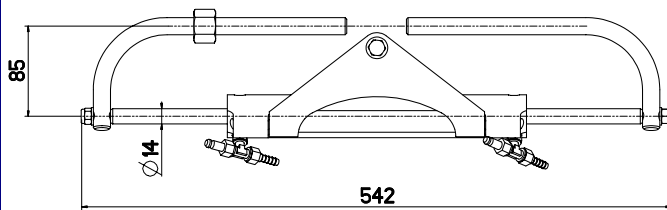
Set of fittings for pump 201 HB

2200810

Ø 6 mm flexible tube (per metre)

2200017

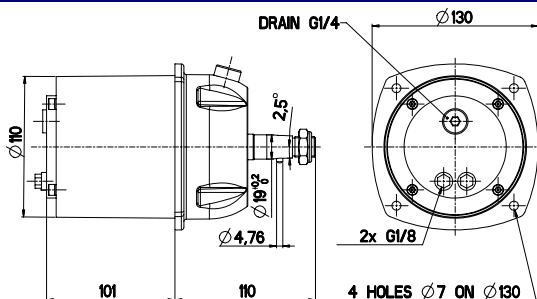
Oil (2 litre can)



1 motor
1 cylinder
1 pump

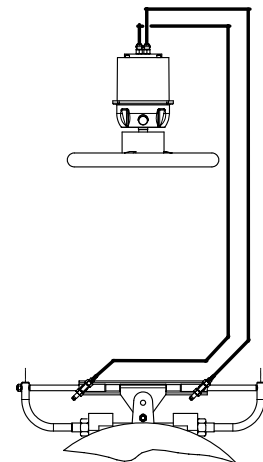
2202275 VHM EX 281

Weight: 2.8 kg

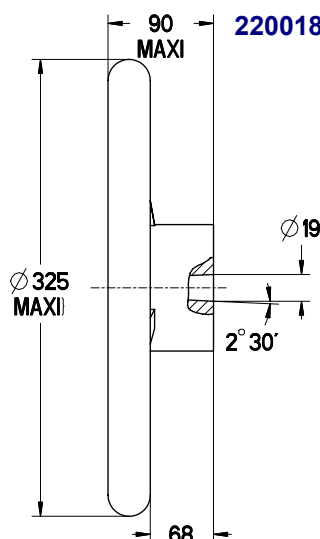


2201980 201 HB with lock valve

Weight: 2.7 kg



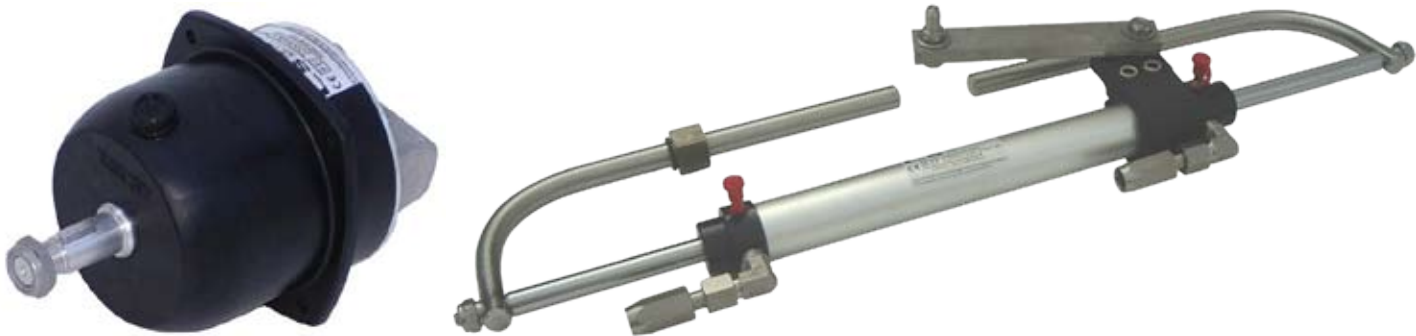
2200181 Plastic wheel



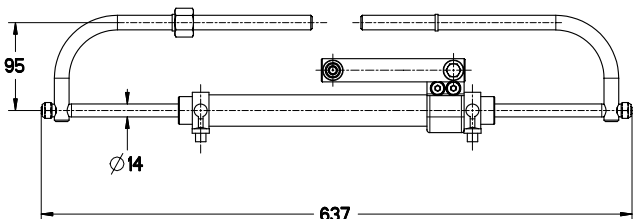
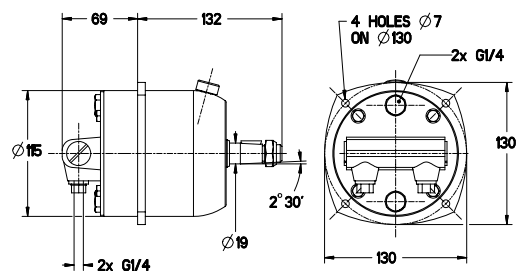

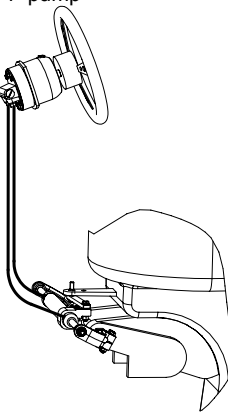
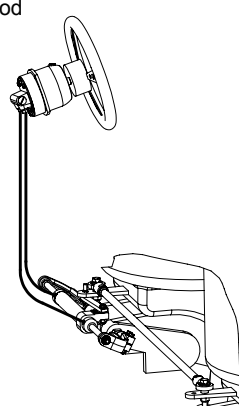
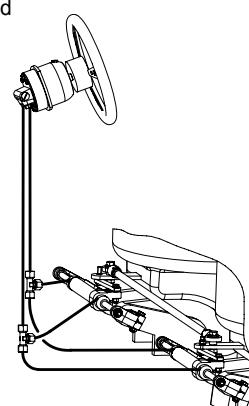
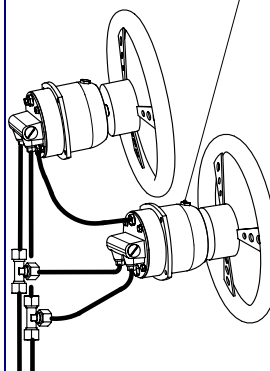
2200182 Imitation leather/anodised aluminium wheel



HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



FOR OUTBOARD MOTORS UP TO 175 H.P. (300 H.P. for two motors working in counter-rotation)

