



SOLERO
TECHNOLOGIES



Mastering Ride Dynamics

Advanced suspension technologies for
control, comfort, and performance

Uneven roads. Dynamic loads.
Constant stress. Even the
smallest imbalance can affect
handling, safety, and comfort.
Modern vehicles demand
suspension systems that
react instantly – and reliably.

**INSTABILITY
IS THE ENEMY
OF CONTROL.**



WE KEEP SUSPENSION STABLE.

Our smart valve and actuator solutions enable precise, real-time damping control – exactly when and where it's needed.

Less complexity.
Faster response
Maximum stability.

We master suspension dynamics.



Active Suspension

Continuous damping adjustment for maximum vehicle control



Semi-Active Suspension

Adaptive damping for optimized comfort and performance



Air Suspension

Variable air springs for superior ride comfort and dynamics



Position & Level Sensing

Precise position and ride height sensing for safety, comfort and load leveling



**COMPLETE SUSPENSION
CONTROL. EVERY RIDE.**



Our valve and actuator technologies enable intelligent control across all suspension systems – from active to semi-active damping, air spring management, and precise position sensing for trucks.

By combining these competencies into one scalable platform, we ensure seamless integration, fast response times, and maximum vehicle stability in every driving condition.

The performance of modern suspension systems depends on precise, reliable control of damping, air management, and position sensing. Solero Technologies offers a comprehensive suspension product portfolio, engineered for seamless integration and maximum system efficiency.

Our solutions cover active and semi-active damping, air suspension control, and high-precision position sensing – all based on a scalable, platform-driven approach.

**BUILT FOR CONTROL.
READY TO PERFORM.**

Product Range Suspension for Valves, Actuators & Sensors



Semi-Active Damping
| eCDV EVO



Semi-Active Damping
| Direct Controlled External
Continuous Damping Valves



Semi-Active Damping
| iCDA | Internal Controlled
Damping Actuator



Active Damping
| Seat Valve



Air Suspension
Active/Semi-Active
| ASV | Valves for
Multichamber Air Springs



Position & Level Sensing
Active/Semi-Active
| Active Angular Sensors

The performance of semi-active suspension systems depends on continuous, precise control of damping forces. Soler Technologies' eCDV EVO is engineered to deliver real-time adaptability, enabling optimal balance between comfort, stability, and driving dynamics.

Mounted externally to the damper, the valve continuously regulates hydraulic flow via an electromagnetic actuator – adapting instantly to road conditions, driving style, and vehicle dynamics. This ensures seamless transitions between comfort and performance modes, enhancing ride quality, handling precision, and overall vehicle control.

**BUILT FOR ADAPTIVITY.
READY TO PERFORM.**

Semi-Active Suspension

eCDV EVO

Benefits at a glance

- Superior Performance Quality (PQ) Curve**
Ensuring optimal damping performance across all driving conditions
- Leading Independent Supplier**
Providing cutting-edge semi-active damping solutions with proven expertise
- Compact & Efficient Design**
Space-saving architecture for seamless vehicle integration
- Accelerated Time to SOP**
Faster development and production timelines to meet industry demands
- Decades of Expertise**
Backed by years of innovation in advanced damping technology



Technical data

Valve type

2/2 proportional pilot valve

Electrical data

Control: PWM

Current: 0.4 A – 1.8 A

Resistance: 3.0 Ω

Hydraulic data

Flow: max. 100 l/min @ 200 bar

Operating pressure: < 250 bar

Burst pressure: 400 bar

Others

Environmental temperature:

-40 °C – 120 °C

Mass: 170 g

Size: 65 mm x Ø 35 mm

Thread: M30 x 1,5

Optional

Fail safe or fail soft

Plug version

Specific settings possible

The performance of semi-active suspension systems relies on precise, continuous control of damping forces under all driving conditions. Soler Technologies' DTS valve is engineered to deliver high-performance damping control with maximum flexibility, enabling real-time adaptation to dynamic road and vehicle inputs.

Using direct control via PWM signals, the valve continuously regulates hydraulic flow, allowing accurate adjustment of damping characteristics. With multiple defined cracking points and a robust design, DTS ensures consistent performance across a wide range of temperatures and pressures – supporting optimal ride comfort, stability, and vehicle handling.

