TECHNICAL REPORT

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# Hydraulic fluid power — Application notes for the optimization of the energy efficiency of hydraulic systems



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# Foreword

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This document was prepared by Technical Committee ISO/TC 131, *Fluid power systems*, Subcommittee SC 9, *Installations and systems*.

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# Introduction

Energy consumption of machines is primarily defined by the type of machine, e.g. lathes, injection moulding machines and excavators.

Additionally, the level of energy consumption is a function of the requirements of the machine manufacturer and duty cycle and frequency of use by the operator. It is only when the machines are adapted for specific applications (e.g. working cycle, control precision, level of automation) in an optimal manner, that energy efficiency concepts can have a positive impact.

Typical applications for hydraulics in machines are:

— clamping with high force;

— pressing with high force;

— motion, acceleration and braking of heavy loads;

— hydraulic weight compensation;

— hydrostatic transmission.