LS 228 C 2202198 Pump 26 HB with lock valve + fittings + cylinder VHM 228 + s/steel fittings + 10 m of flexible tube		Code of elements that can make up a complete kit		Type of pump	Nb of turns lock to lock
PORT TO STARBOARD 4.1 turns		2202644 Pump 20 HB with lock valve G ¼		2202644 20 HB with lock valve G ¼	5.1
		2200948 Pump 26 HB with lock valve			
		2200950 Pump 30 HB with lock valve			
		2200020 Cylinder VHM 228			
		2200322 Cylinder VHM 228 RI			
		2200021 Set of pump fittings		2200948 26 HB with lock valve	4.1
		2200038 Set of s/steel pump fittings			
		2200023 Set of s/steel cylinder fittings			
		2200047 Set of tees for Ø8 mm flex tube			
2200020 VHM 228 Weight: 4.1 kg		2200024 Ø8 mm flexible tube (per metre)		2200950 30 HB with lock valve	3.5
		2200017 Oil (2 litre can)			
		2202041 Tie rod length 470 – 710 mm			
		We recommend oil type DEXRON II or oil viscosity ISO 22			
2200948 26 HB with lock valve Weight: 2.3 kg					
1 motor 1 cylinder 1 pump		2 motors 1 cylinder 1 pump 1 tie rod		2 motors 2 cylinders 1 pump 1 tie rod	
					
				Double station CAUTION Non vented plug 	

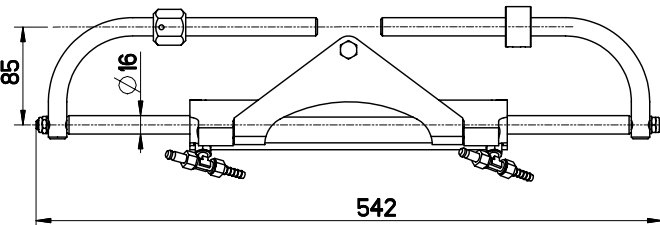
HYDRAULIC STEERING SYSTEMS
FOR OUTBOARD MOTORS



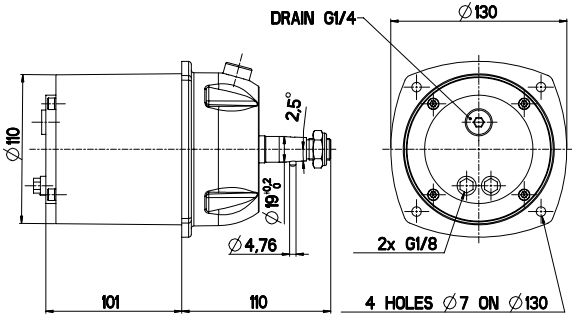
FOR OUTBOARD MOTORS UP TO 200 H.P.
(350 H.P. for two motors working in counter-rotation)

LS 2832 2202112 Pump 281 HB with lock valve + fittings + cylinder VHM EX 321 + fittings + 10 m of flexible tube

PORT TO STARBOARD 4.5 turns



2202114 VHM EX 321 **Weight: 2.8 kg**

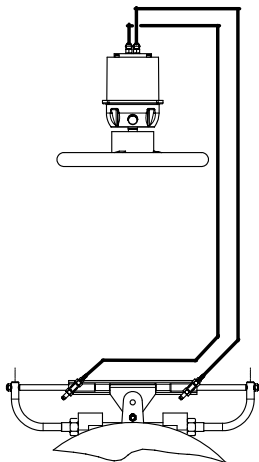


2202113 281 HB with lock valve **Weight: 2.7 kg**

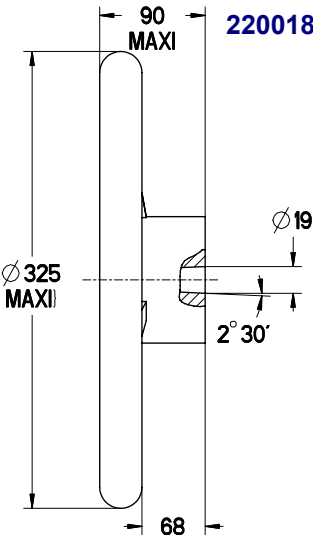
Code of elements that can
make up a complete kit

2202113	Pump 281 HB with lock valve
2202114	Cylinder VHM EX 321 + fittings
2202115	Set of fittings for pump 281 HB
2200024	Ø 8 mm flexible tube (per metre)
2200017	Oil (2 litre can)

1 motor
1 cylinder
1 pump



2200181 Plastic wheel

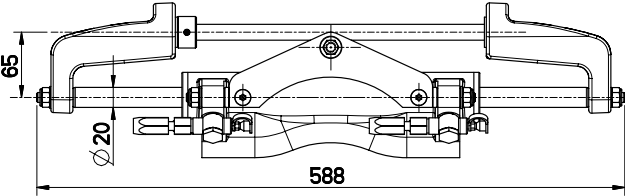
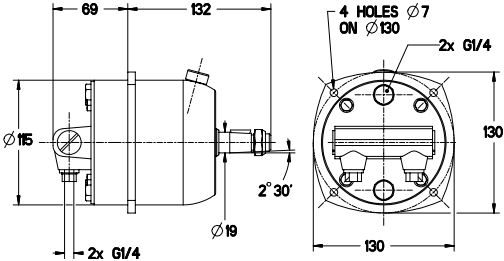

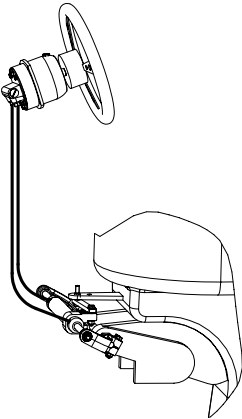
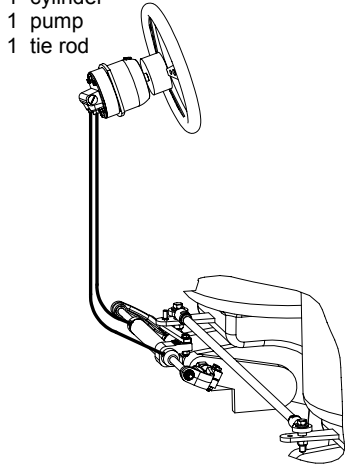
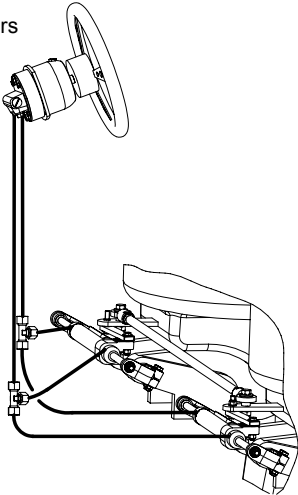
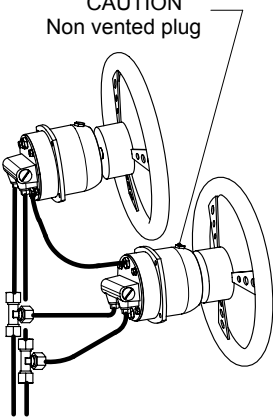