**BUILT FOR PRECISION.
READY TO ADAPT.**

Semi-Active Suspension

Direct Controlled External Continuous Damping Valves (NO)

Benefits at a glance

| Precise Damping Control

Continuous, real-time adjustment for optimized suspension performance

| Customizable Performance

Five variable cracking points and customer-specific PWM for tailored solutions

| Wide Temperature Range

Operates effectively from -40°C to 120°C, ensuring reliability in extreme conditions

| Cost-Optimized Design

High performance at a cost-effective price, ideal for active suspension systems

| Proven Reliability

Over 10 million units produced, backed by Solero's patented technology and years of expertise



Technical data

Valve type

2/2 proportional valve, NO

Electrical data

Control: PWM, 500 – 1,000 Hz,

Current: 0.25 A – 1.8 A

Resistance: 3.45 Ω

Hydraulic data

Flow: max. 100 l/min @ 200 bar

Operating pressure: < 250 bar

Burst pressure: 400 bar

Others

Environmental temperature:

-40 °C – 120 °C

Mass: 380 g

Size: 64 mm x Ø 45 mm

Thread: M44 x 1.0

Optional

Plug version

Specific settings possible

The performance of modern suspension systems depends on precise, real-time control of damping forces directly within the damper. Solero Technologies' iCDA actuator is engineered for seamless integration into the piston rod, enabling highly accurate control of internal damper valves.

By continuously adjusting damping forces based on road conditions, vehicle dynamics, and driving behavior, the iCDA ensures optimal balance between comfort and stability. Its electromagnetic actuation and ECU-controlled operation enable fast response times and adaptive performance under all conditions.

**BUILT FOR INTEGRATION.
READY TO ADAPT.**

Semi-Active Suspension

iCDA | Internal Controlled Damping Actuator

Benefits at a glance

I Patent-protected design

High variability in interfaces and force-stroke characteristics

I Cost-efficient design

Direct assembly into customer piston rod

Variable Features

- I Axis position / Stroke
- I Force / Stroke Characteristic
- I Resistance
- I Valve interference
- I Piston rod diameter and length
- I Customer's connection (cable/plug)
- I Labeling position and content



Technical data

Actuator type

2/2 proportional actuator

Electrical data

Control: PWM

Current: 0.4 A – 1.6 A

Resistance: 4.38 Ω

Hydraulic data (Catridge)

Operating pressure: < 150 bar

Burst pressure: 200 bar

Others

Stroke: 2 mm

Environmental temperature:

-40 °C – 140 °C

Free harness

Mass: 170 g

Size: 65 mm x $\varnothing$ 35 mm

Optional

Plug version

Different piston rods possible

(customized)

Specific settings possible

The performance of active suspension systems depends on fast, precise control of hydraulic flow. Solero Technologies' Seat Valve is specifically engineered to meet the highest demands for sealing performance, response time, and system integration.

Acting as a high-speed on/off valve between pump and damper, it enables accurate pressure control and real-time adjustment of vehicle dynamics – ensuring optimal ride behavior in every driving condition.

**BUILT FOR CONTROL.
READY TO RESPOND.**

Active Suspension

Seat Valve

Benefits at a glance

- | **Smooth ride. Maximum comfort**
Reduced vibrations and shocks.
- | **Less fatigue. More focus.**
Improved comfort over long use.
- | **Better ride. Higher productivity.**
Enhanced efficiency and performance.
- | **Built for harsh conditions.**
Reliable in extreme environments.
- | **Seamless system integration.**
Compatible with hydraulic systems.
- | **Wide pressure capability.**
Efficient across broad ranges.
- | **High durability.**
Up to IP69K protection.
- | **Compact & robust design.**
Space-efficient and reliable.
- | **Flexible connectivity.**
Multiple interface options.



Technical data

Actuator type

3/2 proportional valve

Electrical data

Control: PWM

Current: 0.4 A – 1.8 A

Resistance: 18 Ω

Hydraulic data

Flow: max. 1 l/min @ 30 bar

Operating pressure: < 60 bar

Burst pressure: 150 bar

Others

Environmental temperature:

-40 °C – 150 °C

Size: 55 mm x $\varnothing$ 30.5 mm

Optional

Plug version

Specific settings possible

The performance of air suspension systems depends on precise control of air flow and pressure across multiple chambers. Solero Technologies' ASV valves are engineered to manage complex air spring architectures, enabling accurate adjustment of ride height, load distribution, and spring characteristics.

