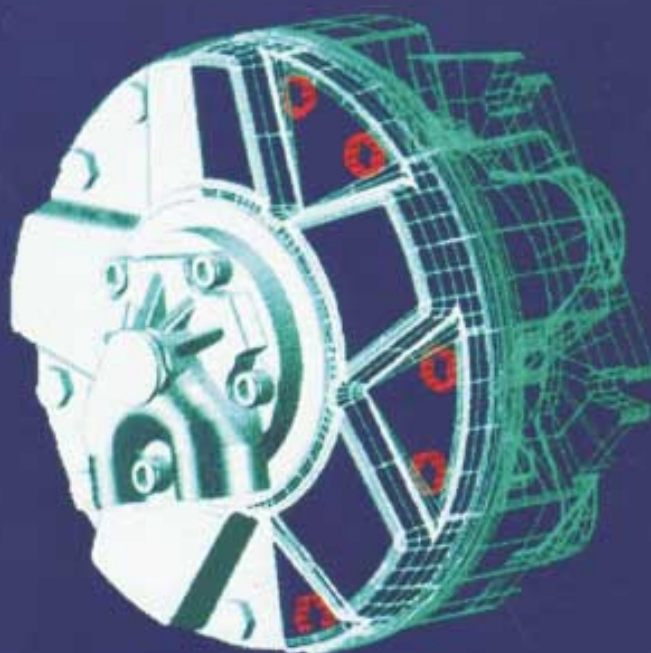


# **SAL**

**HIGH TORQUE, HIGH SPEED  
RADIAL PISTON HYDRAULIC MOTORS**

## **Environmentally-friendly machine applications**



**CRANKSHAFT DESIGN  
RADIAL PISTON  
HYDRAULIC MOTORS**

# quality and performances in mobile equipment drives



Special features of our products are:

HIGH VOLUMETRIC EFFICIENCIES  
WIDE SPEED RANGE  
HIGH STARTING TORQUE  
CAVITATION RESISTANCE  
HIGH POWER DENSITY



## HIGH VOLUMETRIC EFFICIENCIES

The motors have very high volumetric efficiencies in all operating conditions (typically >99%).

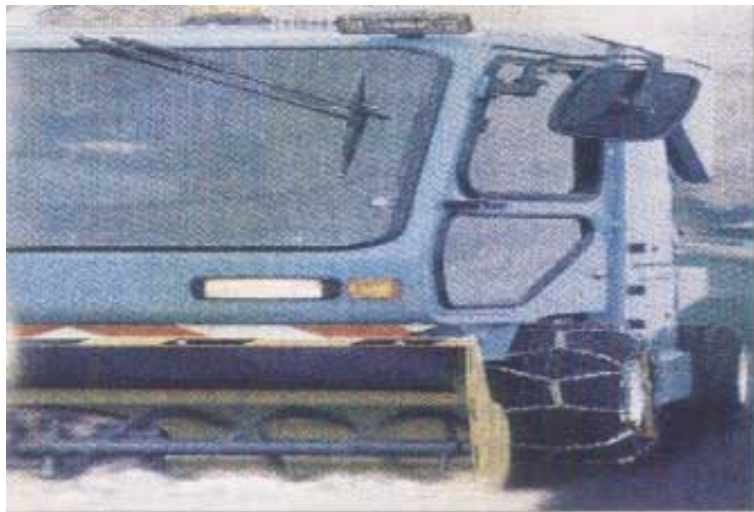
The seal design used throughout the motor ensures that the volumetric efficiency is not affected if components become worn with use.

The combination of high volumetric and mechanical efficiency means that the motors generate less heat enabling smaller heat exchangers to be installed or, in certain cases, enabling them to be completely eliminated.



## WIDE SPEED RANGE

SAI motors have some of the widest specific speed ranges of any hydraulic motor due to their very good low speed characteristics and higher than average max. speeds.



High starting torque enables larger obstacles and steeper slopes to be overcome.

### HIGH STARTING TORQUE

The radial piston design ensures very high starting torque efficiencies, especially at high pressures where they are most required in mobile applications. Efficiency is typically >94% at 400 bar.

The maximum torque requirements for wheel motor applications generally occurs with the vehicle at standstill or low speeds, for example during acceleration from stand-still or when overcoming an obstacle or a slope.



### CAVITATION RESISTANCE

The spring-loaded piston retaining rings ensure that the pistons remain in full contact with the shaft irrespective of the pressure conditions inside the cylinder or in the motor casing.

The retaining force always fully counteracts any separating force, preventing lifting, tilting or hammering of the piston during cavitation.

The motors can be made to operate without oil in the pistons (e.g.: freewheeling with the motor disconnected from the pump).

### HIGH POWER DENSITY

High mechanical efficiency, combined with a high pressure and high speed capability enables the motors to operate with high average powers. This combined with compact dimensions gives the motors high power density.

