PRODUCTS AND SYSTEMS

Complete List of MARSILI Products,
Categories, and Systems
With Description for Web Site

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N° Pag. Document: 105
Documento terminato in data 14/01/2019
File Name: PSCSW-2019

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Note:

1) I testi in Rosso sono componenti mancanti nel sito web / da aggiungere
2) I testi in Blu sono componenti obsoleti / fuori produzione
3) Le note saranno scritte in verde

REVERSIBLE POWER PACKS

AC-02R

The electrohydraulic power pack type AC-02R is supplied with electric motor 12V or 24V-40W-2000Rpm, 0,5 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter and all that is needed for a correct functioning.
This type of power packs is mainly used for sailing vessels or in vessels which require the least power consume possible.
It is used in particular for autopilot systems with electric bypass.

AC-03R

The electrohydraulic power pack type AC-03R is supplied with electric motor 12V or 24V-80W-2200Rpm, 0,5 or 1 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter and all that is needed for a correct functioning.
This type of power packs is mainly used for sailing vessels or in vessels which require the least power consume possible.
It is used in particular for autopilot systems with electric bypass.

AC-05R

The electrohydraulic power pack type AC-05R is supplied with electric motor 12V or 24V-125W-2200Rpm, 0,5 or 1 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter and all that is needed for a correct functioning.
This type of power packs is mainly used for sailing vessels or in vessels which require the least power consume possible.
It is used in particular for autopilot systems with electric bypass.

NOTE:
Da aggiungere nel sito le versioni AC-02RN – AC-03RN – AC-05RN

POWER PACKS 12V / 24V

CC-02 02.006

The electrohydraulic power pack type CC-02 is supplied with electric motor 12V or 24V - 40W-2000Rpm, horizontal 0,5 litre tank (1l optional), solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for small working vessels and/or M/Y with small/medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
UPON REQUEST
– flow regulator
– horizontal 1 litre tank
– Pressure gauge with exclusion
– Painted white

CC-03 02.007

The electrohydraulic power pack type CC-03 is supplied with electric motor 12V or 24V - 80W-2200Rpm, horizontal 0,5 litre tank (1l optional), solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for small working vessels and/or M/Y with small/medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
UPON REQUEST
– Flow regulator
– Horizontal 1 litre tank
– Pressure gauge with exclusion
– Painted white

CC-05 02.008

The electrohydraulic power pack type CC-05 is supplied with electric motor 12V or 24V - 125W-1600Rpm, horizontal 0,5 litre tank (1l optional), solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for small working vessels and/or M/Y with small/medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
UPON REQUEST
– Flow regulator
– Horizontal 1 litre tank
– Pressure gauge with exclusion
– Painted white

CC-075 02.019

The electrohydraulic power pack type CC-075 is supplied with electric motor 12V or 24V - 300W-2700Rpm, horizontal 2,5 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for working vessels and/or ships with medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
UPON REQUEST
– Flow regulator

– Horizontal 5 litre tank
– Vertical 8 litre tank
– Pressure gauge with exclusion
– Painted white
NOTES:
The power pack can be supplied also in CC-075A version code 02.019 with 1500rpm motor.

CC-1 02.020

The electrohydraulic power pack type CC-1 is supplied with electric motor 12V or 24V - 600W-1500Rpm, horizontal 2,5 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for working vessels and/or ships with medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 4,8 l/min (suggested 5 litres tank or vertical with major capacity)
2) Working pressure 100 Bar – maximum flow rate 3 l/min (suggested 5 litres tank or vertical with major capacity)

UPON REQUEST
– Flow regulator
– Horizontal 5 litre tank
– Vertical 8 litre tank
– Pressure gauge with exclusion
– Painted white

CC-1A 02.021

The electrohydraulic power pack type CC-1A is supplied with electric motor 12V or 24V - 500W-1500Rpm, horizontal 2,5 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for working vessels and/or ships with medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 4,8 l/min (suggested 5 litres tank or vertical with major capacity)
2) Working pressure 100 Bar – maximum flow rate 3 l/min (suggested 5 litres tank or vertical with major capacity)

UPON REQUEST
– Flow regulator
– Horizontal 5 litre tank
– Vertical 8 litre tank
– Pressure gauge with exclusion
– Painted white

CC-4A 02.025

The electrohydraulic power pack type CC-4A is supplied with electric motor 12V or 24V - 300W-2700Rpm, 4 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-4 02.030

The electrohydraulic power pack type CC-4 is supplied with electric motor 12V or 24V - 550W-1500Rpm, 4 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-7A 02.040

The electrohydraulic power pack type CC-7A is supplied with electric motor 12V or 24V - 550W-1500Rpm, 7 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 4,8 l/min
2) Working pressure 100 Bar – maximum flow rate 3,2 l/min

UPON REQUEST
– Flow regulator
– Painted white

CC-10 02.050

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type CC-10 is supplied with electric motor 12V or 24V - 800W-1500Rpm, 10 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:
1) Working pressure 50 Bar – maximum flow rate 9 l/min
2) Working pressure 100 Bar – maximum flow rate 4,9 l/min

UPON REQUEST
– Flow regulator
– Painted white

CC-14V 02.056

The electrohydraulic power pack type CC-14V is supplied with electric motor 12V or 24V - 550W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-14V 02.057

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type CC-14V is supplied with electric motor 12V or 24V - 800W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-14V 02.058

The electrohydraulic power pack type CC-14V is supplied with electric motor 12V or 24V - 1000W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

AN-13S 02.060
ATTENTION: Item Out of Production / Spares Only
AN-13S 02.070
ATTENTION: Item Out of Production / Spares Only

AN-13S 02.080
ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type AN-13S is supplied with electric motor 12V or 24V - 1000W-1500Rpm, horizontal 13 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator

AN-22 02.090
ATTENTION: Item Out of Production / Spares Only

AN-22 02.100
ATTENTION: Item Out of Production / Spares Only

CC-28V 02.105
ATTENTION: Item Out of Production - Spares Only / replaced by CC-28V code 02.110
The electrohydraulic power pack type CC-28V is supplied with electric motor 12V or 24V - 800W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-28V 02.110
The electrohydraulic power pack type CC-28V is supplied with electric motor 12V or 24V - 1000W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST

– Flow regulator
– Painted white

CC-28V 02.120

The electrohydraulic power pack type CC-28V is supplied with electric motor 12V or 24V - 1500W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Painted white

CC-075VNA

The electrohydraulic power pack type CC-075VNA is supplied with electric motor 12V - 300W-1500Rpm, 14 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is mainly used for sailing vessels or for vessels of small and medium dimensions and for the yachting sector.

CC-075VNB

The electrohydraulic power pack type CC-075VNB (Unified CC-075VN) is supplied with electric motor 24V - 300W-1500Rpm, 14 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is mainly used for sailing vessels or for vessels of small and medium dimensions and for the yachting sector.

CC-075VNC

The electrohydraulic power pack type CC-075VNC (Unified CC-075VN) is supplied with electric motor 24V - 300W-1500Rpm, 14 litre tank, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is mainly used for sailing vessels or for vessels of small and medium dimensions and for the yachting sector.

CC-1VN

The electrohydraulic power pack type CC-1VN is supplied with electric motor 24V - 500W-1500Rpm, horizontal 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
They are mainly used for working vessels and/or ships with medium workload.
Assembled with high quality materials which guaranty reliability and high performances.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 6,8 l/min
2) Working pressure 100 Bar – maximum flow rate 3,4 l/min

UPON REQUEST
– Flow regulator

– Painted white

POWER PACKS 220/380V

CC-4 03.010

The electrohydraulic power pack type CC-4 is supplied with electric motor 220/380V-550W-1500Rpm, 4 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 6,8 l/min (flow rate however not recommended due to the dimensions of the tank – we recommend 14lt tank of the CC-14V series)
2) Working pressure 100 Bar – maximum flow rate 3,2 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-7A 03.020

The electrohydraulic power pack type CC-7A is supplied with electric motor 220/380V-550W-1500Rpm, 7 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 6,8 l/min (flow rate however not recommended due to the dimensions of the tank – we recommend 14lt tank of the CC-14V series)
2) Working pressure 100 Bar – maximum flow rate 3,4 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-10 03.030

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type CC-10 is supplied with electric motor 220/380V-750W-1500Rpm, 10 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 6,8 l/min
2) Working pressure 100 Bar – maximum flow rate 3,4 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-10A 03.040

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type CC-10 is supplied with electric motor 220/380V-1100W-1500Rpm, 10 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 12 l/min
2) Working pressure 100 Bar – maximum flow rate 6 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-10B 03.050

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type CC-10 is supplied with electric motor 220/380V-1500W-1500Rpm, 10 litre tank, solenoid valve, non-return valve, central manifold with adjustable max

pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 15 l/min (it is recommended a power pack with a bigger tank)
2) Working pressure 100 Bar – maximum flow rate 8 l/min (it is recommended a power pack with a bigger tank)

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-14V 03.051

The electrohydraulic power pack type CC-14V is supplied with electric motor 220/380V-750W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 60 Bar – maximum flow rate 7 l/min
2) Working pressure 100 Bar – maximum flow rate 4 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-14V 03.052

The electrohydraulic power pack type CC-14V is supplied with electric motor 220/380V-1100W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 60 Bar – maximum flow rate 7 l/min (for higher flow rates it is recommended to choose the CC-28V)
2) Working pressure 100 Bar – maximum flow rate 6 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor

CC-14B.V.

The electrohydraulic power pack type CC-14B.V is supplied with electric motor 220/380V-1500W-1500Rpm, vertical 14 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

1) Working pressure 50 Bar – maximum flow rate 7 l/min (for higher flow rates it is recommended to choose the CC-28V)
2) Working pressure 100 Bar – maximum flow rate 7 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white

AN-13 03.060

ATTENTION: Item Out of Production / Spares Only

The electrohydraulic power pack type AN-13 is supplied with electric motor 220/380V-550W-1500Rpm, horizontal 13 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-13 03.070

ATTENTION: Item Out of Production / Spares Only

The electrohydraulic power pack type AN-13 is supplied with electric motor 220/380V-750W-1500Rpm, horizontal 13 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-13S 03.080

ATTENTION: Item Out of Production / Spares Only

The electrohydraulic power pack type AN-13 is supplied with electric motor 220/380V-1100W-1500Rpm, horizontal 13 litre tank, solenoid valve, non-return valve, central manifold with adjustable

max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-22 03.090

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type AN-22 is supplied with electric motor 220/380V-1500W-1500Rpm, horizontal 22 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-22 03.100

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type AN-22 is supplied with electric motor 220/380V-2200W-1500Rpm, horizontal 22 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-22 03.110

ATTENTION: Item Out of Production / Spares Only
The electrohydraulic power pack type AN-22 is supplied with electric motor 220/380V-3000W-1500Rpm, horizontal 22 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor

AN-30 03.120

ATTENTION: Item Out of Production / Spares Only

The electrohydraulic power pack type AN-30 is supplied with electric motor 220/380V-3000W-1500Rpm, horizontal 30 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST

– Flow regulator

– Monophasic motor

AN-50 03.130

ATTENTION: Item Out of Production / Spares Only

The electrohydraulic power pack type AN-50 is supplied with electric motor 220/380V-3000W-1500Rpm, horizontal 50 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST

– Flow regulator

– Monophasic motor

CC-28V 03.140

The electrohydraulic power pack type CC-28V is supplied with electric motor 220/380V-1500W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.

The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

- Working pressure 100 Bar – maximum flow rate 9 l/min

UPON REQUEST

– Flow regulator

– Monophasic motor

– Painted white

CC-28V 03.150

The electrohydraulic power pack type CC-28V is supplied with electric motor 220/380V-2200W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.

This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.

For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure; for example we may set limit values (min / max) as follows:

- Working pressure 100 Bar – maximum flow rate 9 l/min

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white

CC-28V 03.160

The electrohydraulic power pack type CC-28V is supplied with electric motor 220/380V-3000W-1500Rpm, vertical 28 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white

CC-35V 03.170

The electrohydraulic power pack type CC-35V is supplied with electric motor 220/380V-3000W-1500Rpm, vertical 35 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white

CC-50V 03.180

The electrohydraulic power pack type CC-50V is supplied with electric motor 220/380V-3000W-1500Rpm, vertical 50 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
The flow rate must be dimensioned according to the hydraulic cylinder and to the requested pressure.

UPON REQUEST
– Flow regulator

– Monophasic motor
– Painted white

SERVO ASSISTED POWER PACKS

CG-14V 04.010

The CG-14V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V
Power: 300W
Tank capacity: 14 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white

CG-14V 04.020

The CG-14V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.

In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V
Power: 500W
Tank capacity: 14 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-14V 04.030

The CG-14V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V
Power: 500W
Tank capacity: 14 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-14V 04.040

ATTENTION: Item Out of Production – replaced by the CG-14V 1000W
The CG-14V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.

CHARACTERISTICS
Voltage: 24V
Power: 800W
Tank capacity: 14 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-14V 04.050

The CG-14V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V
Power: 1000W
Tank capacity: 14 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-28V

The CG-28V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V
Power: 1500W

Tank capacity: 28 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-35V

The CG-35V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V or 220/380V
Power: from 1500W to 3000W
Tank capacity: 35 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor
– Triphasic motor

CG-50V

The CG-50V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.
CHARACTERISTICS
Voltage: 24V or 220/380V
Power: from 1000W to 3000W
Tank capacity: 50 litres
Flow rate: dimensioned according to the system
UPON REQUEST
– Painted white
– Monophasic motor

CG-70V

The CG-70V power pack is a power unit designed for servo assisted steering systems with feedback; the NFU/Autopilot and the emergency manual modes are integrated.

It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.

When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.

The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.

In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.

The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.

CHARACTERISTICS

Voltage: 24V or 220/380V

Power: from 1000W to 3000W

Tank capacity: 70 litres

Flow rate: dimensioned according to the system

UPON REQUEST

– Painted white

– Monophasic motor

SPECIAL POWER PACKS

CC-70V

The electrohydraulic power pack type CC-70V is supplied with one or two electric motors 220/380V or 24V, vertical 70 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
It is possible to install two valve groups.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
These power packs are equipped for the installation of all the sensors requested by the international approval societies.

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white or else

CC-100V-2U

The electrohydraulic power pack type CC-100V-2U is supplied with one or two electric motors 220/380V or 24V, vertical 100 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
It is possible to install two valve groups.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
These power packs are equipped for the installation of all the sensors requested by the international approval societies.

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white or else

AN-100

The electrohydraulic power pack type AN-100 is supplied with electric motor 220/380V or 24V, vertical 100 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
These power packs are equipped for the installation of all the sensors requested by the international approval societies.