2200182 Imitation leather/anodised aluminium wheel

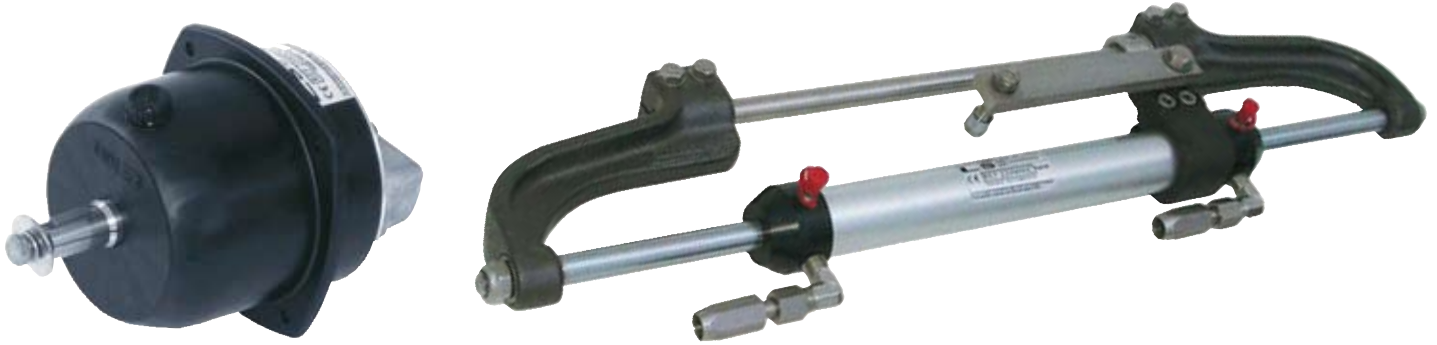


HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



FOR OUTBOARD MOTORS UP TO 300 H.P. (500 H.P. for two motors working in counter-rotation)				
LS 300 PRO/26 2202645 Pump 26 HB with lock valve + fittings + cylinder VHM 300 PRO + s/steel fittings + 10 m of flexible tube PORT TO STARBOARD 5.3 turns		Code of elements that can make up a complete kit		Nb of turns lock to lock
		2202644	Pump 20 HB with lock valve G 1/4	2202644 20 HB with lock valve G 1/4 7
		2200948	Pump 26 HB with lock valve	
		2200950	Pump 30 HB with lock valve	
		2202305	Cylinder VHM 300 PRO RI	
		2200021	Set of pump fittings	2200948 26 HB with lock valve 5.3
		2201733	Set of s/steel cylinder fittings.	
		2200038	Set of s/steel pump fittings	
2202305 VHM 300 PRO - RI Weight: 5.9 kg		2200047	Set of tees for Ø8 mm flex tube	
		2200024	Ø8 mm flexible tube (per metre)	2200950 30 HB with lock valve 4.5
		2200017	Oil (2 litre can)	
		2202103	300 PRO tie rod length 580 – 810 mm	
		We recommend oil type DEXRON II or oil viscosity ISO 22		
2200948 26 HB with lock valve Weight: 2.3 kg				
1 motor 1 cylinder 1 pump 	2 motors 1 cylinder 1 pump 1 tie rod 	2 motors 2 cylinders 1 pump 1 tie rod 		Double station CAUTION Non vented plug 

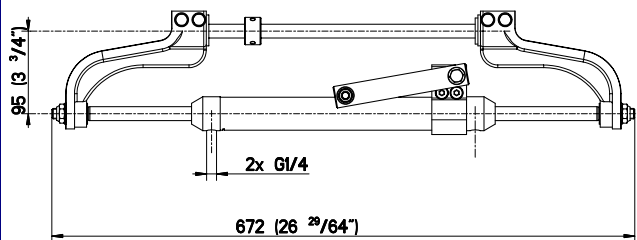
HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



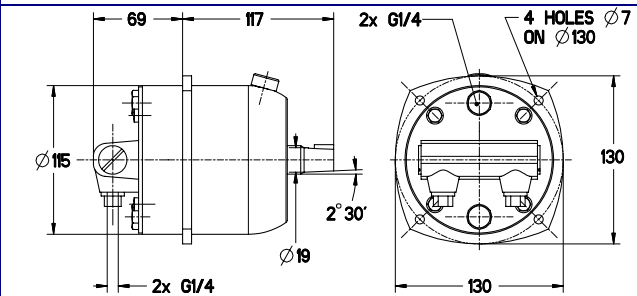
FOR OUTBOARD MOTORS UP TO 300 H.P. (500 H.P. for two motors working in counter-rotation)

LS 232 C 2202224 Pump 30 HB with lock valve
+ fittings + cylinder VHM 232 H
+ s/steel fittings + 10 m flexible
tube

PORT TO STARBOARD 4.7 turns



2200596 VHM 232 H **Weight: 4.1 kg**



2200950 30 HB with lock valve **Weight: 3.4 kg**

Code of elements that can make up a complete kit

2202644	Pump 20 HB with lock valve G 1/4
2200948	Pump 26 HB with lock valve
2200950	Pump 30 HB with lock valve
2200596	Cylinder VHM 232 H
2200696	Cylinder VHM 232 H + RI
2200021	Set of pump fittings
2200038	Set of s/steel pump fittings
2200023	Set of s/steel cylinder fittings
2200047	Set of tees for Ø8 mm flex tube
2200024	Ø8 flexible tube (per metre)
2200017	Oil (2 litre can)
2202041	Tie rod 470 – 710 mm

Type of pump

Nb of turns lock to lock

2202644
20 HB with
lock valve G 1/4

7

2200948
26 HB with
lock valve

5.5

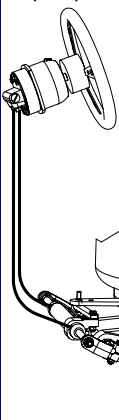
2200950
30 HB with
lock valve

4.7

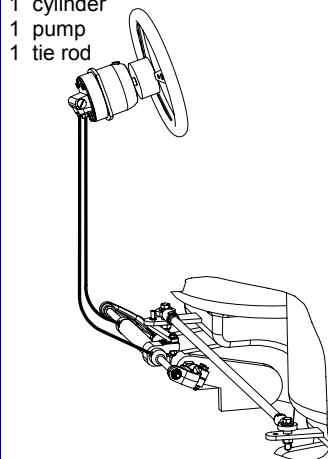
We recommend oil type
DEXRON II
or
oil viscosity **ISO 22**



