

H1-The new Generation of Hydrostatics 045/053 cm³ Single Pumps with integrated Automotive Control (AC)

Introduction

For more than 40 years, Sauer-Danfoss has been developing state-of-the-art components and systems for mobile machinery used in off-highway operations around the world. We have become a preferred supplier by offering the best of what really matters: The hardware inside your vehicle application. H1 - our new generation of servo-controlled hydrostatic pumps - is no exception.

The H1 range is built around an advanced electrical control and available in a wide range of displacements. It is designed for quality and reliability and offers expanded functionality, greater total efficiency, and easy installation.

All H1 control and sensor options are PLUS+1 Compliant. The new Automotive Control (AC) option for H1 pumps puts 40 years of mobile machinery propel system experience at your fingertips: through software configuration it enables faster time-to-market and improved performance and functionality for both new machine designs and model variants.

Local Address:



 **PLUS+1** COMPLIANT

*H1 Axial Piston Pump
Size 045/053 single pump
with integrated Automotive Control (AC)*

Features

- **Complete propel drive system functionality**
 - PLUS+1 Service Tool configurable for custom drive behavior
 - PLUS+1 Compliant pump and motor control, pedal, joystick, and sensor options
 - Independent pump/motor profiling & ramping
 - Multiple individually configurable propel drive modes:
 - Automotive (command signal to pump engine RPM dependent)
 - Non-Automotive (command signal to pump by pedal or joystick)
 - Creep automotive (combination of both above)
 - Advanced functions, including:
 - Temperature compensation for predictable performance
 - Overheat and low-temperature protection
 - Engine antistall
 - Constant speed drive control
 - Vehicle speed limiter
 - Engine and motor overspeed protection
 - Option: pump swashplate feedback and control
 - See also related documents:
 - 11066201 H1 Automotive Control System Description
 - 70012797 H1 Automotive Control PLUS+1™ Compliant User Manual
- **Designed for greater functional safety**
 - Optional SIL-2 certification simplifies vehicle certification
- **Installation and packaging benefits**
 - Length optimized pump
 - Minimum one clean side
 - Higher corner power and power density
 - Deutsch connector standard
 - Expanded functionality through PLUS+1
- **Greater total efficiency**
 - Minimized control losses
 - Improved charge circuit
 - Lower control pressure for less power consumption

Technical Specifications

Physical properties

Features	Unit	Sizes	
		045	053
Displacement	cm ³ [in ³]	45 [2.75]	53.8 [3.28]
Weight (without PTO and filter)	kg [lb]	41 [90]	

Operating parameters

Input speed	Minimum	min-1 (rpm)	500
	Rated		3400
	Maximum		3500
System pressure	Maximum working pressure*	bar [psi]	420 [6090] 380 [5510]
	Maximum pressure		450 [6525] 400 [5800]
	Minimum low loop		10 [150]
Case pressure	Rated	bar [psi]	3.0 [40]
	Maximum		5.0 [75]

* Applied pressures above maximum working pressure requires

Sauer-Danfoss application approval.

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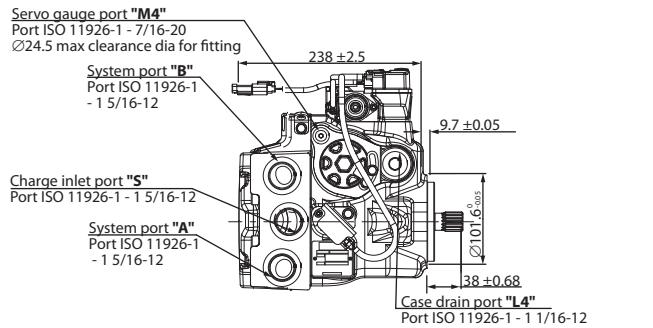
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Electrical parameters

Rated voltage 12 V	Minimum	V	9
Maximum			16
Rated voltage 24 V	Minimum	mA	18
Maximum			36
Digital PWM outputs			3000

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Dimensions



Servo gauge port "M4"
Port ISO 11926-1 - 7/16-20
Ø24.5 max clearance dia for fitting

System port "B"
Port ISO 11926-1 - 1 5/16-12

Charge inlet port "S"
Port ISO 11926-1 - 1 5/16-12

System port "A"
Port ISO 11926-1 - 1 5/16-12

Case drain port "L4"
Port ISO 11926-1 - 1 1/16-12

Schematic