UPON REQUEST

– Flow regulator
– Monophasic motor
– Painted white or else

AN-200V

The electrohydraulic power pack type AN-200V is supplied with one or two electric motors 220/380V or 24V, vertical 200 litre tank, solenoid valve, non-return valve, central manifold with adjustable max pressure valve, gear pump, filter, pressure gauge with exclusion and all that is needed for a correct functioning.
It is possible to install two valve groups.
This type of power pack is equipped with a flexible coupling between gear pump shaft and motor which guaranties high durability.
For such reason it is mainly used for working vessels and/or ships with very high workload.
These power packs are equipped for the installation of all the sensors requested by the international approval societies.

UPON REQUEST
– Flow regulator
– Monophasic motor
– Painted white or else

NOTE:
- Mancano centraline speciali come quelle del tipo AP che andranno aggiunte nel Sito Web

POWER PACK ACCESSORIES

N31
Flow regulator cetop 3 for electrohydraulic power packs.

RFP 50
Regolatore di portata Cetop 3, adatto al montaggio a colonna sulle centraline elettroidrauliche. Fornito come Optional.
Flow regulator cetop 3, compatible for vertical installation on electrohydraulic power packs. Supplied as optional.

RFAC 338A
Flow regulator for power packs with high flow rate.

Electric Bypass 3/8”
The electric bypass is used specifically on autopilot systems, particularly on sailing vessels.

Electric Bypass ½”
The electric bypass is used specifically on autopilot systems, particularly on sailing vessels.

Electric Bypass ¾”
The electric bypass is used specifically on autopilot systems, particularly on sailing vessels.

OUTBOARD CYLINDERS AND KITS

FB-85
The hydraulic cylinder FB-85 is suitable for outboard motors up to 85CV.

FB-90F
The hydraulic cylinder FB-90F is suitable for outboard motors up to 90CV.

FB-100R
The hydraulic cylinder FB-100R is suitable for outboard motors up to 100CV.
Cylinder with frontal installation.

FB-150L
The hydraulic cylinder FB-150L is suitable for outboard motors up to 150CV.
Cylinder with lateral installation.

FB-150F
The hydraulic cylinder FB-150F is suitable for outboard motors up to 150CV.
Cylinder with frontal installation.

FB-250R
The hydraulic cylinder FB-250R is suitable for outboard motors up to 250CV.
Cylinder with frontal installation.

FB-300A
The hydraulic cylinder FB-300A is suitable for outboard motors up to 300CV.
Cylinder with frontal installation.

FB-300R
The hydraulic cylinder FB-300R is suitable for outboard motors up to 300CV.
Cylinder with frontal installation.

Hydraulic outboard steering system FB85
The outboard steering system FB85 is suitable for outboard motors up to 85CV.
The kit is as follows:
N°01 helm pump C5/14 or C5/18 (installation stud optional)
N°01 outboard hydraulic cylinder type FB-85
N°04 fittings diameter 10mm for Rilsan tube 10x2
N°10 metres of Rilsan tube 10x2 (length to be checked on board)
N°01 litre of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 4,5 / 3,5
Balanced frontal cylinder

Universal compact cylinder

Hydraulic outboard steering system FB90F Rilsan tube
The outboard steering system FB90F is suitable for outboard motors up to 90CV.
The kit is as follows:
N°01 helm pump C5/14 or C5/18 (installation stud optional)
N°01 outboard hydraulic cylinder type FB-90F
N°04 fittings diameter 10mm for Rilsan tube 10x2
N°10 metres of Rilsan tube 10x2 (length to be checked on board)
N°01 litre of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 4,5 / 3,5
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB100R Rilsan tube
The outboard steering system FB100R is suitable for outboard motors up to 100CV.
The kit is as follows:
N°01 helm pump C5/14 or C5/18 (installation stud optional)
N°01 outboard hydraulic cylinder type FB-100R
N°04 fittings diameter 10mm for Rilsan tube 10x2
N°10 metres of Rilsan tube 10x2 (length to be checked on board)
N°01 litre of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 4,5 / 3,5
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB150F Rilsan tube
The outboard steering system FB150F is suitable for outboard motors up to 150CV.
The kit is as follows:
N°01 helm pump C5/25A or C5/25 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-150F
N°04 fittings diameter 10mm for Rilsan tube 10x2
N°12 metres of rilsan tube 10x2 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 5
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB150F Nylon tube
The outboard steering system FB150F is suitable for outboard motors up to 150CV.
The kit is as follows:
N°01 helm pump C5/25A or C5/25 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-150F
N°02 reusable straight fittings for nylon tube 5/16” R7
N°02 reusable 90° fittings for nylon tube 5/16” R7
N°12 metres of nylon tube 5/16” R7 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 5

Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB250R
The outboard steering system FB250R is suitable for outboard motors up to 250CV.
The kit is as follows:
N°01 helm pump C5/18 or C5/25 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-250R
N°02 reusable straight fittings for nylon tube 5/16" R7
N°02 reusable 90° fittings for nylon tube 5/16" R7
N°12 metres of nylon tube 5/16" R7 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 5.6 or 4
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB300R
The outboard steering system FB300R is suitable for outboard motors up to 300CV.
The kit is as follows:
N°01 helm pump C5/25A or C5/25 or C7/37 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-300R
N°02 reusable straight fittings for nylon tube 5/16" R7
N°02 reusable 90° fittings for nylon tube 5/16" R7
N°12 metres of nylon tube 5/16" R7 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 5.8 or 3.9
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB300A
The outboard steering system FB300A is suitable for outboard motors up to 300CV.
The kit is as follows:
N°01 helm pump C5/25A or C5/25 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-300R
N°02 reusable straight fittings for nylon tube 5/16" R7
N°02 reusable 90° fittings for nylon tube 5/16" R7
N°12 metres of nylon tube 5/16" R7 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 5.5
Balanced frontal cylinder
Universal compact cylinder

Hydraulic outboard steering system FB300B
The outboard steering system FB300B is suitable for outboard motors up to 300CV.
The kit is as follows:
N°01 helm pump C7/37 (installation stud optional)
N°01 outboard hydraulic cylinder type FB-300B
N°02 reusable straight fittings for nylon tube 5/16" R7
N°02 reusable 90° fittings for nylon tube 5/16" R7

N°12 metres of nylon tube 5/16” R7 (length to be checked on board)
N°03 litres of oil
CHARACTERISTICS
Turns of the wheel from H.O. to H.O. 4.3
Balanced frontal cylinder

CILINDRI IDRAULICI OTTONE

CL.0-6N

The hydraulic inboard cylinder type CL.0-6N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 57cc
Torque: 27Kgm at 35° of the rudder (with working pressure)
Pressure: 75Bar
Force: 283,5Kg (with working pressure)
Stroke: 150mm
Tiller arm radius: 131mm
Piston rod: Diam. 12mm
Cylinder tube: 30mm / 25mm
Ball joint: 10mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-11N

The hydraulic inboard cylinder type CL.0-11N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.

The support is made of brass.
MAIN CHARACTERISTICS
Volume: 105cc
Torque: 51Kgm at 35° of the rudder (with working pressure)
Pressure: 75Bar
Force: 452Kg (with working pressure)
Stroke: 175mm
Tiller arm radius: 153.5mm
Piston rod: Diam. 16mm
Cylinder tube: 38mm / 32mm
Ball joint: 12mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-12N

The hydraulic inboard cylinder type CL.0-12N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 120cc
Torque: 58Kgm at 35° of the rudder (with working pressure)
Pressure: 75Bar
Force: 452Kg (with working pressure)
Stroke: 200mm
Tiller arm radius: 174,5mm
Piston rod: Diam. 16mm
Cylinder tube: 38mm / 32mm
Ball joint: 12mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-15N

The hydraulic inboard cylinder type CL.0-15N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS

Volume: 150cc
Torque: 67Kgm at 35° of the rudder (with working pressure)
Pressure: 75Bar
Force: 452Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 208 mm
Piston rod: Diam. 16mm
Cylinder tube: 38mm / 32mm
Ball joint: 12mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-18N

The hydraulic inboard cylinder type CL.0-22N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 175cc
Torque: 112Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 876Kg (with working pressure)
Stroke: 200mm
Tiller arm radius: 175 mm
Piston rod: Diam. 22mm
Cylinder tube: 50mm / 40mm
Ball joint: 18mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-22N

The hydraulic inboard cylinder type CL.0-22N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 219cc
Torque: 123Kgm at 35° of the rudder (with working pressure)

Pressure: 100Bar
Force: 876Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 200 mm
Piston rod: Diam. 22mm
Cylinder tube: 50mm / 40mm
Ball joint: 18mm
threading: 1/4"G
Standard fittings: 1/4"G or 10mm

CL.0-23

The hydraulic inboard cylinder type CL.0-23 is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 236cc
Torque: 151Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1472Kg (with working pressure)
Stroke: 160mm
Tiller arm radius: 139.5 mm
Piston rod: Diam. 25mm
Cylinder tube: 60mm / 50mm
Ball joint: 18mm
threading: 3/8"G
Standard fittings: 3/8"G or 12mm

CL.0-24N

The hydraulic inboard cylinder type CL.0-24N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 240cc
Torque: 151Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1472Kg (with working pressure)

Stroke: 160mm
Tiller arm radius: 139.5 mm
Piston rod: Diam. 25mm
Cylinder tube: 60mm / 50mm
Ball joint: 25mm

CL.0-34N

The hydraulic inboard cylinder type CL.0-34N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 339cc
Torque: 217Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1472Kg (with working pressure)
Stroke: 230mm
Tiller arm radius: 200mm
Piston rod: Diam. 25mm
Cylinder tube: 60mm / 50mm
Ball joint: 18mm

CL.0-34N-FC

The hydraulic inboard cylinder type CL.0-34N-FC is part of the brass series with central fixing.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 339cc
Torque: 217Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1472Kg (with working pressure)
Stroke: 230mm
Tiller arm radius: 200mm
Piston rod: Diam. 25mm
Cylinder tube: 60mm / 50mm
Ball joint: 18mm
Standard fittings: 3/8"G or 15mm

CL.0-45N

The hydraulic inboard cylinder type CL.0-45N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 445cc
Torque: 281Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1473Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260mm
Piston rod: Diam. 25mm
Ball joint: 25mm
Standard fittings: 3/8"G or 15mm

CL.0-45N-FC

The hydraulic inboard cylinder type CL.0-45N-FC is part of the brass series with central fixing.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 445cc
Torque: 281Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1473Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260mm
Piston rod: Diam. 25mm
Ball joint: 25mm
Standard fittings: 3/8"G or 15mm

CL.0-52N

The hydraulic inboard cylinder type CL.0-52N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.

The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 520cc
Torque: 334Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2610Kg (with working pressure)
Stroke: 200mm
Tiller arm radius: 174.5mm
Piston rod: Diam. 30mm
Cylinder tube: 60mm / 70mm
Ball joint: 25mm
Threading: ½"G
Standard fittings: 1/2"G or 18mm

CL.0-53

The hydraulic inboard cylinder type CL.0-53 is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 530cc
Torque: 340Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2195Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 218 mm
Piston rod: Diam. 30mm
Cylinder tube: 60mm / 70mm
Ball joint: 25mm
Threading: ½"G
Standard fittings: 1/2"G or 18mm

CL.0-53-FC

The hydraulic inboard cylinder type CL.0-53-FC is part of the brass series with central fixing and tie rods.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.

To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 530cc
Torque: 340Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2119Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 218 mm
Piston rod: Diam. 30mm
Ball joint: 25mm
Weight: 21kg
Standard fittings: 1/2"G or 18mm

CL.0-53N

The hydraulic inboard cylinder type CL.0-53N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 530cc
Torque: 340Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2195Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 218 mm
Piston rod: Diam. 30mm
Cylinder tube: 60mm / 70mm
Ball joint: 25mm
Standard fittings: 1/2"G or 18mm

CL.0-78

The hydraulic inboard cylinder type CL.0-78 is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.

The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 783cc
Torque: 502Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2611Kg (with working pressure)
Stroke: 260mm
Tiller arm radius: 250 mm
Piston rod: Diam. 30mm
Ball joint: 25mm
Weight: 20kg
Standard fittings: 1/2"G or 18mm

CL.0-78-FC

The hydraulic inboard cylinder type CL.0-78-FC is part of the brass series with central fixing and tie rods.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 783cc
Torque: 502Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2611Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260 mm
Piston rod: Diam. 30mm
Cylinder tube: 80/65
Ball joint: 25mm
Ball Joint: 25mm
Standard fittings: 1/2"G or 18mm

CL.0-78N

The hydraulic inboard cylinder type CL.0-78N is part of the brass series for the yachting sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.

The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
MAIN CHARACTERISTICS
Volume: 783cc
Torque: 502Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2611Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260 mm
Piston rod: Diam. 30mm
Cylinder tube: 80/65
Ball joint: 25mm
Standard fittings: 1/2"G or 18mm

CL.0-103

The hydraulic inboard cylinder type CL.0-103 is part of the brass series for the super-yacht sector.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 1103cc
Torque: 662Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 3678Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 250 mm
Piston rod: Diam. 40mm
Cylinder tube: 95/80
Ball joint: 40mm
Weight: 36kg
Standard fittings: 3/4"G or 22mm

CL.0-158

The hydraulic inboard cylinder type CL.0-158 is part of the brass series with side fixing and tie rods.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The tie rods are made of stainless steel.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.