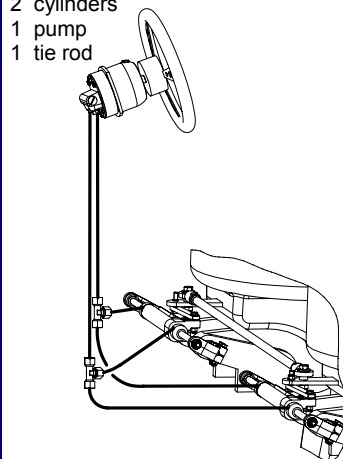
1 motor
1 cylinder
1 pump



2 motors
1 cylinder
1 pump
1 tie rod

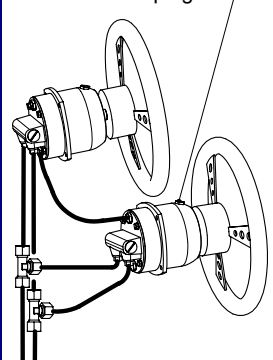


2 motors
2 cylinders
1 pump
1 tie rod



Double station

CAUTION
Non vented plug



HYDRAULIC STEERING SYSTEMS FOR OUTBOARD MOTORS



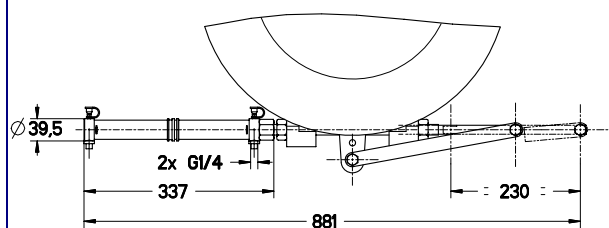
SIDE MOUNTED STEERING

Maxi motor power **115 H.P.** **2201134** **LS 26 HB**
(Pump 20 HB with lock valve + fitt. + VHM 26 ST HB + fitt + 8m of flex tube)

Maxi motor power **175 H.P.** **2200951** **LS 26 A**
(Pump 26 HB with lock valve + fitt. + VHM 28 ST HB + fitt + 8m of flex tube)

Maxi motor power **175 H.P.** **2200952** **LS 26 B**
(Pump 26 HB with lock valve + fitt. + VHM 28 ST HBR + fitt + 8m of flex tube)

Maxi motor power **300 H.P.** **2201327** **LS 32 HB**
(Pump 30 HB with lock valve + fitt. + VHM 32 ST HB + fitt + 8m of flex tube)



2201113 VHM 26 ST HB
2200033 VHM 28 ST HB
2200608 VHM 32 ST HB

Weight: 1.2 kg
Weight: 1.5 kg
Weight: 1.5 kg

Code of elements that can make up a complete kit

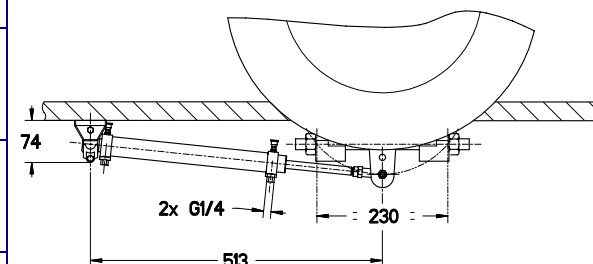
Type of pump

2200804	Pump 20 HB with lock valve
2200948	Pump 26 HB with lock valve
2200950	Pump 30 HB with lock valve
2201113	Cylinder VHM 26 ST HB
2200033	Cylinder VHM 28 ST HB
2200196	Cylinder VHM 28 ST HBR
2200608	Cylinder VHM 32 ST HB
2200807	Set of fittings for 20 HB
2200021	Set of pump fittings
2200022	Set of cylinder fittings
2200038	Set of pump s/steel fittings
2200023	Set of cylinder s/steel fittings
2200809	Set of tees for Ø6 mm flex. tube
2200047	Set of tees for Ø8 mm flex. tube
2200810	Ø6 flexible tube (per metre)
2200024	Ø8 flexible tube (per metre)
2202041	Tie rod 470 – 710 mm
2200017	Oil (2 litre can)

2200804
20 HB with lock valve

2200948
26 HB with lock valve

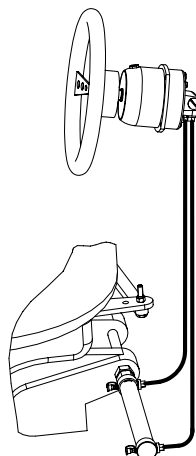
2200950
30 HB with lock valve



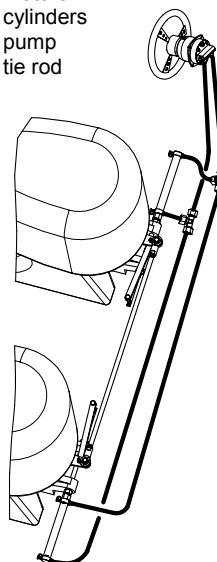
2200196 VHM 28 ST HBR

Weight: 1.1 kg

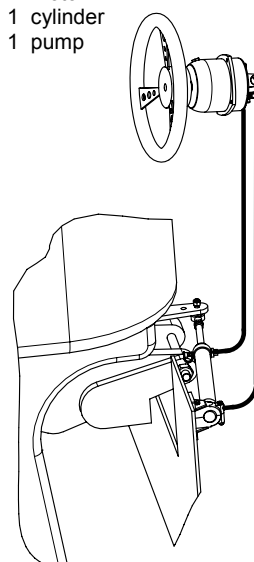
1 motor
1 cylinder
1 pump



2 motors
2 cylinders
1 pump
1 tie rod



1 motor
1 cylinder
1 pump

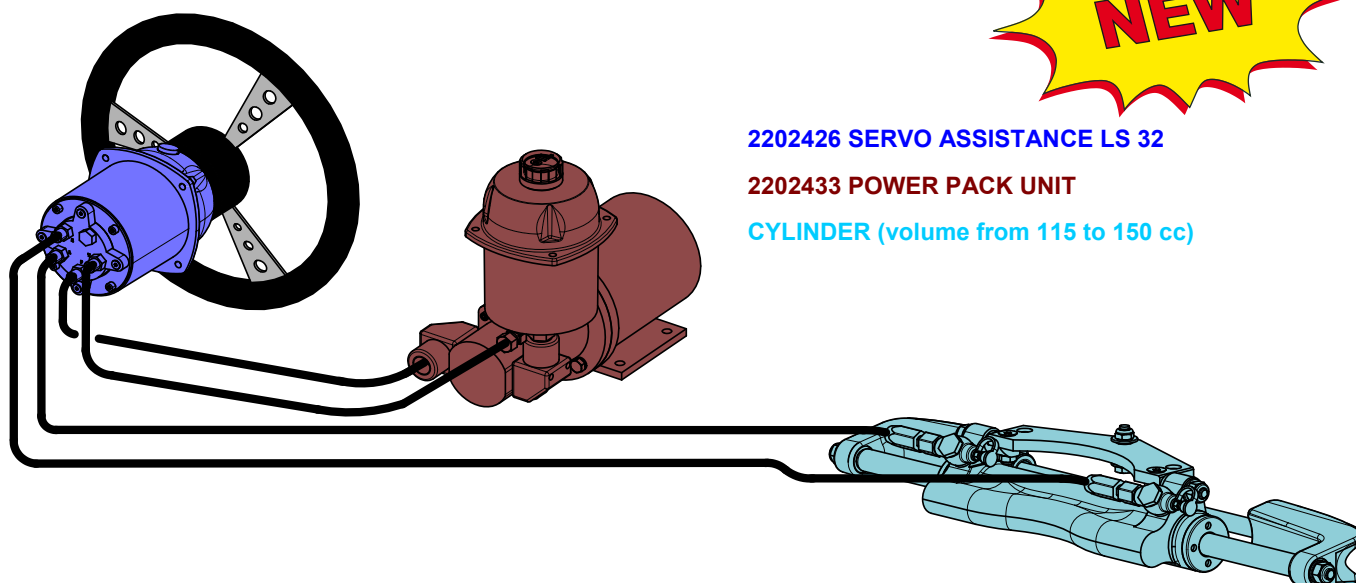


We recommend oil type
Dexron II
or oil viscosity **ISO 22**



POWER ASSIST STEERING FOR OUTBOARDS

NEW



2202426 SERVO ASSISTANCE LS 32

2202433 POWER PACK UNIT

CYLINDER (volume from 115 to 150 cc)

