



# Hydraulic Starters



**Turbo Mot India**

**Gali**

## Applications

The Hydraulic Starters are mainly used to start diesel engines generally emergency sets for marine, oil and gas, off-shore, etc.

## Advantages

Very reliable as an emergency starting system, because it is a closed and independent circuit with few mechanisms.

The hydraulic starting unit can be activated manually so it is a solution when there is no external energy available.

It can be used under extreme environmental conditions just using the suitable hydraulic oil.

Unaffected when stopped for long periods of inactivity, even being under damp and hostile environmental, due to its closed and sealed design that don't allow the entrance of dirt for it. The unit is always ready to start the engine.

Very low maintenance required. Easy assembly on the engine by frontal flange.

## How is the energy supplied to the starter?

The starter gets the power from the oil contained in the hydraulic unit.

This equipment includes a tank with oil and an accumulator with the compressed gas and it may

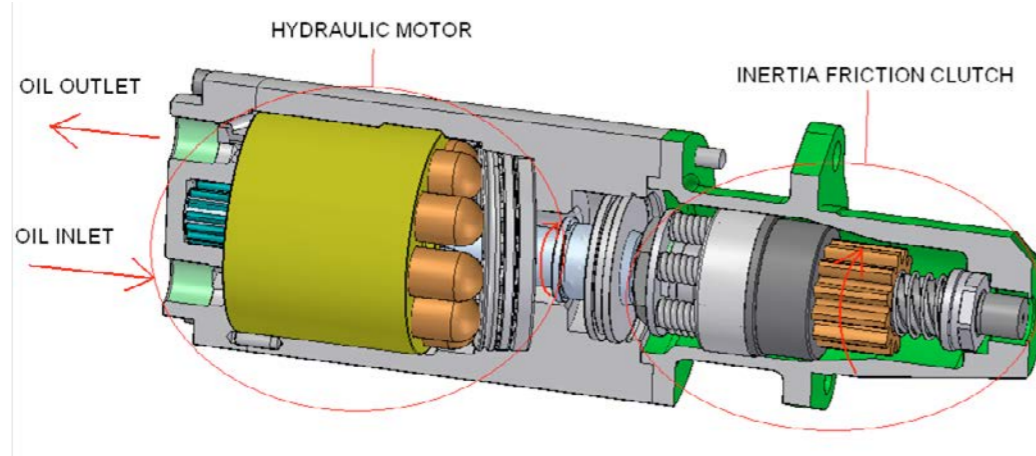
incorporate an electric pump or hand pump (manual), or both.

The hydraulic unit compresses the oil until 210 bar and this oil goes into the starter forcing the movement of the hydraulic motor.

We can adapt the whole system to your exact specifications, dimensioned under the number of start attempts you ask for.

## How it works

The oil goes into the starter and activate the hydraulic motor. The pistons start moving the disc and that transforms the linear movement into circular one which is transmit to the inertia friction clutch. Inertia friction clutch's pinion turns.