The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
MAIN CHARACTERISTICS
Volume: 1530cc
Torque: 918Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 5102Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260 mm
Piston rod: Diam. 40mm
Cylinder tube: 90/105
Ball joint: 40mm
Weight: 40kg
Standard fittings: 3/4"G or 22mm

CILINDRI IDRAULICI ACCIAIO

CL.0-20
ATTENTION: Item Out of Production / Spares Only

CL.0-22
ATTENTION: Item Out of Production / Spares Only

CL.0-30
ATTENTION: Item Out of Production / Spares Only

CL.0-35
ATTENTION: Item Out of Production / Spares Only

CL.0-50N
Hydraulic Cylinder with chromed steel piston rod and steel painted cylinder tube.
This type of cylinder is very strong and particularly recommended for working boats.
CHARACTERISTICS
Volume: 460cc
Torque: 292Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 2886Kg (with working pressure)
Stroke: 160mm
Tiller arm radius: 138 mm
Piston rod: Diam. 35mm

Cylinder tube: 70/85
Fork hole (for pin): 28mm
Threading: ½”G
Standard fittings: 1/2"G or 18mm

CL.0-75N
Hydraulic Cylinder with chromed steel piston rod and steel painted cylinder tube.
This type of cylinder is very strong and particularly recommended for working boats.
CHARACTERISTICS
Volume: 765cc
Torque: 500Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 3063Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 220 mm
Piston rod: Diam. 50mm
Cylinder tube: 100/120
Fork hole (for pin): 35mm
Threading: ½”G
Standard fittings: 1/2"G or 18mm

CL.0-100N
Hydraulic Cylinder with chromed steel piston rod and steel painted cylinder tube.
This type of cylinder is very strong and particularly recommended for working boats.
CHARACTERISTICS
Volume: 1100cc
Torque: 716Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 4398Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 220 mm
Piston rod: Diam. 50mm
Fork hole (for pin): 35mm
Threading: ½”G
Standard fittings: 3/4"G or 22mm

CL.0-150N
Hydraulic Cylinder with chromed steel piston rod and steel painted cylinder tube.
This type of cylinder is very strong and particularly recommended for working boats.
CHARACTERISTICS
Volume: 1473cc
Torque: 1055Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 110Bar
Force: 5890Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 220 mm
Piston rod: Diam. 50mm
Cylinder tube: 100/120
Fork hole (for pin): 35mm
Threading: ½”G
Standard fittings: 3/4"G or 22mm

CL.0-200N
Hydraulic Cylinder with chromed steel piston rod and steel painted cylinder tube.
This type of cylinder is very strong and particularly recommended for working boats.
CHARACTERISTICS
Volume: 2136cc
Torque: 1382Kgm at 35° of the rudder (with working pressure)
Pressure: Max. 100Bar
Force: 6680Kg (with working pressure)
Stroke: 320mm
Tiller arm radius: 280 mm
Piston rod: Diam. 60mm
Cylinder tube: 110/130
Fork hole (for pin): 50mm
Threading: 3/4”G
Standard fittings: 3/4"G or 22mm

CL.2-B101
The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.

CL.2-B151
The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.

CL.2-B201
The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.

CL.2-B301
The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.

CL.2-B401
The actuators of this series are complete of chromed steel piston rod and painted steel body.

Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.
REMARKS:
These cylinders are also produced in special version with internal limit switches bypass valves which can be used for safety reasons but also on vessels which do not have the possibility to have a tie bar installed in case of double rudder (ex: Catamarans). The bypass valves allow a more efficient synchronization of the rudders at the end of the stroke with the addition of a special valve called V.E.I.S.A.

CL.2-B632

The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.
REMARKS:
These cylinders are also produced in special version with internal limit switches bypass valves which can be used for safety reasons but also on vessels which do not have the possibility to have a tie bar installed in case of double rudder (ex: Catamarans). The bypass valves allow a more efficient synchronization of the rudders at the end of the stroke with the addition of a special valve called V.E.I.S.A.

CL.2-B914

The actuators of this series are complete of chromed steel piston rod and painted steel body.
Each actuator is made up of two unbalanced cylinders which can be installed as a couple on the same rudder (for instance for single rudder vessels), or separately on each rudder (in case of double rudder vessels with mechanical connection/tie bar).
The cylinders of this series are very strong and are especially recommended for working boats and/or for medium and big M/Y.
REMARKS:
These cylinders are also produced in special version with internal limit switches bypass valves which can be used for safety reasons but also on vessels which do not have the possibility to have a tie bar installed in case of double rudder (ex: Catamarans). The bypass valves allow a more efficient synchronization of the rudders at the end of the stroke with the addition of a special valve called V.E.I.S.A.

CILINDRI IDRAULICI ASSERVIMENTO

CL.0-34N-FB

The inboard hydraulic cylinder (actuator) type CL.0-34N-FB is used for servo assisted steering systems.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
It is made up of a main cylinder and a feedback cylinder which are coaxial and with the same strokes.
During the FU mode, the feedback cylinder is filled by the manual transmitter, its pressure activates the servo valve which consequently manoeuvres the main cylinder.
The control is step by step and direct.
In NFU mode, the main cylinder is manoeuvred directly by a solenoid valve, while the feedback cylinder is set in bypass through the simultaneous command of a second solenoid valve.
In Manual/Emergency mode, the main cylinder is manoeuvred directly by the manual transmitter, while the feedback cylinder is set in bypass by its antishock valve.

MAIN CHARACTERISTICS
Volume: 339cc
Torque: 217Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1473Kg (with working pressure)
Stroke: 230mm
Tiller arm radius: 200 mm
Piston rod: Diam. 25mm
Cylinder tube: 50mm / 60mm
Ball joint: 18mm
threading: 3/8"G
Standard fittings: 3/8"G or 12mm

CL.0-45N-FB

The inboard hydraulic cylinder (actuator) type CL.0-45N-FB is used for servo assisted steering systems.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
It is made up of a main cylinder and a feedback cylinder which are coaxial and with the same strokes.
During the FU mode, the feedback cylinder is filled by the manual transmitter, its pressure activates the servo valve which consequently manoeuvres the main cylinder.
The control is step by step and direct.
In NFU mode, the main cylinder is manoeuvred directly by a solenoid valve, while the feedback cylinder is set in bypass through the simultaneous command of a second solenoid valve.

In Manual/Emergency mode, the main cylinder is manoeuvred directly by the manual transmitter, while the feedback cylinder is set in bypass by its antishock valve.
MAIN CHARACTERISTICS
Volume: 445cc
Torque: 281Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 1473Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260 mm
Piston rod: Diam. 25mm
Cylinder tube: 50mm / 60mm
Ball joint: 25mm
threading: 3/8"G
Standard fittings: 3/8"G or 12mm

CL.0-53N-FB

The inboard hydraulic cylinder (actuator) type CL.0-53N-FB is used for servo assisted steering systems.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
It is made up of a main cylinder and a feedback cylinder which are coaxial and with the same strokes.
During the FU mode, the feedback cylinder is filled by the manual transmitter, its pressure activates the servo valve which consequently manoeuvres the main cylinder.
The control is step by step and direct.
In NFU mode, the main cylinder is manoeuvred directly by a solenoid valve, while the feedback cylinder is set in bypass through the simultaneous command of a second solenoid valve.
In Manual/Emergency mode, the main cylinder is manoeuvred directly by the manual transmitter, while the feedback cylinder is set in bypass by its antishock valve.
MAIN CHARACTERISTICS
Volume: 553cc
Torque: 340Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 2119Kg (with working pressure)
Stroke: 250mm
Tiller arm radius: 260 mm
Piston rod: Diam. 25mm
Cylinder tube: 60mm / 70mm
Ball joint: 25mm
threading: 3/8"G
Standard fittings: 3/8"G or 12mm ½”G or 18mm.

CL.0-78N-FB

The inboard hydraulic cylinder (actuator) type CL.0-78N-FB is used for servo assisted steering systems.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.

Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
It is made up of a main cylinder and a feedback cylinder which are coaxial and with the same strokes.
During the FU mode, the feedback cylinder is filled by the manual transmitter, its pressure activates the servo valve which consequently manoeuvres the main cylinder.
The control is step by step and direct.
In NFU mode, the main cylinder is manoeuvred directly by a solenoid valve, while the feedback cylinder is set in bypass through the simultaneous command of a second solenoid valve.
In Manual/Emergency mode, the main cylinder is manoeuvred directly by the manual transmitter, while the feedback cylinder is set in bypass by its antishock valve.
MAIN CHARACTERISTICS
Volume: 783cc
Torque: 502Kgm at 35° of the rudder (with working pressure)
Pressure: 100Bar
Force: 2611Kg (with working pressure)
Stroke: 300mm
Tiller arm radius: 260 mm
Piston rod: Diam. 30mm
Cylinder tube: 65mm / 80mm
Ball joint: 25mm
threading: 1/2"G
Standard fittings: ½”G or 18mm.

NOTE:
- Sarebbe il caso di aggiungere nel sito web gli azionatori servoassistiti a doppio cilindro
- Prevedere di aggiungere nel sito esempi di piazzamento

SINGLE AND DOUBLE TILLER ARMS FOR CYLINDES

TA. 0/6N – 0/11N – 0/12N – 0/15N
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

TA. 0/18N – 0/22N – 0/30 – 0/34N – 0/35 – 0/36
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

TA. 0/20 – 0/21 – 0/23 – 0/24N
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

TA. 0/75N – 0/100N – 0/150N
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

TA. 0/200N
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

TA. 632
Single tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. 0/20 – 0/21
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. 0/50N
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. 0/75N – 0/100N – 0/150N
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. 200N
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. B101
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. B151
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. B301
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. B401
Double tiller arm for coupling with tapered axis.

Supplied with pilot bore: machining of final hole and keyway upon request.

DTA. B632
Double tiller arm for coupling with tapered axis.
Supplied with pilot bore: machining of final hole and keyway upon request.

HYDRAULIC TRANSMITTERS

C5/14

C5/18
The hydraulic helm pumps of this series are designed to manoeuvre small quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels.
These transmitters are especially used for outboard steering systems.
CHARACTERISTICS
5 Internal pistons
18 cc capacity

Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 5/16" or 10mm.
We recommend a 300mm as minimum diameter of the wheel.

C5/25
The hydraulic helm pumps of this series are designed to manoeuvre small quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels.
These transmitters are especially used for outboard steering systems.
CHARACTERISTICS
5 Internal pistons
25 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 5/16" or 10mm.
We recommend a 300mm as minimum diameter of the wheel.

C7/25-T (Tilt)
The hydraulic helm pump of this series have high volumetric performances (minimal losses), gained by means of high accurate and modern machining procedures, which lead to very precise tolerances.
The maximum lightness and smoothness of the manoeuvre is continually guaranteed by the lower position of the check valves compared to the rotation axis of the helm pump, and suitable holes which allow the flow of oil even at the minimum oil level of the pump body which has tank function.
This hydraulic transmitter, suitable both for outboard and inboard systems, it is also complete of tilt for the inclination of the steering wheel.
CHARACTERISTICS
5 Internal pistons
25 cc capacity
Compact structure
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 5/16" or 10mm.
A total of 48° inclination with 5 different positions.

C7/25
ATTENTION: item replaced by the C5/25A
The hydraulic helm pumps of this series are designed to manoeuvre small quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels.
These transmitters are especially used for outboard steering systems.
CHARACTERISTICS
5 Internal pistons
25 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.

Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 5/16" or 10mm.
We recommend a 300mm as minimum diameter of the wheel.

C7/37

The hydraulic helm pumps of this series are designed to manoeuvre small/medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels with servo assisted systems.
These transmitters are also used for outboard steering systems.
CHARACTERISTICS
7 Internal pistons
37 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 3/8" or 12mm.
We recommend a 320mm as minimum diameter of the wheel.

C7/37-T (Tilt)

The hydraulic helm pump of this series have high volumetric performances (minimal losses), gained by means of high accurate and modern machining procedures, which lead to very precise tolerances.
The maximum lightness and smoothness of the manoeuvre is continually guaranteed by the lower position of the check valves compared to the rotation axis of the helm pump, and suitable holes which allow the flow of oil even at the minimum oil level of the pump body which has tank function.
This hydraulic transmitter, suitable both for outboard and inboard systems, it is also complete of tilt for the inclination of the steering wheel.
CHARACTERISTICS
7 Internal pistons
37 cc capacity
Compact structure
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 1/4" or 10mm.
A total of 48° inclination with 5 different positions.

C7/45

The hydraulic helm pumps of this series are designed to manoeuvre small/medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels with servo assisted systems.
These transmitters are also used for outboard steering systems.
CHARACTERISTICS
7 Internal pistons
45 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.

Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 3/8" or 12mm.
We recommend a 320mm as minimum diameter of the wheel.

C7/45-T (Tilt)

The hydraulic helm pump of this series have high volumetric performances (minimal losses), gained by means of high accurate and modern machining procedures, which lead to very precise tolerances.
The maximum lightness and smoothness of the manoeuvre is continually guaranteed by the lower position of the check valves compared to the rotation axis of the helm pump, and suitable holes which allow the flow of oil even at the minimum oil level of the pump body which has tank function.
This hydraulic transmitter, suitable both for outboard and inboard systems, it is also complete of tilt for the inclination of the steering wheel.
CHARACTERISTICS
7 Internal pistons
45 cc capacity
Compact structure
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
¼" threading for fittings 3/8" or 12mm.
A total of 48° inclination with 5 different positions.

C8/30

ATTENTION: item out of production-replaced by helm pump C7/37
The hydraulic helm pumps of this series are designed to manoeuvre small quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels.
These transmitters are especially used for outboard steering systems.
CHARACTERISTICS
8 Internal pistons
37 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.

C8/45

ATTENTION: item out of production-replaced by helm pump C7/45
The hydraulic helm pumps of this series are designed to manoeuvre small quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small vessels.
These transmitters are especially used for outboard steering systems.
CHARACTERISTICS
8 Internal pistons
45 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.

C7/55

ATTENTION: item out of production-replaced by helm pump C7/56
The hydraulic helm pumps of this series are designed to manoeuvre medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on medium vessels or as an emergency manoeuvre for big vessels with servo assisted systems as a manual emergency pump.
CHARACTERISTICS
7 Internal pistons
55 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
3/8" threading for fittings 3/8" or 12mm (best if bigger)
We recommend a 600mm as minimum diameter of the wheel.

C7/56
The hydraulic helm pumps of this series are designed to manoeuvre medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on small/medium vessels or as an emergency manoeuvre for big vessels with servo assisted systems as a manual emergency pump.
CHARACTERISTICS
7 Internal pistons
56 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.

C7/68
The hydraulic helm pumps of this series are designed to manoeuvre small/medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on medium vessels or as an emergency manoeuvre for big vessels with servo assisted systems as a manual emergency pump.
CHARACTERISTICS
7 Internal pistons
68 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
3/8" threading for fittings 3/8" or 12mm.
We recommend a 600mm as minimum diameter of the wheel.

C7/80
The hydraulic helm pumps of this series are designed to manoeuvre medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on medium/large vessels or as an emergency manoeuvre for big vessels with servo assisted systems as a manual emergency pump.
CHARACTERISTICS

7 Internal pistons
80 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
3/8” threading for fittings 1/2” or 18mm (best if bigger).
We recommend a 700mm as minimum diameter of the wheel.

C7/100

The hydraulic helm pumps of this series are designed to manoeuvre medium quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used on systems installed on medium/large vessels or as an emergency manoeuvre for big vessels.
CHARACTERISTICS
7 Internal pistons
100 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
1/2” threading for fittings 1/2” or 18mm (best if bigger).
We recommend a 800mm as minimum diameter of the wheel.

C9/105

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
9 Internal pistons
105 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Body in aluminium.
3/4” threading for fittings 3/4” or 22mm (better with bigger tubing).
We recommend a 900mm as minimum diameter of the wheel.