Designed for new installations or retrofits, for single or double steering stations, LS power assisted steering systems and kits for power assistance ensure absolute steering comfort. Steering is accurate, smooth and reactive (4.5 turns lock to lock with 115 to 150 cc cylinders).

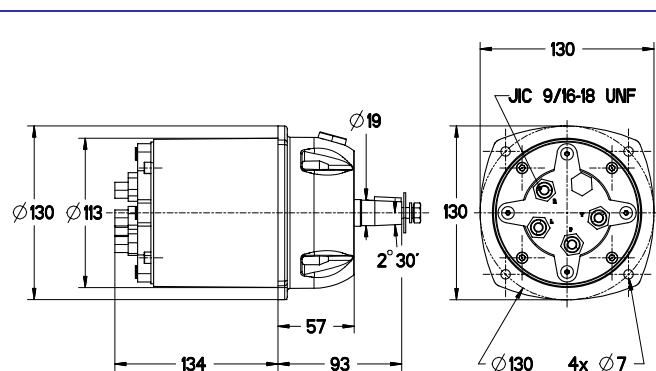
Our power assist steering systems are easy to install and compatible with hydraulic autopilots. They are supplied in 12 V (24 V available upon request).

2202430 Kit for power assist single steering station without cylinder (12 V) composed of:

- 1 servo assistance LS 32 **2202426**
- 1 power pack unit **2202433**
- 1 connection kit **2202427**

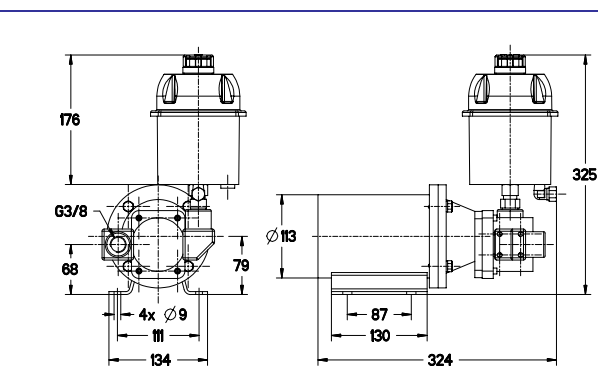
2202431 Kit for power assist double steering station without cylinder (12 V) composed of:

- 1 servo assistance LS 32 **2202426**
- 1 servo assistance LS 32 dble steering station **2202649**
- 1 power pack unit **2202433**
- 1 connection kit for dble steering station **2202650**



2202426 SERVO ASSISTANCE LS 32

2202649 SERVO ASSISTANCE LS 32 dble steering station



2202433 POWER PACK UNIT in 12 V *

ACCESSORIES

DEXRON II oil, 2 litre can	2200017	Ø 8 mm flexible tube (per metre)	2200024
Tilt system for power assistance	2202432	Pump bezel	2201058
Bulkhead strain relief	2201753	Steering wheels, see page 17	

* Available in 24 Volt upon request

POWER ASSIST STEERING FOR OUTBOARDS

NEW

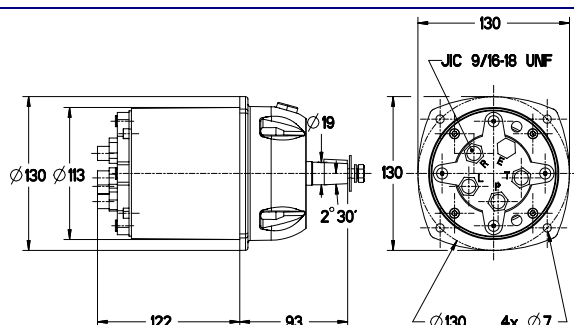


2202428 LS 232 C POWER ASSISTED 12 V composed of:

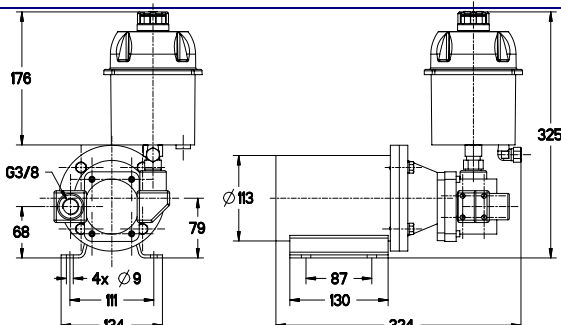
- 1 servo assistance LS 32 **2202426**
- 1 power pack unit **2202433**
- 1 connection kit **2202427**
- 1 cylinder VHM 232H + s/steel fittings **2200696**

2202429 LS 300 PRO POWER ASSISTED 12 V composed of:

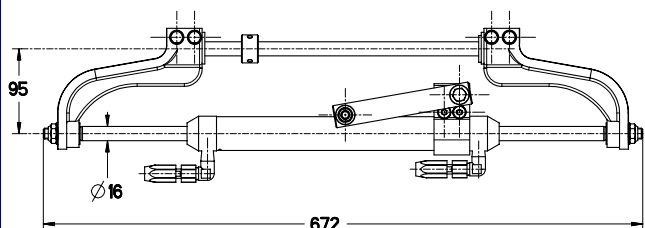
- 1 servo assistance LS 32 **2202426**
- 1 power pack unit **2202433**
- 1 connection kit **2202427**
- 1 cylinder VHM 300 PRO + s/steel fittings **2202305**