By controlling airflow between chambers in real time, ASV valves allow dynamic adaptation to changing driving conditions and vehicle loads. This ensures optimal ride comfort, improved stability, and efficient energy use across all scenarios.

**BUILT FOR FLEXIBILITY.
READY TO BALANCE.**

Air Suspension

ASV | Valves for Multichamber Air Springs

Benefits at a glance

| Switchable Characteristic Curve

Easily adjust between a sporty and comfortable setup

| Cost-Optimized Design

Achieve high performance while keeping costs under control, ensuring a smart investment for your projects

| State-of-the-Art Technology

Leverage cutting-edge design for enhanced reliability, precision, and control in every driving scenario

| Proven & Pre-Developed

Rely on tested and trusted solutions, ensuring dependable performance in a wide range of automotive applications

| Low Leakage with Pressure Equalization

Benefit from efficient pressure management, minimizing leakage and maximizing the lifespan and efficiency of the system

| Customization

Our connectors offer full customization options



Technical data

Valve type

2/2 switching valve, NO

Electrical data

Control: PWM, peak / hold

Current: 2 A / 1 A

Resistance: 3.34 Ω

Pneumatic data

Flow: > 1500 nl/min

Operating pressure: < 28 bar rel.

Burst pressure: > 45 bar rel. bar

Others

Environmental temperature:

-40 °C – 100 °C

Mass: 188 g

Size: 90 mm x Ø 39 mm

The performance of suspension systems depends on precise, real-time detection of vehicle position and movement. Solero Technologies' Active Angular Sensors are engineered to deliver highly accurate chassis level measurement, providing continuous feedback for optimal suspension control.

By continuously detecting rotational angles from 0 to 360°, the sensors enable precise monitoring of suspension movement and vehicle height. This real-time data allows the control unit to adjust the system instantly, ensuring optimal ride comfort, stability, and functionality under all driving conditions.

**HIGH-PRECISION POSITION
SENSING FOR ACTIVE, SEMI-
ACTIVE, AND AIR SUSPENSION
SYSTEMS IN TRUCKS.**

Position & Level Sensing

Active Angular Sensors

Benefits at a glance

- | **Smooth ride. Maximum comfort**
Reduced vibrations and shocks.
- | **Less fatigue. More focus.**
Improved comfort over long use.
- | **Better ride. Higher productivity.**
Enhanced efficiency and performance.
- | **Built for harsh conditions.**
Reliable in extreme environments.
- | **Seamless system integration.**
Compatible with hydraulic systems.
- | **Wide pressure capability.**
Efficient across broad ranges.
- | **High durability.**
Up to IP69K protection.
- | **Compact & robust design.**
Space-efficient and reliable.
- | **Flexible connectivity.**
Multiple interface options.



Technical data

Sensor type

Angle sensor

Hall effect working principle

Output: PWM

Measuring range: $\pm 60^\circ$

Resolution: 0.088°

Environmental temperature:

$-40^\circ\text{C} - +80^\circ\text{C}$

Sensor type

Angle sensor

Inductive working principle

Measuring range: $\pm 50^\circ$

Resolution: 0.342°

Environmental temperature:

$-40^\circ\text{C} - +80^\circ\text{C}$

Engineered for customer success.

Improving grip & ride comfort

- | Plattform based for quick customization
- | Faster time-to-market
- | Simplified integration
- | Lower system & development costs

ONE PARTNER.
FULL SUSPENSION CONTROL.

Integrated engineering, validation, and manufacturing

Solero Technologies combines over 100 years of automotive expertise with advanced engineering capabilities. We support our customers from initial concept to validated, production-ready solutions.

Engineering

Advanced simulation and system design ensure optimal performance from the earliest concept phase.

Prototyping

In-house manufacturing and rapid prototyping enable fast development cycles and high flexibility.

Testing & Validation

Comprehensive testing guarantees reliability under real-world automotive conditions.

**FROM
CONCEPT
TO PROVEN
PERFORMANCE**



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