C9/120

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
9 Internal pistons
120 cc capacity
Axial pistons system

Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Shaft made of brass.
Body in aluminium.
3/4" threading for fittings 3/4" or 22mm (better with bigger tubing).
We recommend a 900mm as minimum diameter of the wheel.
ACCESSORIES UPON REQUEST
-installation flange
-column

C9/150

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
9 Internal pistons
150 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Shaft made of brass.
Body in aluminium.
3/4" threading for fittings 3/4" or 22mm (better with bigger tubing).
We recommend a 900mm as minimum diameter of the wheel.
ACCESSORIES UPON REQUEST
-installation flange
-column

C11/150

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
11 Internal pistons
150 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Shaft made of brass.
Body in aluminium.
3/4" threading for fittings 3/4" or 22mm (better with bigger tubing).
We recommend a 900mm as minimum diameter of the wheel.
ACCESSORIES UPON REQUEST
-installation flange
-column

C11/200

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
11 Internal pistons
200 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Shaft made of brass.
Body in aluminium.
3/4" threading for fittings 3/4" or 22mm (better with bigger tubing).
We recommend a 1000mm as minimum diameter of the wheel.
ACCESSORIES UPON REQUEST
-installation flange
-column

C11/250

The hydraulic helm pumps of this series are designed to manoeuvre large quantities of oil.
They are strong and complete of non-return valve, the body has a tank function.
Hydraulic transmitters with this cubic capacity are usually used for emergency manoeuvres on big systems or as main manual manoeuvre on vessels which have the necessity of using a steering wheel.
These transmitters are also used for small/medium vessels which require a manoeuvre with the minimum turns of the wheel.
CHARACTERISTICS
11 Internal pistons
250 cc capacity
Axial pistons system
Complete of integrated non-return valve which blocks reversibility.
Non-return valve and shaft seal easily accessible in case of replacement.
Shaft made of brass.
Body in aluminium.
3/4" threading for fittings 3/4" or 22mm (better with bigger tubing).
We recommend a 1000mm as minimum diameter of the wheel.
ACCESSORIES UPON REQUEST
-installation flange
-column

ACCESSORIES FOR HYDRAULIC TRANSMITTERS

Small Stud (Plastic) 15.005

Little Plastic stud for hydraulic transmitters C5/18 andC5/25A (ex C7/25)

Small Stud (Aluminium)

The little aluminium stud for hydraulic transmitters C5/18, C7/25 and C5/25 has been designed to allow the installation of partially embedded helm pumps.
The filling cap for the oil remains outside of the bridge and facilitates the filling of the system or the refilling, nonetheless the stud keeps most of the helm pump body inside the bridge.

Aluminium Flange 15.014

The Aluminium Flange for hydraulic transmitters C5/25, C7/37 and C7/45 has been designed to allow the installation of entirely embedded helm pumps.
The filling cap remains inside the bridge as the entire helm pump body.
This solution has been adopted both for aesthetical reasons but also for technical reasons if the protrusion of the helm pump is an obstacle.

Small Stud (chromed bronze) 15.015

The Chromed Bronze Stud for hydraulic transmitters C5/25, C7/37 and C7/45 has been designed to allow the installation of entirely embedded helm pumps.
The filling cap remains inside the bridge as the entire helm pump body.
This solution has been adopted both for aesthetical reasons but also for technical reasons if the protrusion of the helm pump is an obstacle.

Medium Stud (chromed bronze) 15.022

The Chromed Bronze Stud for hydraulic transmitters C7/56 and C7/68 has been designed to allow the installation of entirely embedded helm pumps.
The filling cap remains inside the bridge as the entire helm pump body.
This solution has been adopted both for aesthetical reasons but also for technical reasons if the protrusion of the helm pump is an obstacle.

Borchia Grande in Bronzo 15.025

The Chromed Bronze Stud for hydraulic transmitters C7/80 and C7/100 has been designed to allow the installation of entirely embedded helm pumps.
The filling cap remains inside the bridge as the entire helm pump body.
This solution has been adopted both for aesthetical reasons but also for technical reasons if the protrusion of the helm pump is an obstacle.

IDROGUIDE

OH-40

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 40cc
Flow rate: 2,5 l/min
Weight: 6,5Kg

OH-50

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 50cc
Flow rate: 3 l/min
Weight: 6,5Kg

OH-50LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station

OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 50cc
Flow rate: 3 l/min
Weight: 6,5Kg

OH-63

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 63cc
Flow rate: 3 l/min
Weight: 6,5Kg

OH-63LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 63cc
Flow rate: 3 l/min
Weight: 6,5Kg

OH-80

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 80cc
Flow rate: 4,8 l/min
Weight: 6,5Kg

OH-80LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 80cc
Flow rate: 4,8 l/min
Weight: 6,5Kg

OH-100

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 100cc
Flow rate: 6 l/min
Weight: 6,5Kg

OH-100LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 100cc
Flow rate: 6 l/min
Weight: 6,5Kg

OH-125

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 125cc
Flow rate: 7,5 l/min
Weight: 6,5Kg

OH-125LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 125cc
Flow rate: 7,5 l/min
Weight: 6,5Kg

OH-160

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 160cc
Flow rate: 9,6 l/min
Weight: 6,5Kg

OH-160LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 160cc
Flow rate: 9,6 l/min
Weight: 6,5Kg

OH-200

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 198cc
Flow rate: 12 l/min
Weight: 6,5Kg

OH-200LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 200cc
Flow rate: 12 l/min
Weight: 6,5Kg

OH-250

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 250cc
Flow rate: 15 l/min
Weight: 6,5Kg

OH-250LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 250cc
Flow rate: 15 l/min
Weight: 6,5Kg

OH-320

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 320cc
Flow rate: 19 l/min
Weight: 6,5Kg

OH-320LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 320cc
Flow rate: 19 l/min
Weight: 6,5Kg

OH-400

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 400cc
Flow rate: 24 l/min
Weight: 6,5Kg

OH-400LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS

Volume: 400cc
Flow rate: 24 l/min
Weight: 6,5Kg

OH-600

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 600cc
Flow rate: 36 l/min
Weight: 6,5Kg

OH-600LS

The Orbitrol can represent a technologically advanced solution to ease the movement and the precision of the wheels in the servo assisted steering systems; quality precision and perfect interchangeability with original spares which guaranty the maximum reliability of each product.
We have reactive and non-reactive orbitrols available, with opened and closed centre, and in load sensing version.
The correct dimension of the orbitrol for the steering system is suggested directly by our technical office.
The standard Orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be considered)
CHARACTERISTICS
Volume: 600cc
Flow rate: 36 l/min
Weight: 6,5Kg

Column 75mm

Column for Orbitrol 75mm

Column 75 mm taper 19

Stainless steel column for orbitrol 75mm

Colonnetta 125mm

Column for Orbitrol 125mm

Column 125 mm taper 19

Stainless steel column for orbitrol 125mm

NON RETURN VALVE

VNR 1216
Non return valve (not normally used)

VNR 1683
The non-return valve type 1683 is mainly used as an in line valve to be installed on the tubing.
It can be installed on the tubing of all the steering systems that require this function.

VNR 1667
The non-return valve type 1667 is installed on the hydraulic transmitters type C5/18, C5/25A, C5/25, C7/25, C7/37 and C7/45.

VNR 1685
The non-return valve type 1685 is mainly used as a spare or as an in line check valve.

VNR 1695
The non-return valve type 1695 is exclusively used for hydraulic transmitters type C7/56 and C7/68.

VNR 0/30
The non-return valve type 0/30 is available in four versions:
1) non-return valve type 0/30 for hydraulic transmitters.
2) non-return valve type 0/30SP for transmitters used on systems which require “depressurization”.
3) non-return valve type 0/30L for in line installation.
4) non-return valve type 0/30C for column installation Cetop 3 on electrohydraulic cylinders.

VNR 3015
The non-return valve type 3015 is available in four versions:
1) non-return valve type 3015 for hydraulic transmitters.
2) non-return valve type 3015SP for transmitters used on systems which require “depressurization”.
3) non-return valve type 3015L for in line installation.
4) non-return valve type 3015C for column installation Cetop 3 on electrohydraulic cylinders.

VNR 2 Bar

The 2bar non-return valve is normally used in line both on orbitrol and servo assited systems.
This valve keeps the system full of oil.

NOTE:
Aggiungere nel sito web la 0/30D cod. 16.045 e la MRD4 cod. 16.065

VALVOLE BY-PASS e ANTIURTO

Bypass for CL. 0/6N – 0/11N – 0/12N – 0/15N
Complete bypass valve for hydraulic cylinders.

Bypass for CL. 0/18N – 0/23 – 0/22N – 0/30 – 0/34N – 0/35 – 0/36 – 0/45n
Complete bypass valve for hydraulic cylinders.

Bypass for CL. 0/20 – 0/21 – 0/22
Complete bypass valve for hydraulic cylinders.

Bypass for CL. 0-53 – 0/78 – 0/52N – 0/53N – 0/78N
Complete bypass valve for hydraulic cylinders.

Bypass for CL.0/103 – 0/158
Complete bypass valve for hydraulic cylinders.

Bypass for CL.0/50N-75N-100N-150N-200N
Complete bypass valve for hydraulic cylinders.

Flexible hoses L= max 70cm for connection between bypass valve and hydraulic cylinders.

Standard Flexible hoses for connection of cylinder series B or 2B to bypass with four plugs.

16.070
The synchronization valve 3/8" is used for systems on which the two rudders cannot be connected by a mechanical tie bar (for example on catamarans).
This valve is capable of resetting the synchronization of the rudders by making the synchronization manoeuvre thus bringing the hydraulic cylinders to the end of the stroke without having an operator in the steering room to open and close the ball valve so the synchronization can be made directly from the control station.
The valve can be used for all types of systems: manual, electrohydraulic, servo assisted and electronic.

16.080
The synchronization valve 1/2" is used for systems on which the two rudders cannot be connected by a mechanical tie bar (for example on catamarans).
This valve is capable of resetting the synchronization of the rudders by making the synchronization manoeuvre thus bringing the hydraulic cylinders to the end of the stroke without having an operator in the steering room to open and close the ball valve so the synchronization can be made directly from the control station.
The valve can be used for all types of systems: manual, electrohydraulic, servo assisted and electronic.

22.080

Antishock valve 1/2"G.
This valve is used in line (along the tubing) for protection of the entire system from overpressure (EX.: a shock of the rudder).
Especially used if the system is under approval of a classification society.

22.090
Antishock valve 3/4"G.
This valve is used in line (along the tubing) for protection of the entire system from overpressure (EX.: a shock of the rudder).
Especially used if the system is under approval of a classification society.

V.B.P.A.-50
The valve type V.B.P.A.-50 is a special valve which includes both the bypass valve and the antishock valve.
This block is mainly used for systems with two hydraulic cylinders since the valve has four plugs on each side.

V.E.I.S. ½" G
The V.E.I.S. ½"G valve is a special block with 4 connections on each side (4 towards the cylinder and 4 towards the actuating section thus power pack and helm pump).
This valve has 12 screw spindles installed which allow the exclusion, the interception or bypass of multiple parts of the system.
Two max pressure valves are also integrated in the block which have antishock function.
By means of two lateral connections it is also possible to install additional hydraulic equipment (ex: manual pump for emergency).
It reduces consistently the system installation time on board, avoiding the use of many isolation valves, fittings and tubes.

NOTE:
Aggiungere nel sito web una sezione dedicata alle Valvole VEIS da ¾" e da 1" oltre che alle valvole VEISA e VEISAR

RUDDER ANGLE INDICATORS AND TRANSMITTERS

RQ-52

Rudder angle system made up of one receiver diameter 52mm and one transmitter.
It can be supplied on demand for double station.

IAB/03

Rudder angle indicator type IAB/03.
Can also be requested in MED version.

IAB/012

Rudder angle indicator type IAB/012
Measuring range ±45°
Dimensions Ø 120 mm
Voltage 12/24 V
Clock face colour: white
Level of protection: IP67 on the front

W/90S

Rudder angle indicator for pleasure boats, available in variations with scale facing upwards (Mod.W/90-S) or facing downwards (Mod. W/90-G)
Datasheet
Graduated scale +/-40°
Dimensions Ø97 mm
Level of protection IP56
Backlight 24V

C/110-L

Rudder angle indicator with MED certification and TYPE APPROVAL (Rina), available both with scale facing upwards or downwards.
Datasheet
Graduated scale +/-40°- +/-50°
Dimensions 154x154
Level of protection IP56
Backlight 24V

E/110/S
Rudder angle indicator with MED certification and TYPE APPROVAL (Rina), available both with scale facing upwards or downwards.
Datasheet
Graduated scale +/-40°- +/-50°
Dimensions Ø121 mm
Level of protection IP56
Backlight 24V

TAB/U/M
Rudder angle transmitter type TAB/U/M coupled with indicator type IAB/03.

TAB/012
Rudder angle transmitter type TAB/012
Outlet 0-1kΩ
Voltage 12/24VCC
Level of protection IP67

TR-80-L
Rudder angle indicator for pleasure boats with the possibility to install one or two receivers.
CHARACTERISTICS
-Complete of mechanical connection group
-Voltage 24V
-Internal electronic card with tension stabilizer
-External aluminium body Ø80 mm
-level of protection IP52

TR-100-L
Rudder angle indicator for pleasure boats with the possibility to install one or two receivers.

TR-120-L
Rudder angle indicator for marine use with the possibility to install one or two receivers.
CHARACTERISTICS
-Complete of mechanical connection group
-Voltage 24V
-Internal electronic card with tension stabilizer
-External aluminium body Ø120 mm
-level of protection IP56

ACCESSORIES

TLC
This electric joystick of small dimensions can be installed on the bridge of in safe environments.
Level of protection IP65.

TLCD
Double contact electric joystick for console.

TL
Single contact waterproof electric tiller with lever for NFU mode.

TLD
The waterproof tiller is suitable for external use also for working boats.
Strong and reliable, this tiller can be connected to two electro-hydraulic power packs.

TV
Waterproof electric tiller with wheel.

TVD
This model is supplied with stainless stell wheel (standard) or wood (on demand)

TP
Mobile electric tiller with 10m wire.

22.060
Approved low level alarm for electrohydraulic power pack.
Supplied as optional or if the vessel is under classification society.

22.070
Single vane compensation tank in stainless steel 13l capacity.

22.100
Compensation tank 3l stainless steel

22.105
The compensation tank in stainless steel with triple vane is used for systems with multiple items which must be connected to one another.

22.110
Double vane compensation tank: 2x3litres

Hydraulic Oil
The hydraulic oil is supplied in bottles of 1 litre and correct viscosity for each type of hydraulic system.
Viscosities available : 5Cst-10Cst-22Cst

FITTINGS

28.010
The straight brass fitting for nylon tube R7 5/16”G can be used for hydraulic steering systems with a maximum working pressure of 135bar.
It is especially recommended for vessel of small and medium dimensions for which the rules allow the use of flexible tubing.
This fitting allows a quick and easy installation of the flexible tube by cutting it of the right size.