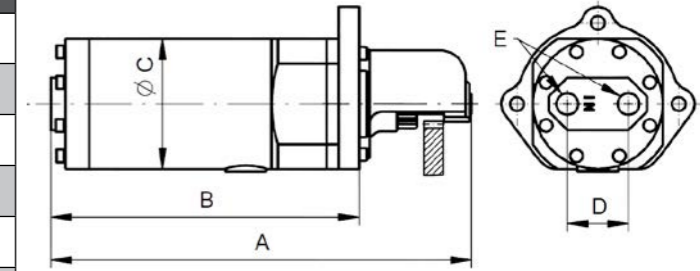


Hydraulic starter: Hydraulic motor + Inertia friction clutch

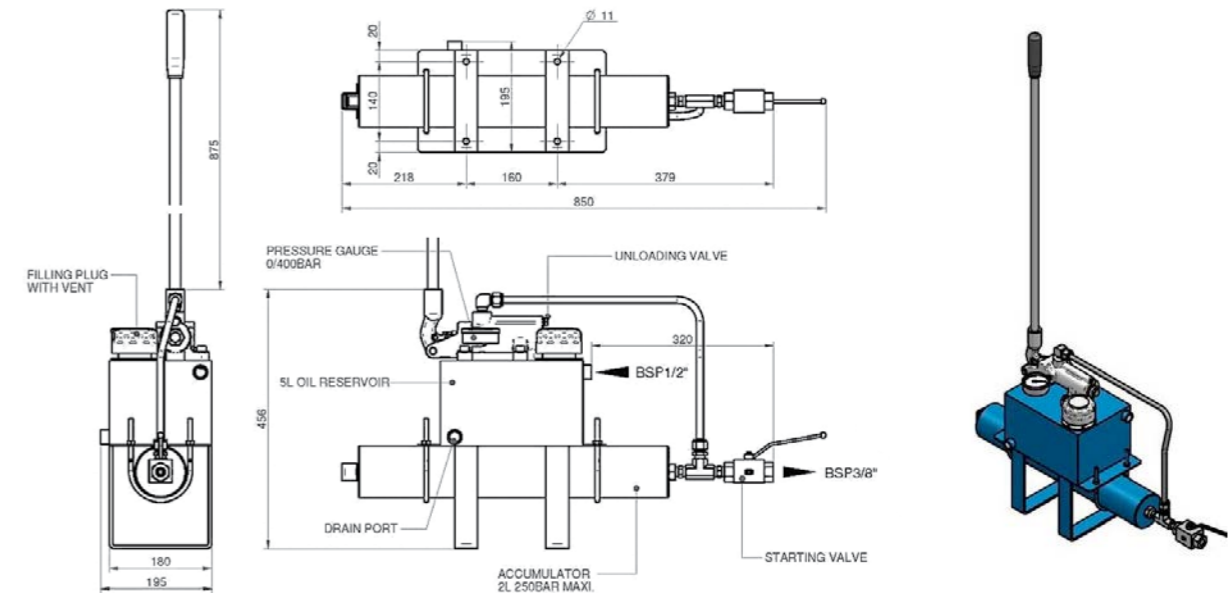
Model	Displacement	Maximum torque	Maximum speed	Engine displacement
H5	8,65 cm <sup>3</sup> /rev	20 Nm	7000 rpm	0 to 5 dm <sup>3</sup>
H10	21,95 cm <sup>3</sup> /rev	61 Nm	7000 rpm	5 to 8 dm <sup>3</sup>
H15	33,80 cm <sup>3</sup> /rev	98 Nm	4500 rpm	8 to 18 dm <sup>3</sup>
H20	57,26 cm <sup>3</sup> /rev	163 Nm	4500 rpm	18 to 41 dm <sup>3</sup>
H25	96,28 cm <sup>3</sup> /rev	271 Nm	3000 rpm	41 to 74 dm <sup>3</sup>
H30	131,88 cm <sup>3</sup> /rev	365 Nm	3000 rpm	74 to 110 dm <sup>3</sup>

## Dimensions

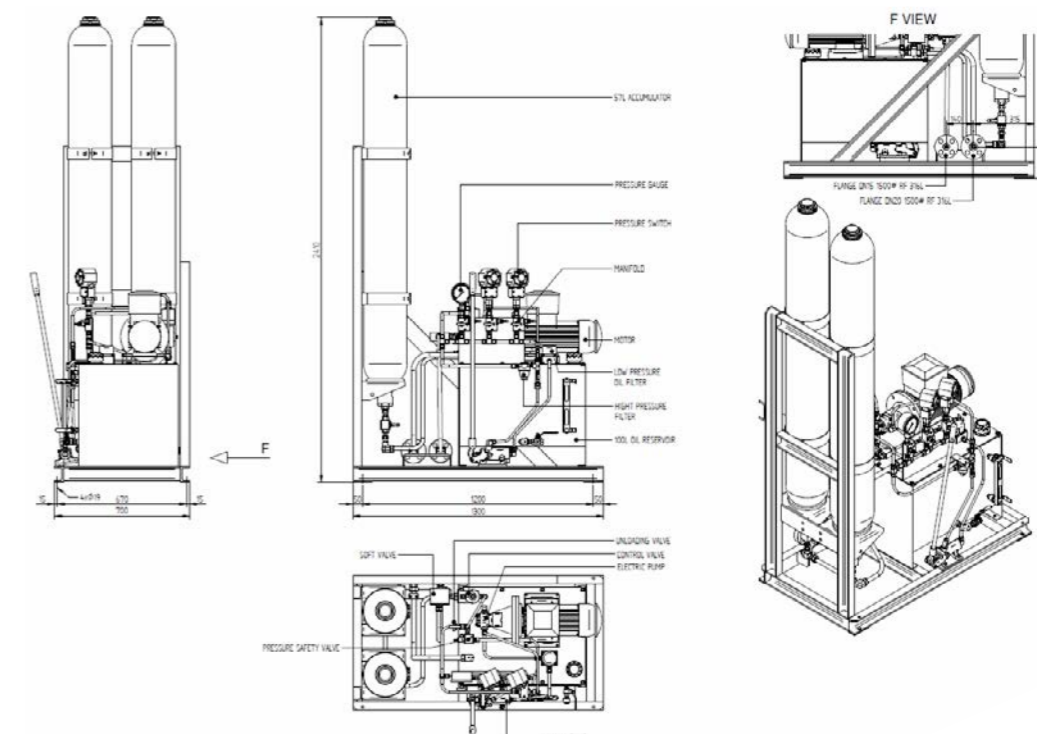
Model	A	B	C	D	E
H5	325	237	89	44	3/8" NPT
H10	330	242	102	48	3/8" NPT
H15	381,5	266,5	122	58	1/2" NPT
H20	400	284	130	62	1/2" NPT
H25	471	343	143	75	3/4" NPT
H30	480	352	150	81	3/4" NPT



