



ESA-T HDR

HYDRAULIC MOTOR POWERED pump for tank trucks and street washers



Powerful compact ready-to-install centrifugal pump for medium and heavy vehicles

The pump is suitable due to its good pressure and high output both for washing and water transfer and irrigation

Complete equipment according to the customer's needs

Rated output 1000 L/min @ 8 bar, maximum pressure 15 bar, maximum output 1200 lpm

Simple, reliable design Low footprint

Oy Veljekset KULMALA Ab

Linjatie 4 01260 VANTAA
www.veljeksetkulmala.fi
tel. 09 875 1800

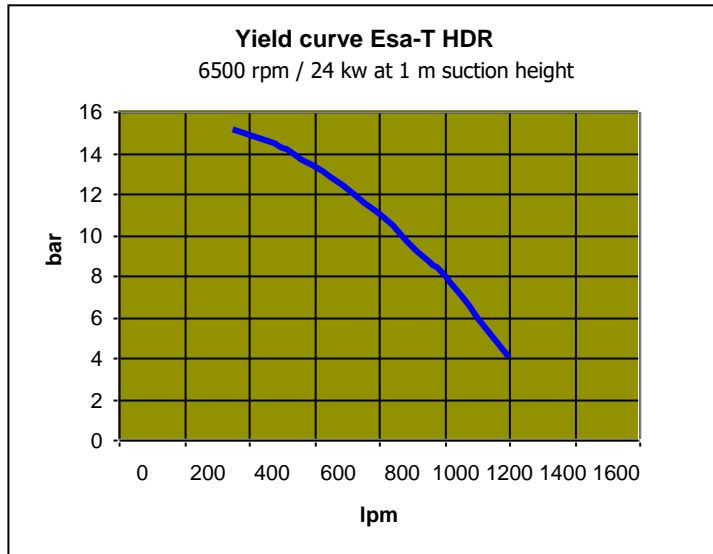
Esa T HDR hydraulic pump for vehicle installations

ESA T HDR Small but high-capacity ready-to-install hydraulic pump for street washers and light tank trucks.

The pump is available in aluminum or bronze.

Equipped with a red metal impeller, the ESA T is suitable for seawater and the application of saline solutions (rinsing after use)

the centrifugal pump is equipped with a maintenance-free mechanical seal. The pump shaft is made of stainless steel.



Engine: Volvo F11-10 revolution volume engine (10 cl revolution with a maximum speed of 7800 rpm/continuous and 10 000 rpm/short-term maximum continuous power of 30 kW 350 bar. Oil demand 60-78 L / min, power demand with nominal output 63 L / min / 200 bar 23 kW.

Suction device: If necessary, a compressed air ejector can be equipped with a suction device or a manual suction pump. Thanks to the suction devices, the pump can use open water sources without the seed water in the suction hoses. Suction hoses and piping according to rated power NS 80 to NS 100.

Suction connection: The size of the Esa T HDR suction connection is R 3" SPK.

Pressure outlet: The pressure outlet is equipped with an NS 65 non-return valve.

Pressure gauge: The pump is equipped with a liquid-damped 63 mm stainless steel pressure gauge with a display of -1 / + 15 bar.

Pump speed: The maximum continuous speed is 6500 rpm/min.

Dimensions:

length: 410 mm without suction connector

Width: 350 mm

height: 560 mm valve open

weight: 29 kg



Commissioning of Esa T HDR and installation of hydraulics

The direction of rotation of Esa T is clockwise from the direction of the pump inlet. The direction of rotation of the hydraulic motor is then also clockwise. The supply is connected to terminal B (direction of rotation clockwise) and the return terminal to terminal A.

Note Turning the pump counterclockwise will damage the pump mechanical seal

Esa T oil demand and piping

The nominal output is 65 L/min @ 200 bar. The recommended oil level for the system without the oil cooler is 3 x liter output per minute. (example: 3 x 65 L/min = 195 L)

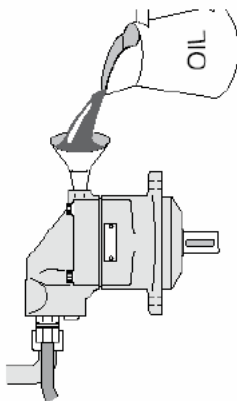
Always use a larger pipe in the return line than in the pressure line. The size of the piping is affected by its length. The general recommendation for vehicle use is 20 mm for the supply line, 32 mm for the return line and 12 mm for the leak line.

Leak line

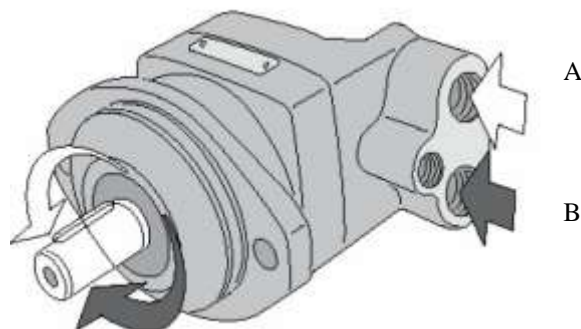
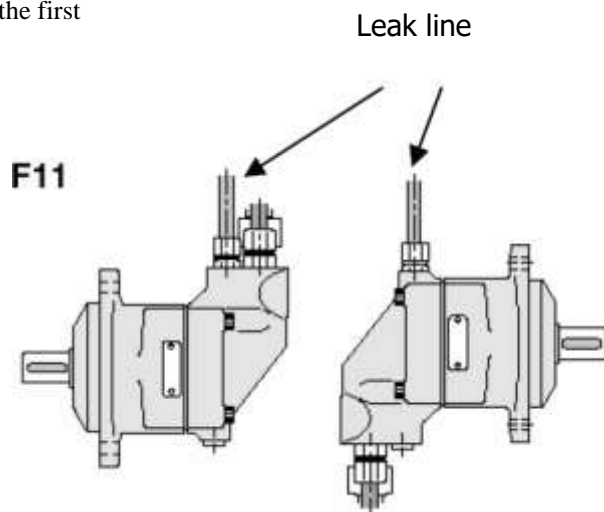
The leak line must never be left disconnected. Depending on the position of the hydraulic motor, the upper line is always selected as the leak line. (Leak line outputs on both sides of the motor).

The leak line is connected directly to the oil tank. If a leak line is connected to the return line, make sure that no pressure is created in the return line by using sufficiently large piping. The pressure will damage the hydraulic motor shaft seal.

Fill the hydraulic motor with oil before starting for the first



Fill the engine with oil before starting for the first time.



Make sure that the installer has sufficient professional skills to install the pump and hydraulics.