28.011
The 90° brass fitting for nylon tube R7 5/16”G is used as a junction on parts of the steering system for which it is necessary to change the direction of the tubing.
It can be used for hydraulic steering systems with a maximum working pressure of 135bar.
The fitting needs to be fixed on the item (helm pump, cylinder, power pack, …) by means of a 10mm fitting for the shank.
It is especially recommended for vessel of small and medium dimensions for which the rules allow the use of flexible tubing.
This fitting allows a quick and easy installation of the flexible tube by cutting it of the right size.

28.020
The straight brass fitting for nylon tube R7 3/8”G is used as a junction on parts of the steering system for which it is not necessary to change the direction of the tubing (curve/angle).
It can resist to high pressures and it is designed specifically for nylon tube 3/8” R7 (please verify the maximum pressure of the tube bought if it is not supplied directly by MARSLI).
It is especially recommended for vessel of small and medium dimensions for which the rules allow the use of flexible tubing.
This fitting allows a quick and easy installation of the flexible tube by cutting it of the right size.

28.025
The 90° fitting with cadmium plating for nylon tube R7 3/8”G is used as a junction on parts of the steering system for which it is necessary to change the direction of the tubing.
It can resist to high pressures and it is designed specifically for nylon tube 3/8” R7 (please verify the maximum pressure of the tube bought if it is not supplied directly by MARSLI).
It is especially recommended for vessel of small and medium dimensions for which the rules allow the use of flexible tubing.
This fitting allows a quick and easy installation of the flexible tube by cutting it of the right size.

28.030
The fitting type T 10-10-10 in chromed brass is used as a junction on systems for which it is necessary to change the direction of the tubing and add helm pumps, power packs or other items which must be integrated on a steering system.
This fitting has three identical female connections for rigid and flexible tube with 10mm external diameter.

The most common use for this fitting is for the addition of a second or a third station or a power pack for autopilot.

28.040
The fitting type T 12-12-12 in chromed brass is used as a junction on systems for which it is necessary to change the direction of the tubing and add helm pumps, power packs or other items which must be integrated on a steering system.
This fitting has three identical female connections for rigid and flexible tube with 10mm external diameter.
On this "T" fitting can be directly installed reusable straight or 90° fittings for flexible hoses 3/8" R7.

28.050
The fitting type T 10-1/4"G-10 in chromed brass is used as a junction on systems for which it is necessary to change the direction of the tubing and add helm pumps, power packs or other items which must be integrated on a steering system.
This fitting has two connections for rigid and flexible tube with 10mm external diameter and one connection ¼"G for eventual junctions or flexible tubing with press fittings.

28.060
The fitting type T 12-3/8"G-12 in chromed brass is used as a junction on systems for which it is necessary to change the direction of the tubing and add helm pumps, power packs or other items which must be integrated on a steering system.
This fitting has two connections for rigid and flexible tube with 12mm external diameter and one connection 3/8"G for eventual junctions or flexible tubing with press fittings.

28.064
The 90° fitting for 10-10 is used as a junction on parts of the steering system for which it is necessary to change the direction of the tubing.
It is suitable for rigid stainless steel or brass tubing with diameter 10mm but also for flexible tubing Rilsan 10x2.
It is also used as a junction for reusable fittings 5/16".

28.065
The 90° fitting for 12-12 is used as a junction on parts of the steering system for which it is necessary to change the direction of the tubing.
It is suitable for rigid stainless steel or brass tubing with diameter 12mm but also for flexible tubing Rilsan 12x2.
It is also used as a junction for reusable fittings 3/8".

28.066
90° fitting ¼"G-10 chromed brass.

28.067
The chromed brass straight fitting ¼"G-10 is used as a junction fitting for components of the steering system (helm pump, cylinder, power pack, …)
The fitting allows to connect a rigid or flexible tube with 10mm diameter to a component with female threading ¼"G; it also allows to connect the reusable straight fitting or 90° fitting for tube 5/16"R7.

28.068
The chromed brass straight fitting ¼”G-12 is used as a junction fitting for components of the steering system (helm pump, cylinder, power pack, …)
The fitting allows to connect a rigid or flexible tube with 12 diameter to a component with female threading ¼”G; it also allows to connect the reusable straight fitting or 90° fitting for tube 3/8”R7.

28.069
The chromed brass straight fitting 3/8”G-12 is used as a junction fitting for components of the steering system (helm pump, cylinder, power pack, …)
The fitting allows to connect a rigid or flexible tube with 12 diameter to a component with female threading 3/8”G; it also allows to connect the reusable straight fitting or 90° fitting for tube 3/8”R7.

28.070
The isolation valve with ball for low pressure ¼”G is usually used to exclude parts of the steering system and tubing in which the pressure does not reach the working pressure, and it is low.
The isolation valves with ball, on steering systems, can be used both to exclude parts of the system in case of failure and, eventually, to change the flow direction of the oil towards and auxiliary hydraulic system (if the system is configured accordingly), but the line must be without pressure.
The isolation valves are also very useful during the maintenance of the system to avoid leaks of oil.

28.080
The isolation valve with ball for low pressure 3/8”G is usually used to exclude parts of the steering system and tubing in which the pressure does not reach the working pressure, and it is low.
The isolation valves with ball, on steering systems, can be used both to exclude parts of the system in case of failure and, eventually, to change the flow direction of the oil towards and auxiliary hydraulic system (if the system is configured accordingly), but the line must be without pressure.
The isolation valves are also very useful during the maintenance of the system to avoid leaks of oil.

28.090
The isolation valve with ball for low pressure 1/2”G is usually used to exclude parts of the steering system and tubing in which the pressure does not reach the working pressure such as compensation tubing of hydraulic oil or as an exclusion for the compensation tanks.

28.091
The isolation valve with ball for high pressure 3/8”G is usually used to exclude parts of the steering system in which the tubing reaches the working pressure.
The isolation valves with ball, on steering systems, can be used both to exclude parts of the system in case of failure and, eventually, to change the flow direction of the oil towards and auxiliary hydraulic system (if the system is configured accordingly), but the line must be without pressure.
The isolation valves are also very useful during the maintenance of the system to avoid leaks of oil.

28.092
The isolation valve with ball for high pressure 1/2”G is usually used to exclude parts of the steering system in which the tubing reaches the working pressure.
The isolation valves with ball, on steering systems, can be used both to exclude parts of the system in case of failure and, eventually, to change the flow direction of the oil towards and auxiliary hydraulic system (if the system is configured accordingly), but the line must be without pressure.
The isolation valves are also very useful during the maintenance of the system to avoid leaks of oil.

28.093
The brass straight adaptor ¼”G-10 is used as a junction fitting between a standard threading ¼”G and an item which has a female fitting with diameter 10mm such as an isolation valve.
The most common use is between a “T” fitting and an isolation valve.

28.094
The brass straight adaptor ¼”G-12 is used as a junction fitting between a standard threading ¼”G and an item which has a female fitting with diameter 12mm such as an isolation valve.
The most common use is between a “T” fitting and an isolation valve.

Rilsan Tube 8x1
The Rilsan tube is used for hydraulic telecontrol systems.

Rilsan Tube 10x2
The rilsan tube is used on small systems or for compensation tubing.
The tube is easy to install and can be cut in the desired size directly on board during the installation.
This tube can be used only on hydraulic steering systems with low pressure.

Rilsan Tube 12x2
The rilsan tube is used on small systems or for compensation tubing.
The tube is easy to install and can be cut in the desired size directly on board during the installation.
This tube can be used only on hydraulic steering systems with low pressure.

Nylon tube 5/16”R7
The nylon tube 5/16”R7 is used for systems of small and medium dimensions.
By means of reusable fittings the tube is easy to install and can be cut in the desired size on board during the installation.

Nylon tube 3/8”R7
The nylon tube 3/8”R7 is used for systems of small and medium dimensions.
By means of reusable fittings the tube is easy to install and can be cut in the desired size on board during the installation.

NOTE AGGIUNTIVE

NOTE AGGIUNTIVE

WHEELS

T1
STYLE: traditional wheel
AVAILABLE DIAMETERS Ø (cm): 30-37-42-49-52-60-65-70-80
WHEEL MATERIAL: Mahogany
HANDLES MATERIAL:6 Mahogany Handles
RING: Brass
HUB: anodized aluminium brass colour
COVERING PLATE: Brass not included (on demand, see accessories)
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: Straight
COLOUR: Mahogany

T2
STYLE: traditional wheel
AVAILABLE DIAMETERS Ø (cm): 30-37-42-49-52-60-65-70-80-90-100-120-150
WHEEL MATERIAL: Mahogany
HANDLES MATERIAL:6 Mahogany Handles
HUB: anodized aluminium brass colour
COVERING PLATE: Brass not included (on demand, see accessories)
INSTALLATION HOLE: depends on the type of helm pump ordered
INCLINATION: Straight
COLOUR: Mahogany
N.B.: in case of order please specify the type of transmitter or the dimensions of the installation hole.

T3
STYLE: traditional wheel
AVAILABLE DIAMETERS Ø (cm): 42-49-52-60-65-70-80
WHEEL MATERIAL: Varnished Mahogany
INTERNAL AND EXTERNAL RING MATERIAL: Stainless Steel
HANDLES MATERIAL:6 Mahogany Handles
HUB: anodized aluminium brass colour
COVERING PLATE: Brass not included (on demand, see accessories)
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: Straight
COLOUR: Mahogany

T3B
STYLE: traditional wheel
AVAILABLE DIAMETERS Ø (cm): 46-55-60-70
WHEEL MATERIAL: Varnished Mahogany
EXTERNAL RING MATERIAL: Mahogany
HANDLES MATERIAL:6 Mahogany Handles
HUB: Brass
COVERING PLATE: Brass not included (on demand, see accessories)
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: Straight
COLOUR: Mahogany

T4
STYLE: nautical wheels/rafts/motorboats
AVAILABLE DIAMETERS Ø (cm): 32-35-37-40-45
SPOKES: 5 spokes in stainless steel
RING MATERIAL: stainless steel
HUB: stainless steel
COVERING PLATE: wood
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 28°
COLOUR: stainless steel

T4B
STYLE: nautical wheels/rafts/motorboats
AVAILABLE DIAMETERS Ø (cm): 32-35-37-40-45
SPOKES: 5 spokes in stainless steel
RING MATERIAL: stainless steel
HUB: stainless steel
COVERING PLATE: wood
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 28°
COLOUR: stainless steel

T4C
STYLE: nautical wheels
AVAILABLE DIAMETERS Ø (cm): 32-40-45
SPOKES: 5 spokes in stainless steel
WHEEL MATERIAL: opaque teak wood
HUB: stainless steel
COVERING PLATE: teak wood
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 28°
COLOUR: teak/mahogany

T5
STYLE: nautical wheels – sailing vessels
AVAILABLE DIAMETERS Ø (cm): 42-50-60-70-80-90-100-120
SPOKES: 5 spokes in stainless steel for diameters 420mm and 500mm
SPOKES: 6 spokes in stainless steel for diameters from 600mm to 1200mm
WHEEL MATERIAL: stainless steel
HUB: stainless steel
COVERING PLATE: wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight
COLOUR: stainless steel

T5B
STYLE: nautical wheels
AVAILABLE DIAMETERS Ø (cm): 37-42
SPOKES: 5 spokes in stainless steel
WHEEL MATERIAL: stainless steel
HUB: internal aluminium and external polyurethane colour black
COVERING PLATE: stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 15°
COLOUR: stainless steel

T5P
STYLE: sailing vessels
AVAILABLE DIAMETERS Ø (cm): 42-50-60-70-80-90-100-120-130
SPOKES: 5 spokes in stainless steel for diameters 420mm and 500mm
SPOKES: 6 spokes in stainless steel for diameters from 600mm to 1300mm
WHEEL COVER MATERIAL: suede
HUB: stainless steel

COVERING PLATE: teak wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight
COLOUR: sand colour leather

T6
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 40-45-50-60-70-80-90-100-120-130
SPOKES: 5 spokes in stainless steel and teak wood for diameters 400mm and 450mm
SPOKES: 6 spokes in stainless steel and teak wood for diameters from 500mm to 1300mm
WHEEL MATERIAL: opaque teak wood
HUB: stainless steel
COVERING PLATE: teak wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight
COLOUR: teak

T6I
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 40-45-50
SPOKES: 5 spokes in stainless steel and teak wood
WHEEL MATERIAL: opaque teak wood
HUB: stainless steel
COVERING PLATE: teak wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 15°
COLOUR: teak

T6IN
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 35-40-45-50
For model Ø cm 35 A= cm 9,5
For model Ø cm 40 A= cm 10
For model Ø cm 45 A= cm 11
For model Ø cm 50 A= cm 11,5
SPOKES: 5 spokes in stainless steel
WHEEL MATERIAL: opaque teak wood
HUB: stainless steel
COVERING PLATE: stainless steel with “rosa dei venti” logo
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 15°
COLOUR: teak

T6R
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 40-45-50
SPOKES: 5 spokes in stainless steel and wooden handles
WHEEL MATERIAL: varnished mahogany wood
HUB: stainless steel
COVERING PLATE: wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight

COLOUR: mahogany

T8M
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 40-45-50-60-70-80-90-100
SPOKES: 5 spokes in stainless steel for diameters 400mm and 600mm
SPOKES: 6 spokes in stainless steel for diameters from 700mm to 1000mm
WHEEL MATERIAL: varnished mahogany wood
HUB: stainless steel
COVERING PLATE: wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight
COLOUR: mahogany

T8T
STYLE: Luxury Motor Yachts
AVAILABLE DIAMETERS Ø (cm): 40-45-50-60-70-80-90-100
SPOKES: 5 spokes in stainless steel for diameters 400mm and 600mm
SPOKES: 6 spokes in stainless steel for diameters from 700mm to 1000mm
WHEEL MATERIAL: opaque teak wood
HUB: stainless steel
COVERING PLATE: wood and stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: straight
COLOUR: teak

T9B
STYLE: Tenders/rafts/motorboats
AVAILABLE DIAMETERS Ø (cm): 35-45-55-70-80
SPOKES: 6 spokes in stainless steel diam. 14mm (diam. 35mm 5 spokes in stainless steel diam. 10mm)
WHEEL MATERIAL: polyurethane colour black
HUB: aluminium covered in polyurethane
COVERING PLATE: stainless steel
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: 7° (diam. 35mm 10°)
COLOUR: black

T9W
STYLE: motorboats
AVAILABLE DIAMETERS Ø (cm): 32-35-40
SPOKES: 6 spokes in stainless steel diam. 14mm
WHEEL MATERIAL: polyurethane colour white
HUB: aluminium covered in polyurethane
COVERING PLATE: stainless steel
INSTALLATION HOLE: depends on the ordered helm pump.
INCLINATION: 7°
COLOUR: white RAL 9010
N.B.: in case of order please specify the type of transmitter or the dimensions of the installation hole.

