

# ROR Trailer Products

## CS Air Suspension



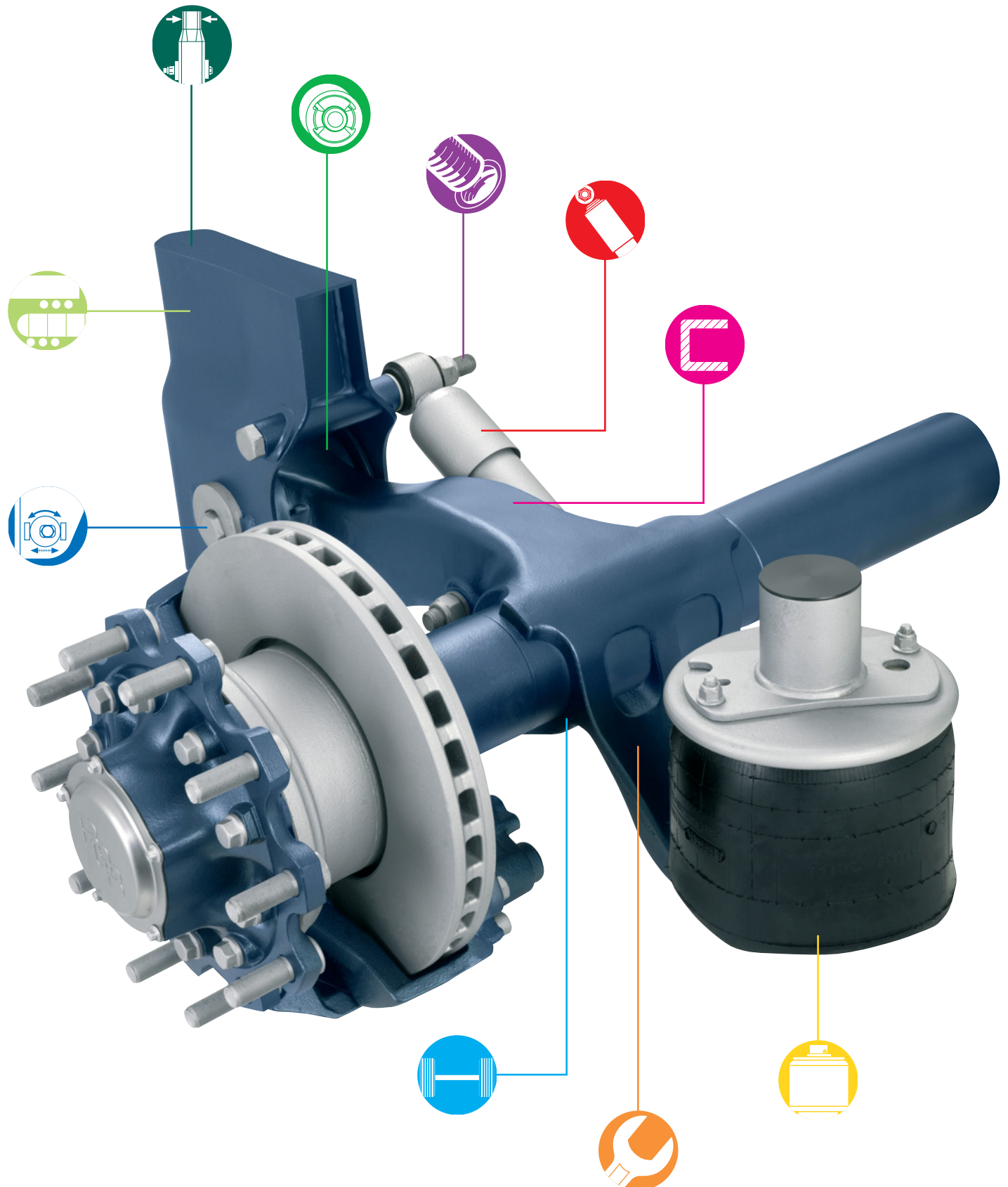
choose for reliability . . .  
choose for quality . . .  
choose for robustness . . .

*. . . your profitability is our concern*

**ArvinMeritor™**

# The Right Combination

ROR Meritor are introducing a new concept in air suspension design, production and application. The proven quality and reliability at every stage of production of the CS range is backed with rigorous quality control and inspection to the same high standards of ROR axles and brakes. This results in the optimum running gear combination.



# ROR CS Air Suspensions



## Trailing Arm

**Optimised 'C' Section**  
**Weight Saving**  
**Increased Strength**

### **Benefits**

- Design maximised for disc and drum.
- Use of multifunctional bush.



## Pivot Eye Tracking

The CS suspension is fitted with the patented pivot eye tracking device as standard to allow fine adjustment after the axle/suspension unit has been fitted to the trailer frame.

### **Benefits**

- Permits realignment during service which in turn improves handling and tyre wear.



## Axle Connection

**No 'U' bolts or spring seats required**  
**Rigid connection with no chance of axle 'slip'**

### **Benefits**

- Reduced maintenance.
- Reduced weight.



## Pivot Bush

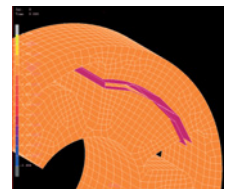
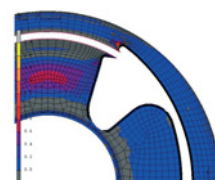
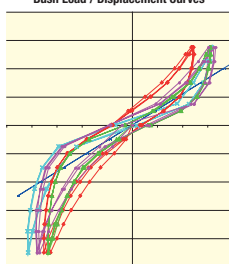
**Longitudinal bonded steel interleaves in for and aft blocks**  
**Slim width design**  
**Designed using state of the art computer finite element techniques**  
**In service for over 4 years**

### **Benefits**

- Increased for and aft stiffness.
- Increased roll stiffness and tramp compliance.
- Predictable progressive roll stiffness adding to safety.
- Reduced induced steer.