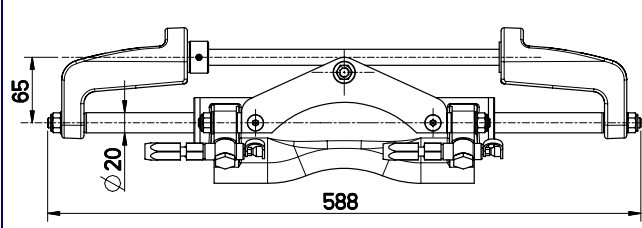
2202426 SERVO ASSISTANCE LS 32



2202433 POWER PACK UNIT in 12 V *



2200696 CYLINDER VHM 232 H + S/STEEL FITTINGS



2202305 CYLINDER VHM 300 PRO + S/STEEL FITTINGS

ACCESSORIES

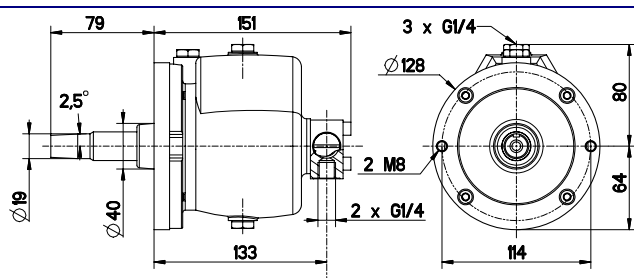
DEXRON II oil, 2 litre can	2200017	Ø8 mm flexible tube (per metre)	2200024
Tilt system for power assistance	2202432	Pump bezel	2201058
Tie rod 470 – 710 mm (232)	2202041	Bulkhead strain relief	2201753
Tie rod 580 – 810 mm (300 PRO)	2202103	Steering wheels, see page 17	

* Available in 24 Volt upon request

HYDRAULIC STEERING SYSTEMS FOR RACE BOATS



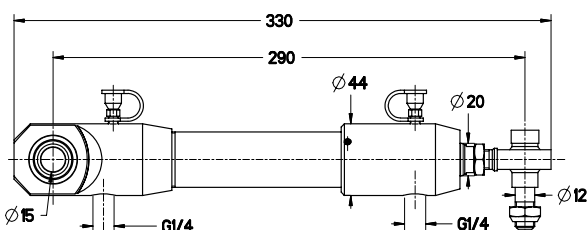
SINGLE-ENGINE INSTALLATION



2200073 Pump 40 CT with lock valve **Weight: 4.1 kg**

The steering system will be composed of:

- 1 Pump 40 CT with LV **2200073**
- 3 Sets of pump fittings **2200021**
- 1 Distribution block **2210002**
- 2 Sets of cylinder fittings **2200023**
- 2 "Race" cylinders 28 C158 **2210000**
- x Metres of Ø8 flexible tube **2200024**

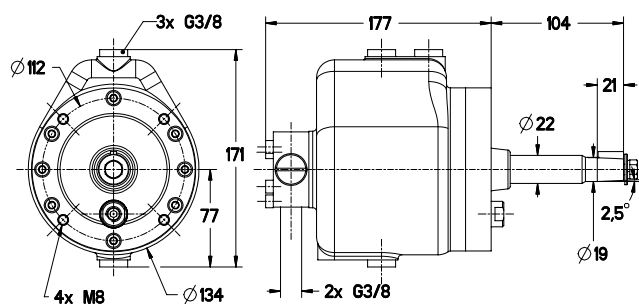


2210000 Race cylinder 28 C158 **Weight: 1.1 kg**

We recommend oil type **DEXRON II**
or
oil with viscosity **ISO 22**



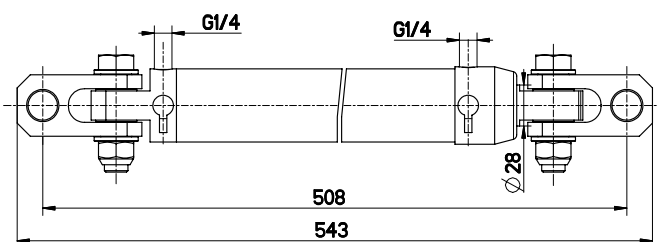
TWIN-ENGINE INSTALLATION



2202068 Pump 30-90 CT with lock valve **Weight: 7.5 kg**

The steering system will be composed of:

- 1 Pump 30-90 CT with LV **2202068**
- 1 Distribution block **2210002**
- 2 Sets of cylinder fittings **2200023**
- 2 S/steel cylinders 40 - 28 C220 **2201976**
- x Metres of Ø10 flexible tube **2200070**
- x Metres of Ø8 flexible tube **2200024**
- + Various fittings



2201976 Race cylinder 40 C220 **Weight: 6.4 kg**

Photo: Laurent PLASSE
OFFSHORE PASSION

French Champion 2003 – 2005 – 2006
World Champion 2005

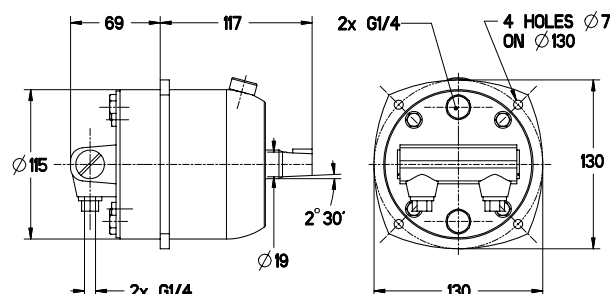
HYDRAULIC STEERING SYSTEMS FOR STERN-DRIVES

HYDRAULIC STEERING SYSTEMS FOR POWER ASSISTED STERN-DRIVES

Cylinder type 28 ST HB AS is fitted directly on the power assisted steering system of the stern-drive motor. No additional mounting kit is required. It is suitable for Volvo, OMC, Mercruiser, Yamaha and others...

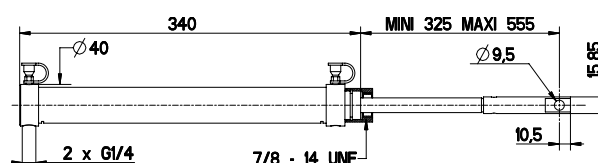
The kit for a single steering station consists of:

- 1 pump type 30 HB with lock valve **2200950**
- 1 set of pump fittings **2200021**
- 1 set of cylinder fittings **2200022**
- 1 cylinder type VHM 28 ST HB AS **2200358**
- x metres of Ø 8 mm flexible tube **2200024**



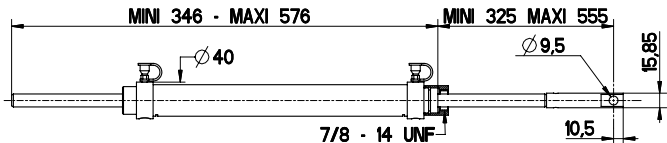
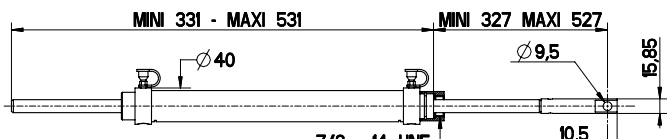
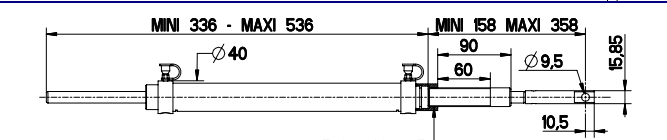
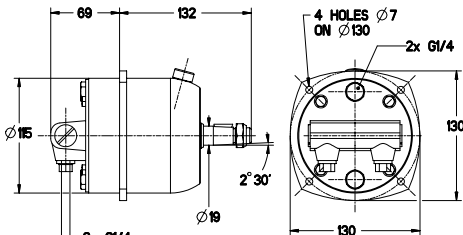
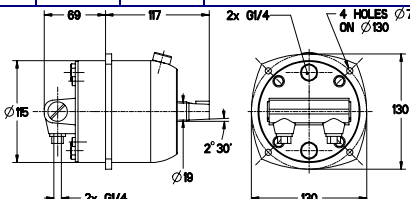
For a double steering station, add the following to the above kit:

- 1 pump type 30 HB with lock valve **2200950**
- 2 sets of pump fittings **2200021**
- 1 set of tees **2200047**
- x metres of Ø 8 mm flexible tube **2200024**



CYLINDERS FOR STERN-DRIVES WITHOUT POWER ASSISTANCE

These cylinders are fitted on in the same way as a cable steering system. Fittings and tubes are the same as for cylinder VHM 28 ST HB AS above (2200358).