T11
STYLE: traditional wheel
AVAILABLE DIAMETERS Ø (cm): 50-60-70-80

WHEEL MATERIAL: Mahogany
HANDLES MATERIAL:6 Mahogany Handles
RING: Stainless steel
HUB: Stainless steel
COVERING PLATE: Stainless steel and Mahogany
INSTALLATION HOLE: tapered standard 17/19mm or on demand.
INCLINATION: Straight
COLOUR: Stainless steel and Mahogany

T12
STYLE: rafts/motorboats
AVAILABLE DIAMETERS Ø (cm): 35
SPOKES: stainless steel
WHEEL MATERIAL: varnished mahogany wood
HUB: stainless steel
COVERING PLATE: stainless steel/wood
INSTALLATION HOLE: tapered standard 17/19mm
POSITIONER: included, necessary for the regulation of the wheels with T spoke.
INCLINATION: straight
COLOUR: Mahogany / Ivory-beige RAL 1007/black/light metal grey, black / Carbon / Mahogany-black-steel / White RAL 9010

MATERIALE SEIPEM

(Tutti i Testi sono già tradotti in Inglese)

DEF52

Cilindro idraulico per flap di grandi dimensione (serie Heavy-Duty).
Il cilindro DEF52 è fissato internamente con stelo passante dalla scafo.
Esiste anche in versione DEF52/A con l'asticina posteriore per la connessione con il trasmettitore angolo Flap.

FCMT-ST

Pulsantiere per movimentazione flap.

COV120

Centralina elettronica di commutazione segnale per connessione del sensore dei cilindri flap con impianti angolo flap analogici.

FIAFS/CPI-1

Pannello di controllo integrato, che riunisce in un unico strumento sia la pulsantiera di azionamento flap, sia i nuovi indicatori a led.
Il pannello, di dimensioni contenute (Ø 100 mm.), permette l'ottimizzazione dello spazio sul cruscotto, riunendo le 2 funzioni (monitoraggio e controllo), e viene fornito in versione precablata e corredato di 10 metri di cavo di collegamento, nonché di eventuale prolunga per strumento ripetitore. (Art. FIAFS/CPI-1)

FIAFR/PS1

Pannello a led. RETTANGOLARE con Pulsanti per la regolazione dell'illuminazione dei LED e del pannello (Art. FIAFR/PS1)
Dimensioni 90 x 70 mm

FIAFS/2S1

Il segnale trasmesso dal sensore viene analizzato tramite una scheda elettronica, e quindi interfacciato su strumenti analogici, identici a quelli forniti con l'impianto tradizionale a cavetto. Sono disponibili a scelta i seguenti strumenti:

- Due strumenti singoli DS/SN – Ø 52 mm (Art. FIAFS/2S1)

A RICHIESTA è possibile installare strumento/i ripetitori per fly bridge.

FIAFS/SE1

Il segnale trasmesso dal sensore viene analizzato tramite una scheda elettronica, e quindi interfacciato su strumenti analogici, identici a quelli forniti con l'impianto tradizionale a cavetto. Sono disponibili a scelta i seguenti strumenti:

- Uno strumento a doppia scala – Ø 100 mm (Art. FIAFS/SE1)

A RICHIESTA è possibile installare strumento/i ripetitori per fly bridge.

FGEH1

The electrohydraulic power pack FGEH1 is specifically designed for the activation of hydraulic cylinders for flaps.
This model is supplied with motor 12V-500W, flow rate 0,6l/min, 80 pressure, 0,5l tank.

FGEH2

The electrohydraulic power pack FGEH2 is specifically designed for the activation of hydraulic cylinders for flaps.
This model is supplied with motor 12V-500W, flow rate 0,6l/min, 80 pressure, 0,5l tank.

FGEH15

The electrohydraulic power pack FGEH15 is specifically designed for the activation of hydraulic cylinders for flaps.
This model is supplied with motor 12V-500W, flow rate, 1,2l/min, 80 pressure, 1l tank.

FGEH25

The electrohydraulic power pack FGEH25 is specifically designed for the activation of hydraulic cylinders for flaps.
This model is supplied with motor 24V-500W, flow rate, 1,2l/min, 80 pressure, 1l tank.

CIF60 e CIF73

Grazie all'esperienza ultra trentennale nei sistemi di controllo e monitoraggio per gli impianti flap, SEIPEM ha realizzato un innovativo sistema nel campo degli indicatori di posizione, affiancando al tradizionale cavetto meccanico, il nuovo impianto completo di sensore integrato.
Questo sistema prevede l'impiego di un cilindro derivato dalla serie standard CIF50, ampiamente collaudata e sperimentata nel corso di oltre 15 anni di produzione, al quale è stato aggiunto uno speciale dispositivo, realizzato su nostre specifiche, in grado di rilevare ogni minima inclinazione dei flap.
L'apparecchiatura, esente da manutenzione e garantita per oltre 10 milioni di cicli, è integrata nel cilindro e immersa nell'olio idraulico. Questa configurazione rende il sistema protetto dagli agenti marini, sempre efficiente e affidabile nel tempo.
Il vantaggio principale è dunque l'estrema semplicità di installazione (applicazione sullo specchio di poppa e taratura degli strumenti indicatori) e la totale assenza di tubazioni e cavi esterni, che possono corrodersi o essere causa di malfunzionamenti e guasti meccanici.
Questo innovativo sistema è applicabile a tutti i flap della produzione SEIPEM , in particolare della serie HY-TRIM e OFFSHORE, per i quali sono impiegati cilindri a doppio effetto, nonché per installazioni personalizzate su specifiche del Cliente.
Per qualunque informazione, il nostro Ufficio Tecnico e Commerciale sono a Vostra completa disposizione per suggerirVi la soluzione tecnicamente ed economicamente più adeguata alle Vostre esigenze.

OFF-SHORE SERIES (Già Fatto in Inglese)

Modelli studiati per imbarcazioni dalle elevate performance in particolare quelle dotate di trasmissioni per eliche di superficie e idrogetti, ove non è possibile installare, per problemi di ingombro, il modello Off-Shore tradizionale con piastra integrata. Questi impianti sono caratterizzati da alettoni in fusione di alluminio con cerniera ribassata e un solo cilindro azionatore in acciaio inox AISI 316 a doppio effetto senza tubazioni esterne. E' possibile inoltre utilizzare i nuovi cilindri con sensore digitale interno, in grado di rilevare ogni minima inclinazione dei flap. La strumentazione può essere di tipo analogico o digitale con pulsantiera e indicatori a led integrati.
FOSN 50302 con singolo cilindro
A= 500
B= 300
H= 150
FOSN 60352 con singolo cilindro
A= 600
B= 350
H= 150
FOSN 70402 con singolo cilindro
A= 700
B= 265/400
H= 150
FOSN 80502 con singolo cilindro
A= 800 o 570
B= 500
H= 130
Per completare la gamma OFF-SHORE tradizionale, studiata per l'impiego su motoscafi ad alte prestazioni, sono stati realizzati questi alettoni in lega leggera, caratterizzati da una cerniera a specchio di poppa ribassata per un minor ingombro d'installazione. Particolarmente adatto per

trasmissioni con eliche di superficie e trasmissioni poppiere, questo sistema viene movimentato tramite due cilindri standard a doppio effetto in acciaio inox AISI 316, alimentati con speciali condotte interne per evitare tubazioni esterne.
La fornitura standard comprende: una coppia di alettoni, quattro cilindri azionatori, due centraline elettroidrauliche indipendenti (12 o 24 Volt) e raccorderia completa per il montaggio.
FOS 57504 con doppio cilindro
A= 570
B= 500
H= 130
FOS 80504 con doppio cilindro
A= 800
B= 500
H= 150
A= Larghezza B=Profondità H=Altezza Cerniera

HY-TRIM SERIES (Già fatto in Inglese)
La serie HY-TRIM, ampiamente sperimentata, è caratterizzata dall'impiego di cilindri a doppio effetto con 2 centraline elettroidrauliche indipendenti e alettoni a struttura scatolata in acciaio inox AISI 316.
La fornitura standard comprende:
- 2 alettoni in acciaio inox AISI 316, a struttura scatolata con superfici liscie che contribuiscono a inibire le formazioni di incrostazioni.
- 2 o 4 cilindri in acciaio inox AISI 316 a doppio effetto con alimentazione attraverso il supporto, quindi privi di tubazioni esterne. E' prevista la fornitura di 2 o 4 cilindri in base alla lunghezza dell'alettone e alle specifiche caratteristiche dell'imbarcazione. 2 centraline elettroidrauliche indipendenti con motore reversibile, 12 o 24 V. complete di valvola di massima e di tubazioni flessibili.
Single actuator equipment

SERIE 350	A	B	
FHT35602	350	600	Up to 10
FHT35702	350	700	11 to 12m
FHT35902	350	900	12 to 14 m
SERIE 400			
FHT40602	400	600	Up to 10 m
FHT40702	400	700	11 to 12 m
FHT40902	400	900	Da 11 a 13 m
SERIE 450			
FHT45602	450	600	Fino a 10 m
FHT45702	450	700	Da 11 a 12 m
FHT45902	450	900	Da 11 a 13 m
SERIE 500			
FHT50702	500	700	Da 11 a 12 m
FHT50902	500	900	Da 11 a 13 m

Dual actuator equipment

SERIE 350	A	B	
FHT351004	350	1000	Da 12 a 14 m
FHT351204	350	1200	Da 12 a 14 m
FHT351504	350	1500	Da 14 a 16 m
SERIE 400			
FHT401004	400	1000	Da 14 a 16 m
FHT401204	400	1200	Da 14 a 16 m
FHT401504	400	1500	Da 14 a 16 m
FHT401804	400	1800	Da 16 a 18 m
SERIE 450			

FHT451204	450	1200	Da 16 a 18 m
FHT451504	450	1500	Da 16 18 m
FHT451804	450	1800	Da 18 a 20 m
FHT452004	450	2000	Da 18 a 20 m
SERIE 500			
FHT501004	500	1000	Da 18 a 20 m
FHT501204	500	1200	Da 18 a 20 m
FHT501504	500	1500	Oltre 20 m
FHT501804	500	1800	Oltre 20 m
FHT502004	500	2000	Oltre 20 m

CARBON FIBRE TRIM TAB

Una nuova proposta di variatori d'assetto, dedicata a imbarcazioni performanti, che si va ad aggiungere alla vasta gamma della serie OFF-SHORE. Questo impianto è stato progettato per l'impiego su motoscafi ad alte prestazioni ed è dunque caratterizzato da una robusta struttura in acciaio unta alla rigidità e leggerezza della pala in fibra di carbonio. Questo connubio è sinonimo si alta affidabilità e resistenza, pur mantenendo un peso inferiore rispetto a quelli della serie standard in lega leggera. Sono completi di cerniera per fissaggio allo specchio di poppa in acciaio inox: il suo profilo è ribassato per offrire un minor ingombro e facilitando l'installazione. Ben si adatta quindi alle trasmissioni per eliche di superficie, idrogetti e trasmissioni poppiere EFB. Le dimensioni degli alettoni sono personalizzate e realizzate custom per assecondare le specifiche esigenze di ciascuna imbarcazione.
Come da standard Seipem, il sistema è movimentato tramite cilindri idraulici a doppio effetto in acciaio inox AISI 316, alimentati tramite speciali condotte interne onde evitare tubazioni esterne. Una soluzione che offre diversi vantaggi, sia di installazione, sia di minor rotture o deterioramenti dovuti all'ambiente.
Il kit comprende: una coppia di alettoni, due o quattro cilindri azionatori (in dipendenza dalle dimensioni dell'alettone), due centraline elettroidrauliche indipendenti (12 o 24 Volt) e un set di raccorderia completa per il montaggio a bordo.
A RICHIESTA: pannello di comando e controllo, impianto indicatore dell'angolo di inclinazione di tipo analogico con trasmissione a cavetto o, in alternativa, impianto indicatore con sensore digitale integrato all'interno del cilindro abbinabile a uno strumento in plancia con led e pulsanti integrati.

BLADE SERIES 0 to 90° Angle

Di nuova concezione, questo tipo di impianto si aggiunge alla vasta produzione SEIPEM ®. Come tradizione, il sistema è realizzato con materiali di prima qualità ed è frutto della ricerca tecnologica sviluppata nel corso della ultra trentennale esperienza nel settore dei correttori d'assetto. Scopo dell'applicazione di questo modello di correttori è essenzialmente la riduzione del tempo di planata (per installazione su imbarcazioni veloci) con conseguente miglioramento dell'assetto longitudinale e riduzione dei consumi. Per le imbarcazioni di tipo semidislocante, l'impianto si comporta come un prolungamento fisso di carena che aumenta la portanza generando una spinta verticale necessaria a sollevare la poppa dell'imbarcazione. L'incidenza del flap da 0° a 90°, permette una regolazione ottimale e si adatta facilmente alle caratteristiche dell'unità. La movimentazione indipendente delle appendici, nonché la possibilità di azzeramento dell'incidenza, consente una precisa correzione dell'assetto longitudinale, migliorando la stabilità. Con moto ondoso proveniente da prua, l'utilizzo di questi correttori riporta la carena nel giusto assetto permettendo una navigazione più sicura.
L'impianto consiste essenzialmente in 2 appendici mobili di robusta costruzione, incernierate allo scafo e mosse da cilindri idraulici a doppio effetto. Tali apparati sono caratterizzati dalla assenza di tubazioni esterne e vengono azionati da due mini-centraline elettroidrauliche di tipo reversibile.
L'utilizzo, come per i flap tradizionali, avviene tramite pannello di comando a 2 levette, con possibilità di ripetizione dei comandi per le unità con doppia stazione sul flying bridge.
L'impianto è inoltre dotato di sistema con indicatore dell'angolo di incidenza o tramite sensori all'interno dei cilindri o tramite due trasmettitori collegati meccanicamente ai cilindri.

Il sistema consiste in un flap di ridotta profondità (pochi centimetri) che ruota dalla posizione iniziale, parallela alla carena, sino a portarsi a 90° gradi rispetto al fondo. Contrariamente a quanto si possa pensare, l'effetto frenante, con incidenza 90°, è ridotto rispetto a un flap tradizionale di pari larghezza (che raggiunge al massimo una inclinazione di 20°) e la spinta di sostentamento maggiore. Questo fenomeno è dovuto alla deviazione dei filetti fluidi che scorrono sotto la carena; l'acqua viene "trattenuta" dalla pala, creando in tal modo un cuneo idrodinamico che devia il flusso e genera una spinta idrodinamica(F), dal basso verso l''alto nelle sezioni poppiere dello scafo. Come noto, il minor attrito(R) possibile di un corpo immerso in movimento è che questo sia fatto (o ricoperto) di acqua: da questo si può intuire come il sistema possa dare una notevole forza di sostentamento(P), sottraendo ben poca spinta propulsiva. Il sistema ha inoltre diverse regolazioni, poiché già dai 20 gradi di inclinazione, e in funzione dell'angolo di incidenza della pala, si può variare la forza generata sul fondo dello scafo. Data la maggiore efficacia rispetto ai flap tradizionali, questo impianto può essere utilizzato anche come correttore d''assetto trasversale che smorza il rollio di imbarcazioni veloci.

