



## H1-The new Generation of Hydrostatics 078 cm<sup>3</sup> 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.

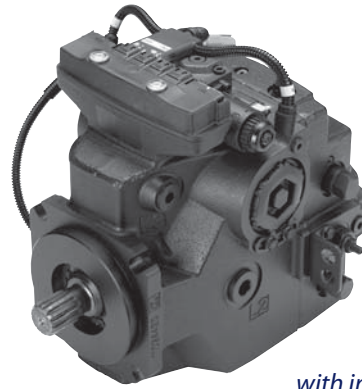
The H1 range is built around an advanced electrical control and available in a wide range of displacements. It is designed for quality and reliability and offers expanded functionality, greater total efficiency, and easy installation.

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.

Data Sheet

Local Address:



**E1**™ COMPLIANT

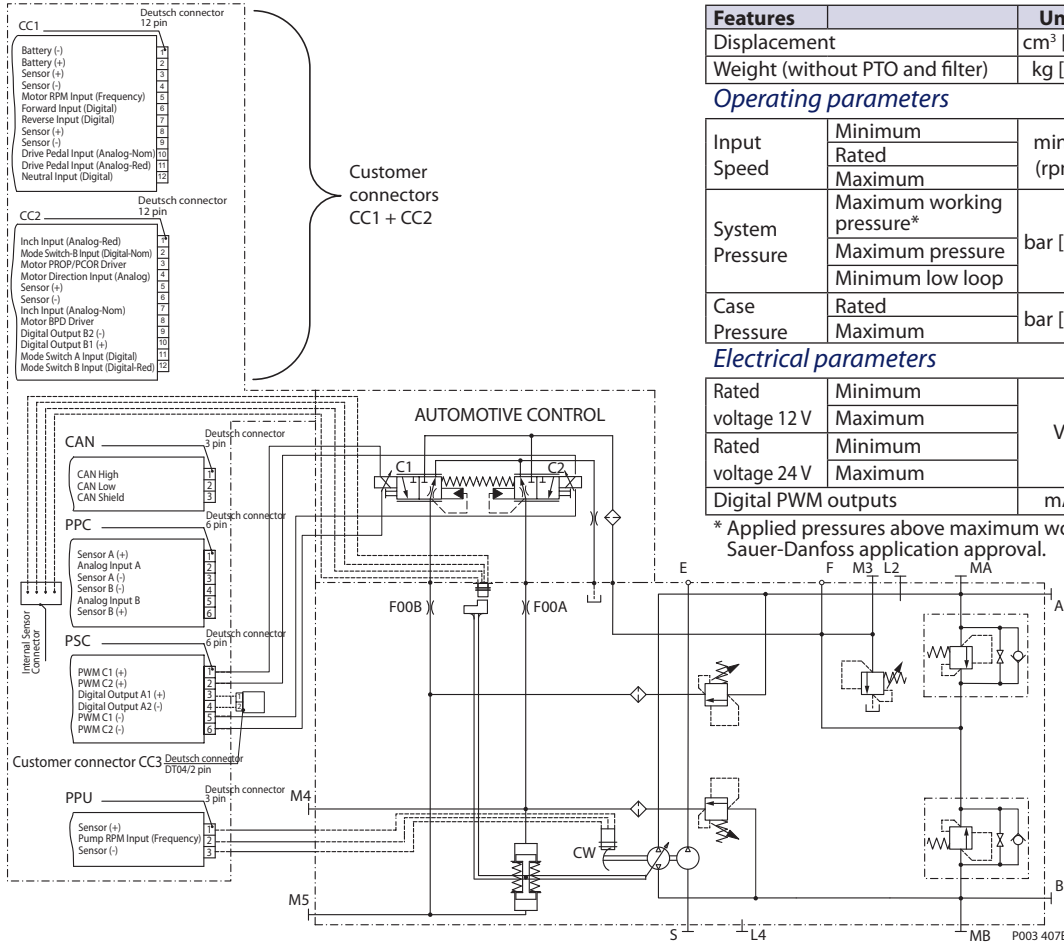
*H1 Axial Piston Pump  
Size 078 single pump*

*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
    - Option: J1939 CAN communication enabling component to component and service tool/laptop communication via gateway
  - 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

### Schematic



### Technical Specifications

#### Physical properties

Features	Unit	Size 078
Displacement	cm <sup>3</sup> [in <sup>3</sup> ]	78.1 [4.77]
Weight (without PTO and filter)	kg [lb]	56 [123]

#### Operating parameters

Input Speed	Minimum	min-1 (rpm)	500
	Rated		3500
	Maximum		4000
System Pressure	Maximum working pressure*	bar [psi]	420 [6090]
	Maximum pressure		450 [6525]
	Minimum low loop		10 [150]
Case Pressure	Rated	bar [psi]	3.0 [40]
	Maximum		5.0 [75]

#### Electrical parameters

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

\* Applied pressures above maximum working pressure requires Sauer-Danfoss application approval.

### Dimensions