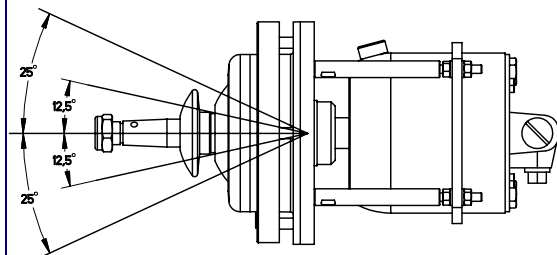
Number of turns lock to lock in function of the PUMP / CYLINDER selection	2200948 26 HB-L.V.	2200950 30 HB-L.V.	2201105 35 HB-L.V.	2201107 40 HB-L.V.	TYPE OF MOTOR TYPE OF CYLINDER (Other types on request)
	4	3.6	3	2.6	Up to 175 H.P. VOLVO 2200546 28 ST HB DT
	5	4.5	3.7	3.2	Up to 260 H.P. VOLVO 2200460 32 ST HBV DT
	4.7	4.2	3.5	3	Up to 175 H.P. MERCURISER - OMC 2200344 32 ST HBM DT
 22000948 26 HB with lock valve	 2200950 2201105 2201107 30 HB with lock valve 35 HB with lock valve 40 HB with lock valve				

ACCESSORIES FOR OUTBOARD STEERING SYSTEMS



2202655 TILT HB 3

This system can be fitted on pump types 30HB, 35HB and 40 HB standard.



ORIENTATION CAPACITY

Possible orientation angle:
plus or minus 25° (5 positions).



TIE RODS FOR OUTBOARD MOTORS



*Allow the tilting of one motor
independently of the other one*

2202041	Length 470 – 710 mm	
2202102	Length 710 – 940 mm	
2202103	Length 580 – 810 mm	<i>To be fitted with 1 VHM 300 PRO</i>
2202123	Length 660 – 900 mm	<i>To be fitted with 2 VHM 300 PRO</i>

2201058 PUMP BEZEL



2201753 BULKHEAD STRAIN RELIEF



(Suitable for all LS flexible
tubes and all other flexible
tubes with an outer
diameter of 8 to 12 mm)



RANGE OF STEERING WHEELS



2200181 Plastic Wheel Ø 320	2200182 Imitation Leather/Anodised Alu Ø 320
2202461 S/Steel Wheel Ø 320	2202462 S/Steel Wheel with knob Ø 275
2202463 Covered S/Steel Wheel Ø 340	2202464 Covered S/Steel Wheel with knob Ø 340
2200985 S/Steel Wheel Ø 350	2200986 Covered S/Steel Wheel Ø 400

HYDRAULIC FLEXIBLE TUBES

FLEXIBLE TUBES FOR CRIMP CONNECTIONS

Only the sole use of LS flexible tubes in Ø6, 8 or 10 mm will guarantee the global performances of LS steering systems.

A few references:

- Ø6 Flexible tube - per metre	2200810
- Ø8 Flexible tube - per metre	2200024
- Ø10 Flexible tube - per metre	2200070
- Ø6 Flexible tube - length 8 m	1204267
- Ø6 Flexible tube - length 10 m	1204268
- Ø6 Flexible tube - length 12 m	1204740
- Ø6 Flexible tube - length 25 m	1204985
- Ø6 Flexible tube - length 35 m	1205301
- Ø6 Flexible tube - length 400 m	1205359
- Ø8 Flexible tube - length 8 m	1224986
- Ø8 Flexible tube - length 12 m	1204742
- Ø8 Flexible tube - length 20 m	1205245
- Ø8 Flexible tube - length 35 m	1205300
- Ø8 Flexible tube - length 400 m	1205360