HEAVY DUTY SERIES

Le serie HEAVY-DUTY FFH e FHA sono particolarmente adatte per imbarcazioni semiplananti, con lunghezza sino a 35 m Il modello FFH prevede alettoni in acciaio inox AISI 316 a struttura scatolata e con profondità 50, 60 e 70 cm. Questo prodotto, particolarmente robusto e affidabile è installato su numerosi 'Luxury' yachts, su naviglio militare veloce e su imbarcazioni per trasporto passeggeri. La serie FHA ha le stesse caratteristiche funzionali ma e'' fornita con alettoni realizzati in fusione di alluminio ed è particolarmente indicata per quelle applicazioni in cui il risparmio di peso ha una importanza rilevante. Questi sistemi sono equipaggiati con cilindri ""entrobordo"" che azionano i bracci di comando aventi altezza regolabile.

La fornitura standard comprende:

- 2 alettoni in acciaio inox AISI 316, a struttura scatolata con superfici liscie che contribuiscono a inibire le formazioni di incrostazioni.
- 2 o 4 cilindri in acciaio posizionati all'interno dello scafo, e con lo stelo che fuoriesce. E' prevista la fornitura di 2 o 4 cilindri in base alla lunghezza dell'alettone e alle specifiche caratteristiche dell'imbarcazione.
- 2 centraline elettroidrauliche indipendenti con motore reversibile, 12 o 24 V. complete di valvola di massima e di tubazioni flessibili.
- Accessori vari su richiesta (indicatori e trasmettitori d'angolo, leve/joystick per la movimentazione).

NOTE AGGIUNTIVE

HYDRAULIC STEERING SYSTEMS

For the MARSILI encoding they are called “systems type A”.

The MARSILI hydraulic steering systems meet perfectly the needs of motorized vessels of all types.

Very simple to install and built with materials which are resistant to the maritime environment.

A large range of piston helm pumps, hydraulic cylinders and accessories, allow a precise choice of the most suitable equipment for each situation, the reliability and comfort are guaranteed.

The MARSILI hydraulic steering systems are designed with an accurate attention to details, during the phases of production and test, aiming to obtain systems with high manoeuvrability, maintaining the characteristic smoothness of the hydraulic transmitters during the manoeuvre.

Usually, the hydraulic steering systems are made up of one or more hydraulic cylinders and one or more piston helm pumps.
These are "classic" steering systems since the '60s as a concept, but are now produced at a more advanced level both for the design and the material used.

To the manual hydraulic steering systems can be added accessories and components even at a later stage, such as electrohydraulic power packs for autopilot.

Thus, the systems type "A" are mainly composed of:

Hydraulic Cylinder

It is the most important element in a steering gear control system.
The cylinder is usually sized correctly by our technical office depending on the characteristics of the vessels and specifically depending on the torque exercised on the rudder, trying also to meet the customer's demand both for the dimensions and the aesthetics.
The cylinder can be supplied with a suitable tiller for connection to the rudder stock.

Helm Pump

It consists of a pump with axial pistons which withdraw and push the oil contained in the hydraulic system while the helm pump is manoeuvred by the steering wheel.
The cubic capacity determines the total turns that the wheel must do for a complete manoeuvre from hardover to hardover.
The pump is equipped with a non-return valve which does not allow the rudder to move freely when nobody is holding the wheel.

Tubing and Fittings

The tubing must be sized correctly depending on the cubic capacity of the helm pump.
MARSILI can supply 5/16" and 3/8" standard flexible hoses.
Other dimensions are supplied on request depending on the length required.
We recommend rigid tubing for working vessels for which MARSILI can supply suitable fittings.

ELECTROHYDRAULIC STEERING SYSTEMS

For the MARSILI encoding they are called "systems type B".

The MARSILI electrohydraulic steering systems meet perfectly the needs of motorized vessels of all types from nautical to working ones.

Very simple to install and built with materials which are resistant to the maritime environment.

A large range of piston helm pumps, hydraulic cylinders, electrohydraulic power packs with voltage on demand and accessories, allow a precise choice of the most suitable equipment for each situation, the reliability and comfort are guaranteed.

The MARSILI electrohydraulic steering systems are designed with an accurate attention to details, during the phases of production and test, aiming to obtain systems with high manoeuvrability, maintaining the characteristic smoothness of the hydraulic transmitters during the manoeuvre.
In addition to the manual manoeuvre, an electrohydraulic power pack is installed for a manoeuvre without any effort in NFU (Non-Follow-Up) or in AP (Autopilot) mode.

The MARSILI power packs are adaptable to all kinds of autopilots.
The standard directional valves are 12V or 24V ON-OFF, but proportional directional valves can be supplied as well.

Usually, the hydraulic steering systems are made up of one or more hydraulic cylinders, one or more piston helm pumps and one or more power packs.
These are "classic" steering systems since the '60s as a concept, but are now produced at a more advanced level both for the design and the material used.

To the electrohydraulic steering systems, as for the manual steering systems, can be added accessories and components even at a later stage.

The power packs of the systems Type "B" are classified as "Y" or "W".
The power packs type "Y" exploit the power of an electric motor coupled to a gear pump, the tank and the base of the electric motor are complete of control and safety valves and filters; the movement of the rudder is obtained by means of a solenoid valve controlled by an electric transmitter on the bridge.
The power packs type "W" exploit the power of a gear pump coupled to a motor on board or to a belt driven support which transmits the rotation and, thus, the oil flow to the valve group installed on the tank.

SERVO ASSISTED STEERING SYSTEMS

For the MARSILI encoding they are called "systems type F".

The MARSILI servo assisted steering gears meet perfectly the needs of motorized vessels of all types from nautical to working ones.

Very simple to install and built with materials which are resistant to the maritime environment.

A large range of orbitrols, hydraulic cylinders, electrohydraulic power packs with voltage on demand and accessories, allow a precise choice of the most suitable equipment for each situation, the reliability and comfort are guaranteed.

The MARSILI servo assisted steering systems are designed with an accurate attention to details, during the phases of production and test, aiming to obtain systems with high manoeuvrability.
The main manoeuvre in the systems type "F" is made by means of an orbitrol (assisted manoeuvre) with a steering wheel, with no effort needed.
The orbitrol is powered by the power pack, to which the solenoid valves can be added to connect a joystick or an autopilot.
The MARSILI power packs are adaptable to all kinds of autopilots.
The standard directional valves are 12V or 24V ON-OFF, but proportional directional valves can be supplied as well.

Usually, the servo assisted steering systems are made up of one or more hydraulic cylinders, one or more orbitrols and one or more power packs.
These are "classic" steering systems since the '70s as a concept, but are now produced at a more advanced level both for the design and the material used.

To the servo assisted steering systems, as for the electrohydraulic steering systems, can be added accessories and components even at a later stage.
The power packs of the servo assisted systems are classified as "Y" or "W".

The power packs type “Y” exploit the power of an electric motor coupled to a gear pump, the tank and the base of the electric motor are complete of control and safety valves and filters; the movement of the rudder is obtained by means of a solenoid valve controlled by an electric transmitter on the bridge.
The power packs type “W” exploit the power of a gear pump coupled to a motor on board or to a belt driven support which transmits the rotation and, thus, the oil flow to the valve group installed on the tank.

STEERING SYSTEMS WITH FEEDBACK

For the MARSILI encoding they are called “systems type G”.

The MARSILI servo assisted steering systems with feedback meet perfectly the needs of motorized vessels of all types from nautical to working ones.

Built with materials which are resistant to the maritime environment.

The system uses three main components:

- Actuator.
- Electrohydraulic power pack
- Hydraulic transmitter, which allows the manoeuvre in the three systems; Hydraulic FU, Electric NFU, Manual Hydraulic/Emergency.

ACTUATOR:
It is made up of a main cylinder and a feedback cylinder which are coaxial and with the same strokes.
During the FU mode, the feedback cylinder is filled by the manual transmitter, its pressure activates the servo valve which consequently manoeuvres the main cylinder.
The control is step by step and direct.
In NFU mode, the main cylinder is manoeuvred directly by a solenoid valve, while the feedback cylinder is set in bypass through the simultaneous command of a second solenoid valve.
In Manual/Emergency mode, the main cylinder is manoeuvred directly by the manual transmitter, while the feedback cylinder is set in bypass by its antishock valve.

ELECTROHYDRAULIC POWER PACK:
It is the core of the system, where both the working elements (motor - gear pump) and the command and control valves are assembled.
When the power pack is switched on the FU and NFU systems are available simultaneously and automatically using the transmitter or the tiller/autopilot.
The Manual/Emergency system takes over automatically if the power pack is switched off or in case of power failure.
In this case, an electric selector connects directly the transmitter to the main cylinder, allowing the manoeuvre automatically.
The power pack is also equipped for the automatic filling of the system and the regulation of the manoeuvre time during the NFU mode.

TRANSMITTER:
It is an axial piston pump turned by means of a steering wheel, depending on which mode it is set, it works under servo assisted mode or in manual emergency mode.
The system, as it is designed, allows a total hydraulic separation between the working system and the piloting system, avoiding that the feedback cylinder receives the working pressure during the emergency mode unnecessarily.

It is preferable to the traditional servo assisted systems because it is not only silent (there is no oil under pressure on the bridge), but it allows a safer and better manoeuvre as well.

OUTBOARD STEERING SYSTEMS

For the MARSILI encoding they are called “systems type A”, being usually manual systems.

Very simple to install and built with materials which are resistant to the maritime environment.

A large range of piston helm pumps, hydraulic cylinders and accessories, allow a precise choice of the most suitable equipment for each situation, the reliability and comfort are guaranteed.

The choice of the type of outboard steering system depends on the type of motor.

MARSILI can supply systems for outboard motors up to 300CV.

The kit is as follows:
N°01 helm pump C5/25A or C5/25 (flange/installation stud optional)
N°01 outboard hydraulic cylinder type FB-300°
N°02 reusable straight fittings for nylon tube 5/16” R7
N°02 reusable 90° fittings for nylon tube 5/16” R7
N°12 metres of nylon tube 5/16” R7 (length to be checked on board)
N°03 litres of oil

SYSTEMS WITH HYDRAULIC SYNCHRONIZATION

The MARSILI steering systems with hydraulic synchronization are equipped with synchronization valves which are installed when it is not possible to synchronize two or more rudders, by means of a tie bar for example.
These are systems mainly designed for Catamarans, Trimarans, or vessels with very distant rudders.
These systems are often chosen, particularly for small vessels, as an alternative to electronic systems which not only are more expensive but are also more complex electrically speaking.
The hydraulically synchronized steering systems can be Manual, servo assisted with orbitrol, Assisted with hydraulic feedback and can be used with electrohydraulic power packs for autopilot or joystick.

For bigger vessels MARSILI produces special cylinders with internal bypass for phasing combined with the V.E.I.S.A. valve for synchronization.

ELECTRONIC STEERING SYSTEMS

For the MARSILI encoding they are called “systems type H” or “I”.

The MARSILI electronic steering systems meet perfectly the needs of motorized vessels of all types from nautical to working ones.

The electronic systems can be supplied in various versions very different from one another but, despite the hydraulic, electrohydraulic and mechanic parts of the “B” systems, they are mainly made up of one or more potentiometric transmitters with wheel (control stations), a junction box with integrated card for the electronic system and alarms card, one or more electric feedbacks, one or more starters with alarm repeaters and eventual panels to be installed on the bridge.
The electronic systems may also be supplied, in special versions, with electronic synchronization of the rudders and with proportional valves which are adaptable for the dynamic position system.

A large range of piston helm pumps, hydraulic cylinders, electrohydraulic power packs with voltage on demand and accessories, allow a precise choice of the most suitable equipment for each situation, the reliability and comfort are guaranteed.

The MARSILI power packs are adaptable to all kinds of autopilots.
The standard directional valves are 12V or 24V ON-OFF, but proportional directional valves can be supplied as well.

The power packs of the systems Type “H” are classified as “Y” or “W”.
The power packs type “Y” exploit the power of an electric motor coupled to a gear pump, the tank and the base of the electric motor are complete of control and safety valves and filters; the movement of the rudder is obtained by means of a solenoid valve controlled by an electric transmitter on the bridge.
The power packs type “W” exploit the power of a gear pump coupled to a motor on board or to a belt driven support which transmits the rotation and, thus, the oil flow to the valve group installed on the tank.

STEERING SYSTEMS FOR AUTOPILOT

For the MARSILI encoding they are called “systems type B” (same category of the electrohydraulic steering systems).

The MARSILI autopilot steering systems meet perfectly the needs of motorized and sailing vessels of all types from nautical to working ones and/or with a mechanical steering system already installed.

Very simple to install and built with materials which are resistant to the maritime environment.

Usually, the steering systems for autopilot are made up of one or more hydraulic cylinders, an electric bypass and one or more power packs.
The hydraulic cylinder is fixed on the sector of the mechanical steering system already installed.
The electric bypass is necessary to bypass the hydraulic system when the vessel is manoeuvred by the mechanical system.

A large range of electric bypasses, hydraulic cylinders, electrohydraulic power packs with voltage on demand and accessories, allow a precise choice of the most suitable equipment for all necessities, the reliability and comfort are guaranteed.

The MARSILI steering systems for autopilot are designed with an accurate attention to details, during the phases of production and test, aiming to obtain systems with high manoeuvrability, trying not to affect the normal handling of the mechanical steering system.
The MARSILI power packs are adaptable to all kinds of autopilots.
The standard directional valves are 12V or 24V ON-OFF, but proportional directional valves can be supplied as well.

The power packs of the systems Type “B” are classified as “Y” or “W”.
The power packs type “Y” exploit the power of an electric motor coupled to a gear pump, the tank and the base of the electric motor are complete of control and safety valves and filters; the movement of the rudder is obtained by means of a solenoid valve controlled by an electric transmitter on the bridge.
The power packs type “W” exploit the power of a gear pump coupled to a motor on board or to a belt driven support which transmits the rotation and, thus, the oil flow to the valve group installed on the tank.