## Manual pump

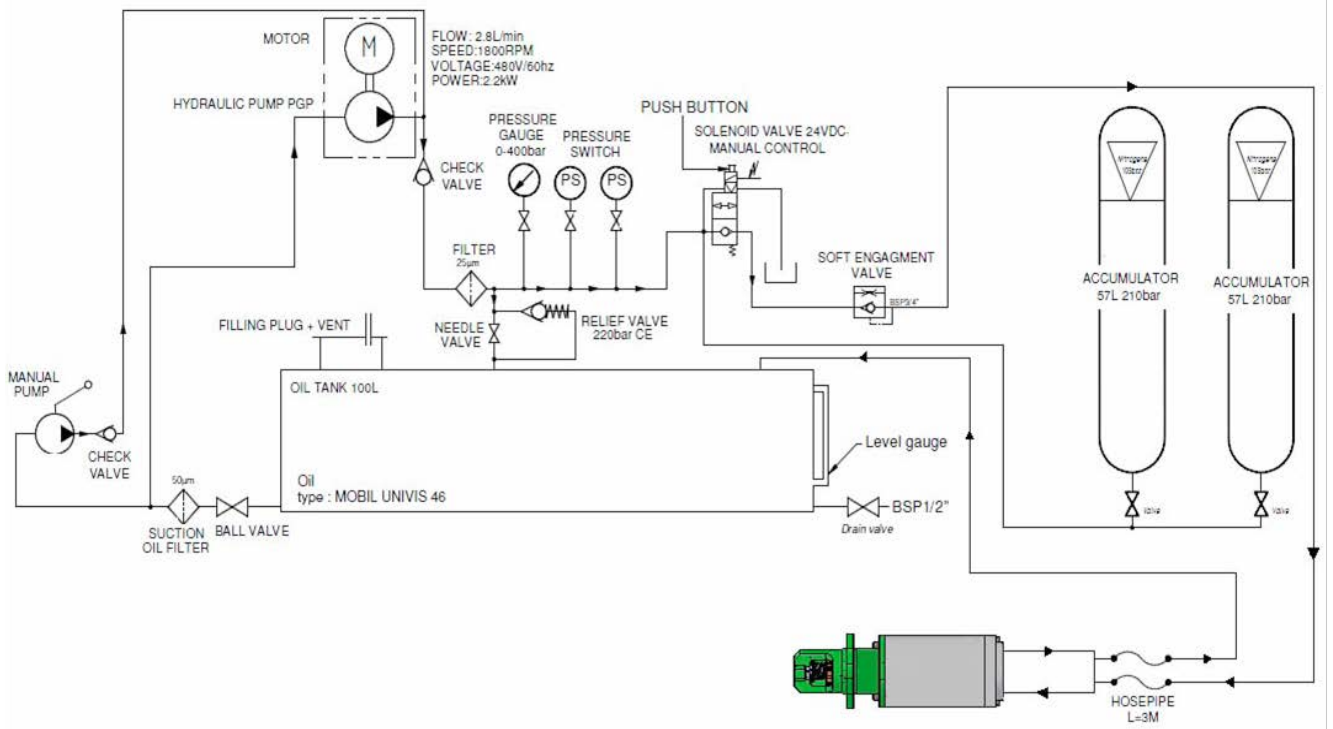


## Electric pump



## Installations

### Pipping & Instrumentation drawing hydraulic unit



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