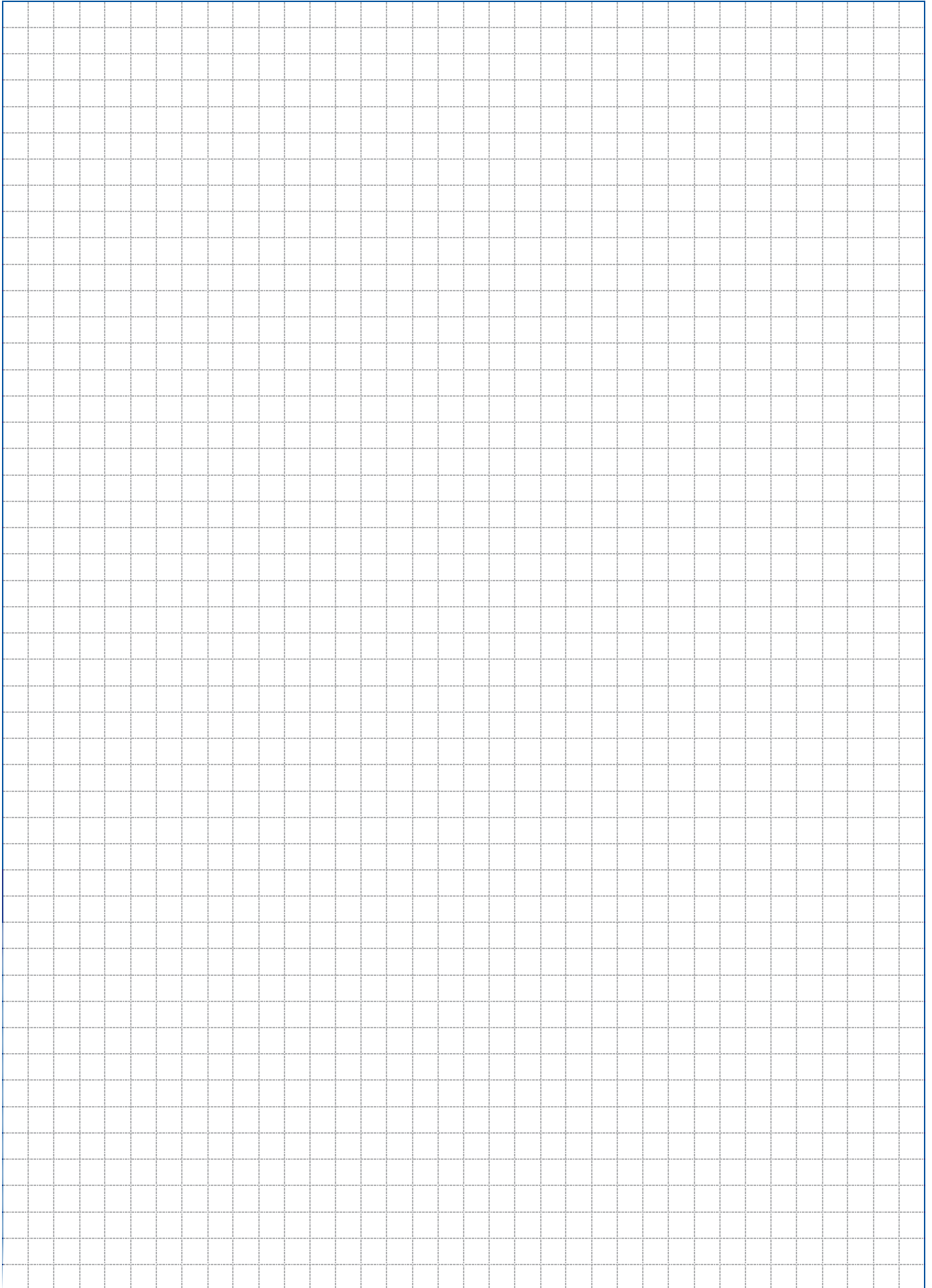


FITTINGS

FOR FLEXIBLE TUBE

Type	Designation	Code for steel	Code for s/steel
Elbow fittings 90°	G 1/4 conic JIC M. 9/16	2200321	2200309
	G 3/8 conic JIC M. 9/16	2200426	
Straight fittings	G 1/4 conic JIC M. 9/16	2200427	2200447
	G 1/4 cylindric JIC M. 9/16	2200199	2200448
	G 3/8 conic JIC M. 9/16	2200428	
	G 3/8 cylindric JIC M. 9/16	2200429	2202039
Adapters	G 1/4 conic JIC F.T. 9/16	2200430	
	G 3/8 conic JIC F.T. 9/16	2200356	
Connection fitt.	JIC M. 9/16	2200288	
Tee fittings	G 1/4 conic 2 x JIC M. 9/16	2200431	2202100
	G 3/8 conic 2 x JIC M. 9/16	2200432	
Equal tee fittings	JIC M. 9/16	2200433	2202009
Straight fittings	JIC M. 9/16 inner diam. 8	2200299	2200449
	JIC M. 9/16 inner diam. 10	2200301	
Elbow fittings	JIC M. 9/16 inner diam. 8	2200302	
	JIC M. 9/16 inner diam. 10	2200303	
Connection fitt.	Inner diam. 8	2200373	
	Inner diam. 10	2200434	

NOTES



GUARANTEE

- 1) The manufacturer guarantees the equipment sold and supplied against any faulty manufacturing or defects whether they are the result of the design, the raw material, the manufacturing or construction under the terms and restrictions indicated below :
- 2) The guarantee is applicable only if the client has satisfied the general obligations of this contract, in particular, the terms of payment.
- 3) The guarantee only includes equipment sold by the manufacturer. It does not extend to equipment in which the manufacturers supply has been installed and, in particular, to the performances of this equipment.
- 4) When the manufacturers supplies are installed by the client or a third party into any other equipment, they remain solely responsible for this installation, the selection and suitability of the manufacturers supplies as the manufacturers diagrams, designs and proposals are given as an indication only, unless otherwise specified in the order. In particular, the manufacturer does not guarantee components or equipment not sold by him, nor the assembly, adaptation, design or operation of the assembly or parts of the assembly thus created. The manufacturers supply, as well as the assembly created by the client or a third party, are assumed to be operated under the exclusive control of the client or the third party.
- 5) The period of the guarantee is eighteen months starting from the date of first use by the original consumer or twenty four months from the date of delivery of the products to the transporter, distributor or wholesaler. The manufacturer has the right to require from the client proof of the commissioning date specified on the guarantee request. This period is neither extended nor interrupted through legal or amicable claims on the part of the client. At the end of this period, the guarantee is terminated without further consideration.
- 6) The obligation of the guarantee only applies if the client establishes that the defect appeared under normal operating conditions stipulated for this type of supply, or indicated by the manufacturer in writing and during normal operation. It does not apply in case of negligence, faulty maintenance or supervision, operators responsibility, imprudence, non observance of recommended or operating instructions, or the use of oil of insufficient quality for the equipment. The manufacturer is released from responsibility for any damage caused by loss of oil or leaks. The guarantee also does not apply for any incidents resulting from a case of force majeure or Acts of God, as well as any damage, replacement or repairs exceeding the normal material wear.
- 7) The guarantee is limited to the repair in the manufacturer's shop at his own cost within the shortest possible time, of the equipment and parts supplied by him, identified as defective by the technical department. These parts must be sent pre-paid. No claim may be made for compensation for any damage such as personal injury, damage to goods other than those concerned in this contract, privation of possession, operating losses, commercial damage or loss of earnings. During the guarantee period, the cost of labor, dismantling and reassembly of the equipment outside the manufacturer's plant, the shipping costs for repaired, replaced or faulty equipment, travelling and accommodation expenses for technicians are the responsibility of the client.

When the guarantees are given according to the industrial results for a given equipment, these results and the consequences of this undertaking will result in a special agreement between the parties.

- 8) In order to take advantage of this guarantee, the client must notify the manufacturer in writing as soon as possible of the defects attributed to the equipment and provide any proof concerning these defects. He must do his best for the manufacturer to be able to ascertain these defects and to perform corrective actions. The guarantee does not apply if the equipment is not returned to the manufacturer in the state in which it broke down or if it has previously been disassembled, repaired, modified either by a third party, the user or the client. After receiving proper notification of the equipment defect, the manufacturer shall correct this fault as soon as possible, reserving the right, if applicable, to modify all or part of equipment in order to fulfil the obligations.
- 9) The client agrees that the manufacturer will not be responsible for damage due to the fact that the client has not satisfied anyone of the obligations defined above.



For additional information, please contact:

Please indicate :

Type of boat

- ☐ Sport boat
- ☐ Pleasure fishing boat
- ☐ Professional boat

Power and number of outboard motors

- ☐ Under 75 H.P.
- ☐ Under 150 H.P.
- ☐ Under 200 H.P.
- ☐ Under 300 H.P.
- ☐ Above 300 H.P.

Brand and type of outboard motor(s)

- ☐ 2 strokes
- ☐ 4 strokes

Contact us for boat speed exceeding 45 knots

Lecomble & Schmitt

BP n° 2 64240 URT France

Tél : 33 (0)5 59 56 22 22 - Fax : 33(0)5 59 56 27 33

E-mail : commercial@ls-france.com

<http://www.ls-france.com>