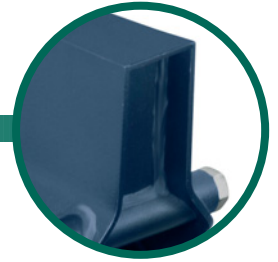


Bush Load / Displacement Curves





## Hanger Brackets



**Necked in hanger bracket gives improved hanger/chassis connection**

### **Benefits**

- Permits welding to narrow chassis rails.
- Bull nose 'necking' give chassis friendly connection.
- Flat fronted to permit ease of bracing connection.



## Dampers



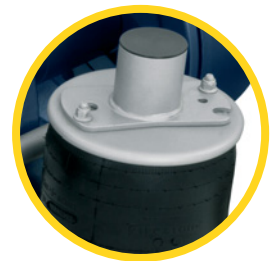
**Heavy Duty  
Precision valving  
Purpose design bushings  
Integral check strap rated at 10 tonne per damper**

### **Benefits**

- Road friendly, reduces road damage.
- Controls the effect of wheel end shimmy vibration.
- Prevents over extension of air spring.



## Air Springs



**Composite Piston  
Potential for push to connect fittings  
Variable stiffness**

### **Benefits**

- Weight saving and corrosion resistance.
- Permits softer ride when empty with firmer ride when fully laden.



## Fasteners



**The Fasteners are long to properly stretch and resist loosening loads – short bolts are susceptible to loosening  
The solid clamped tubes and damper bush cylinder ensure a properly engineered joint  
The fasteners are protected against corrosion**

### **Benefits**

- Designed to be strong and never come loose.
- Absorb suspension vibration loads.
- Effectively transfer loads

# Advantages of ROR CS Air Suspensions



## Maintenance

Designed to reduce maintenance to a minimum

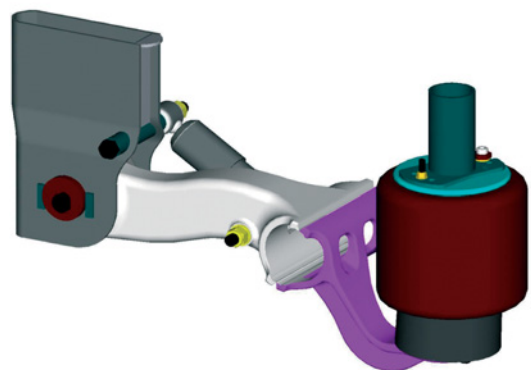
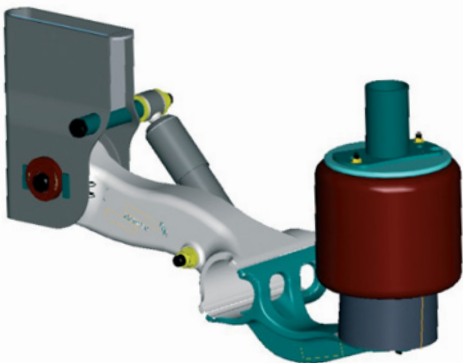
### Benefits

- Reduced trailer off-road time.
- All parts are easily available from MERITOR distributors and are designed to last.



## Applications

The CS suspension is available in a range of ride heights from 200mm to 500mm. Various MERITOR axles, mounting centres and tracks can be combined to cater for all applications.



### CS9/11 Features & benefits

- High durability trailing arm air suspension for trailer applications.
- The suspension accommodates both disc and drum brakes, and is available in ride heights from 200mm to 500mm.
- The arms are rigidly attached to the axle in a special, patent pending, joint that provides a protective axle 'grip' that actually extends the axle life due to the stress smoothing design. The trailing arms will last the life of the running gear.
- The direct trailing arm joint to the axle eliminates 'U' bolts, effectively removing maintenance and weight.
- The suspension is extremely stable thanks to its high roll stiffness and optimised damping.
- The use of cast steel allows the trailing arms to be shaped around the brake and wheel end which permits fitting of both disc or drum brake.
- The trailing arms feature a 'C' cross sectional profile which provides a more efficient engineering structure and further reduces suspension weight.
- The suspension provides 'road friendly' levels of damping, stiffness and axle load equalisation. Pivot tracking is standard. The hanger bracket will directly mount to a 80mm chassis flange width.

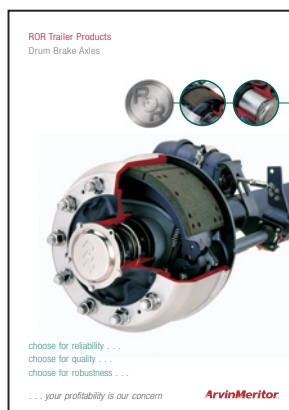
### CS WEIGHT SPECIFICATION

Ride Height (mm)	Low Mount Installation								Top Mount Installation							
	200	225	250	275	300	325	350	375	325	350	375	400	425	450	475	500
CS9 Li (kg) ±2%	135	137	139	141	143	145	148	149	136	138	140	142	144	146	149	151
CS11 Li (kg) ±2%	143	146	148	150	152	154	156	158	143	145	147	149	152	153	156	157

## Related ROR Products



**Air Disc Brake Axles**  
Publication No. 4.103.1



**Drum Brake Axles**  
Publication No. 4.104.1



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