NOTE AGGIUNTIVE

MAIN PRODUCT CATEGORIES

ELECTRO HYDRAULIC POWER PACKS

MARSILI offers a large range of electro hydraulic power packs for steering system:
- reversible electro hydraulic power packs 12V or 24V for small vessels, sailing vessels and autopilot systems.
- power packs with solenoid valve 12V or 24V or 220/380V for vessels with an electric generator which can power up a continuous running motor. These power packs are used both for autopilot and for non follow up systems on small, medium and large vessels.
- The servo-assisted power packs are of two types: servo-assisted for orbitrol and servo-assisted for full follow up.

Custom power packs which are built depending on the type of vessel, classification society and customer's necessities.

12/24V

The electro-hydraulic power pack with solenoid valve 12V or 24V for vessels with an electric generator which can power up a continuous running motor. These power packs are used both for autopilot and for non follow up systems on small, medium vessels.
they are usually supplied complete of electric motor, central manifold, gear pump, non-return valve, solenoid valve, filter and tank.
We can supply on demand a flow regulator, a larger tank and the pressure gauge with exclusion.

220/380V

The electro-hydraulic power pack with solenoid valve 220/380V for vessels with an electric generator which can power up a continuous running motor.
These power packs are used for autopilot , non follow up and Electronic full follow up systems on small, medium vessels and large vessels.
they are usually supplied complete of electric motor, central manifold, gear pump, non-return valve, solenoid valve, filter, pressure gauge with exclusion and tank.
We can supply on demand a flow regulator, a larger tank or other components depending on the type of system.
The power packs can also be equipped with various sensors required by classifications society in case of approval such as low pressure sensor, high temperature sensor, low level sensor, hydraulic lock and oil filter clogging.

REVERSIBLES

The Reversible Electro-hydraulic power packs 12V or 24V are usually designed for small vessels, sailing vessels and autopilot systems.
These power packs with reversible motor 12V or 24V are supplied with electric motor, central manifold, gear pump and filter.

WITHOUT MOTOR (Type "W")

The electro-hydraulic power packs without motor are supplied for vessels which do not have an electric generator which can power up an electric motor or if the hydraulic system already has pumps which can power the hydraulic steering system.

Usually these power packs are powered by a gear pump coupled on the vessel motors or by a pump installed on a belt driven system with pulley.
These power packs are supplied complete of valve group (solenoid valve, non-return valve, flow regulator and max pressure valve), filter, pressure gauge with exclusion, and suitable tank.
The power packs can also be equipped with various sensors required by classifications society in case of approval such as low pressure sensor, high temperature sensor, low level sensor, hydraulic lock and oil filter clogging.

SERVO ASSISTED

The servo assisted electro-hydraulic power packs can be supplied with electric motors 12V, 24V and 220/380V.
They are divided in 2 categories:

- – Electro- hydraulic power packs for orbitrol (system F)
- – Electro- hydraulic power packs for FFU systems with manual pump and feedback (system G)

Both servo assisted electro-hydraulic power packs are complete of motor, valve group, filter, pressure gauge with exclusion, and tank.
To understand the difference between the two power packs please visit the section “servo assisted steering systems” and “steering systems with feedback”.

SPECIAL

All non-standard electro-hydraulic power packs go under the category “Special power packs”.
The non-standard power packs are custom built depending on the requests of the vessel owner, the shipyard, the captain and/or the classification society.
They are studied and designed by our technical office to satisfy all the customer’s requests.

ACCESSORIES AND SPARES

In this section can be found all the accessories that can be matched or added to the electro-hydraulic power packs.

HYDRAULIC CYLINDERS

The MARSILI hydraulic cylinders combine and accurate machining to an highly innovative technology to assure maximum performances and a high resistance to corrosion.
All the cylinders are designed to work at very high pressures.
Decades of experience in cylinder construction guarantees quality and reliability.
The MARSILI hydraulic cylinders are studied for all the necessities and can be installed in all type of vessels.
The main categories of hydraulic actuators are divided in brass and bronze cylinders and painted steel cylinders.
All MARSILI cylinders are certified CE and are approved by the most important international classification societies.

OUTBOARD CYLINDERS

The MARSILI outboard cylinders are designed specifically for outboard motors.
The installation is universal and can be adapted to all types of motor, except for Mercury motors for which is supplied an adapting flange.
The MARSILI outboard cylinders are for motors up to 300HP.
MARSILI supplies also tie bars in case of double motor and the dimensioning of the cylinder also depends on the rotation of the propeller.

STEEL SERIES DOUBLE CYLINDERS

The MARSILI steel double cylinder actuators are designed mainly for medium/large working boats.
The volume of the standard cylinders of this series goes from 1067cc to 9123cc with a torque that goes from 630kgm to 7100kgm.
The steel cylinders are strong and are approved by the most important international classification societies.

Depending on the request, the cylinders of this series can be supplied in special materials such as NIKROM piston rod and with particular antishock valves-bypass such as the VBPA and VEIS.
Some models of this series can be supplied with internal bypass valves which open at the end of the stroke to avoid the contact of the piston with the cylinder head but most of all they are used on steering systems with hydraulic synchronization (when it is not possible to install a tie bar).
As a matter of fact, by means of these internal valves it is possible to synchronize the two rudders directly from the main control station, without using other valves, simply manoeuvring the cylinders to the end of the stroke.

STEEL SERIES WITH CENTRAL SUPPORT

The MARSILI steel actuators with single cylinder and central installation are designed mainly for working boats.
The volume of the standard cylinders of this series goes from 460cc to 2136cc with a torque which goes from 292kgm to 1382kgm.
The steel cylinders are strong and are approved by the most important international classification societies.
This cylinder series is known for its strength and high reliability during the years, thanks to its structure completely in steel and piston rods with suitable diameters to resist high mechanical efforts.

BRASS SERIES

The MARSILI hydraulic cylinders combine and accurate machining to an highly innovative technology to assure maximum performances and a high resistance to corrosion.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass.
All MARSILI cylinders are certified CE and are approved by the most important international classification societies.

BRASS SERIES WITH TIE RODS

The hydraulic cylinders of the brass series with tie rods are designed to work at very high pressures.
The brass material is also appealing aesthetically considering that these cylinders are usually used in the yachting sector, but also others.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
All MARSILI cylinders are certified CE and are approved by the most important international classification societies.

BRASS SERIES WITH CENTRAL SUPPORT

The MARSILI hydraulic cylinders combine and accurate machining to an highly innovative technology to assure maximum performances and a high resistance to corrosion.
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The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of bronze.
All MARSILI cylinders are certified CE and are approved by the most important international classification societies.

SERVO ASSISTED
The MARSILI hydraulic cylinders combine and accurate machining to an highly innovative technology to assure maximum performances and a high resistance to corrosion.
The hydraulic actuators of this series are made up of two cylinders: a main force cylinder and a feedback cylinder coupled to the main one with an aluminium support.
The cylinder tube is made of brass, a material which has higher resistance to pressure than aluminium.
Double seals are inserted on each cylinder head to compensate the micro leaks which occur after many working hours.
To facilitate the bleeding of air, inclined bleed screws are installed on top of the cylinder heads.
The piston rod is made of stainless steel, chromed and rectified; the chromium plating in a protected environment guaranties a high quality plating, and an excellent protection against the marine corrosion, combined with a very smooth surface guaranties a long endurance of the seals.
The chromium helps to eliminate at least 30% of the friction caused by the use of seals and its hardness protects the piston rod from accidental scratches which could damage the seals.
The support is made of brass and bronze.
All MARSILI cylinders are certified CE and are approved by the most important international classification societies.

OLD MODELS
This section includes MARSILI cylinders which are out of production.

ACCESSORIES AND SPARES
The MARSILI hydraulic cylinders of all the series can be supplied with accessories such as bypass valves, flexible hoses, antishock valves, double and single tiller arms for coupling to the rudder axis.
N.B.: the MARSILI standard tiller arms are suitable for coupling with tapered rudder axis.
If the rudder axis is cylindrical please contact our technical office for custom tiller arms.

TILLER ARMS
The MARSILI standard tiller arms are suitable for coupling with tapered rudder axis.
All the tiller arms can be supplied both single (for one rudder coupled with one cylinder) and double (for two rudders coupled to one or two cylinders).
If the rudder axis is cylindrical please contact our technical office for custom tiller arms.

SPARES
The standard spares for MARSILI hydraulic cylinders are the seals, the ball joint and the piston rod.
Other components can be supplied as spares but we recommend contacting our technical office.

REMOTE CONTROLS
The hydraulic remote controls can be supplied for flexible hoses or copper tubing.
They are suitable for the control of 1 or 2 motors and in systems which may have up to three control stations.

STARTERS
MARSILI supplies starters on demand for electrohydraulic power packs both 24V and 220/380V.
The starters can include electronic command systems of the rudder and PLC for the monitoring of the sensors installed on the power pack.

The starters are custom designed depending on the request of the customer and/or of the classification society.

JOYSTICKS AND TILLERS

The MARSILI joysticks and tillers can control one or two solenoid valves simultaneously.
We produce from the most simple versions for the internal installation (on the console) up to the waterproof versions which are for working boats and are more resistant.

JUNCTION BOX – RACK

The Junction Box/RACK is an essential component for electronic control systems.
It manages both the FFU (Full Follow-Up) and the rudder angle system.
The RACK is equipped with an electronic card approved by RINA MIL which is able to manage up to 10 alarms/sensors of the steering system.

PANELS

The MARSILI panels for the bridge are entirely custom made.
On the control panel can be installed multiple components such as LED alarms, the mode switch, the control of the starters (switch on/standby/switch off), the alarm management, the rudder angle indicator or the analogue angle setting and other components which the customer and/or the classification society could request.

RUDDER ANGLE SYSTEM

The complete rudder angle systems are made up of one rudder angle transmitter to be installed in the steering room on the tiller arm and one or more rudder angle indicators.
The systems can be potentiometric or electronic and digital or analogue.
MARSILI also supplies MED certified systems for steering systems that must be approved and tested by a classification society.

OUTBOARD KITS

The kits for outboard motors from 80HP to 300HP are usually made up of the following components:

- Hydraulic outboard cylinder
- Hydraulic transmitter
- Flange or stud for transmitter installation (optional)
- Fittings
- Hydraulic oil

UP TO 90HP

The kits for outboard motors up to 90HP are usually made up of the following components:

- Hydraulic outboard cylinder for a power up to 90HP
- Hydraulic transmitter suitable for the cylinder dimensions
- Flange or stud for transmitter installation (optional)
- 10mm Fittings
- Rilsan tube 10x2
- Hydraulic oil

UP TO 100HP

The kits for outboard motors up to 100HP are usually made up of the following components:

- Hydraulic outboard cylinder for a power up to 100HP
- Hydraulic transmitter suitable for the cylinder dimensions
- Flange or stud for transmitter installation (optional)
- 10mm Fittings (+eventual 5/16” fittings)
- Rilsan tube 10x2 or nylon tube 5/16” R7
- Hydraulic oil

UP TO 150HP

The kits for outboard motors up to 150HP are usually made up of the following components:

- Hydraulic outboard cylinder for a power up to 150HP

- Hydraulic transmitter suitable for the cylinder dimensions
- Flange or stud for transmitter installation (optional)
- 10mm Fittings (+eventual 5/16" fittings)
- Rilsan tube 10x2 or nylon tube 5/16" R7
- Hydraulic oil

UP TO 250HP

The kits for outboard motors up to 250HP are usually made up of the following components:

- Hydraulic outboard cylinder for a power up to 250HP
- Hydraulic transmitter suitable for the cylinder dimensions
- Flange or stud for transmitter installation (optional)
- 5/16" fittings
- Nylon tube 5/16" R7
- Hydraulic oil

UP TO 300HP

The kits for outboard motors up to 300HP are usually made up of the following components:

- Hydraulic outboard cylinder for a power up to 300HP
- Hydraulic transmitter suitable for the cylinder dimensions
- Flange or stud for transmitter installation (optional)
- 5/16" fittings
- Nylon tube 5/16" R7
- Hydraulic oil

HYDRAULIC TRANSMITTERS

The Marsili hydraulic transmitters can be of two types:

- Piston pump
- Orbitrols

The classic helm pumps with pistons are used on all the hydraulic and electrohydraulic steering systems as main or emergency manoeuvre. The volumes go from 14cc to 250cc.
The orbitrols are only used on servo assisted systems and the volumes go from 50cc to 630cc.

ORBITROLS

The orbitrols represent an advanced technological solution to ease the movement and the precision of the wheels and of the assisted systems; quality, precision and perfect interchangeability with original spares which guarantee the maximum reliability of each product.
These orbitrols are available in reactive and non-reactive version, for systems with opened centre and closed centre and in load sensing version.
The correct dimension of the orbitrol for the steering system is recommended directly from our technical office.
The standard orbitrols are the following:
OH/8 for single control station
OH/3 for double control station (priority valve must be foreseen)

HYDRAULIC PUMPS

The MARSILI hydraulic pumps or transmitters have an high volumetric performance (minimum losses), obtained with accurate and modern working procedures, which allow precise tolerances.
The maximum lightness and smoothness of the manoeuvre is guaranteed by the position of the atmospheric valves which is lower than the axis of rotation of the pump, and suitable passage holes, which allow the flow of oil even at the minimum level inside the tank.

STEERING WHEELS

MARSILI offers a large range of steering wheels for all types of vessels.
Wooden wheels (mahogany and teak), stainless steel wheels and polyurethane wheels are available with different colours and shapes.
MARSILI also supplies very large wheels specifically for sailing vessels.

ACCESSORIES

The accessories are an integration of the steering system.
MARSILI offers many types of accessories such as fittings, valves, compensation tanks suitable for all types of hydraulic and electrohydraulic steering systems.

OTHER

In the category “other” are contained those products which are not classified or specific for steering systems.

FITTINGS AND TUBES

MARSILI supplies, together with the standard systems, many types of fittings which vary from 10mm diameter or ¼”G up to 22mm or ¾”G.
The dimension of the fittings may change depending on the system and can reach even 2”G.
The fittings supplied by MARSILI, for small and medium vessels is designed to be perfectly suitable for tubing 5/16” and 3/8”R7 which are of easy installation and can reach high working pressures guaranteeing the maximum reliability, safety and easy installation.

COMPENSATION TANKS

The compensation tank is used on systems with multiple components which must be connected or simply to have more compensation and positioned in a place easily accessible.

VALVES

The MARSILI Standard valves are divided in four main categories: bypass valves, non-return valves, antishock valves and valve groups.
The bypass valves are used in line to bypass the tubing or the cylinders in case of emergency.
The non-return valves can be installed both on along the tubing or directly on the components and are used to block the return of oil flow.
The antishock valves are safety valves which are installed to avoid that eventual high pressures damage the tubing or components of the system.
The valve groups can integrate various functions on the same valve.