

Carbon BS by Trelleborg

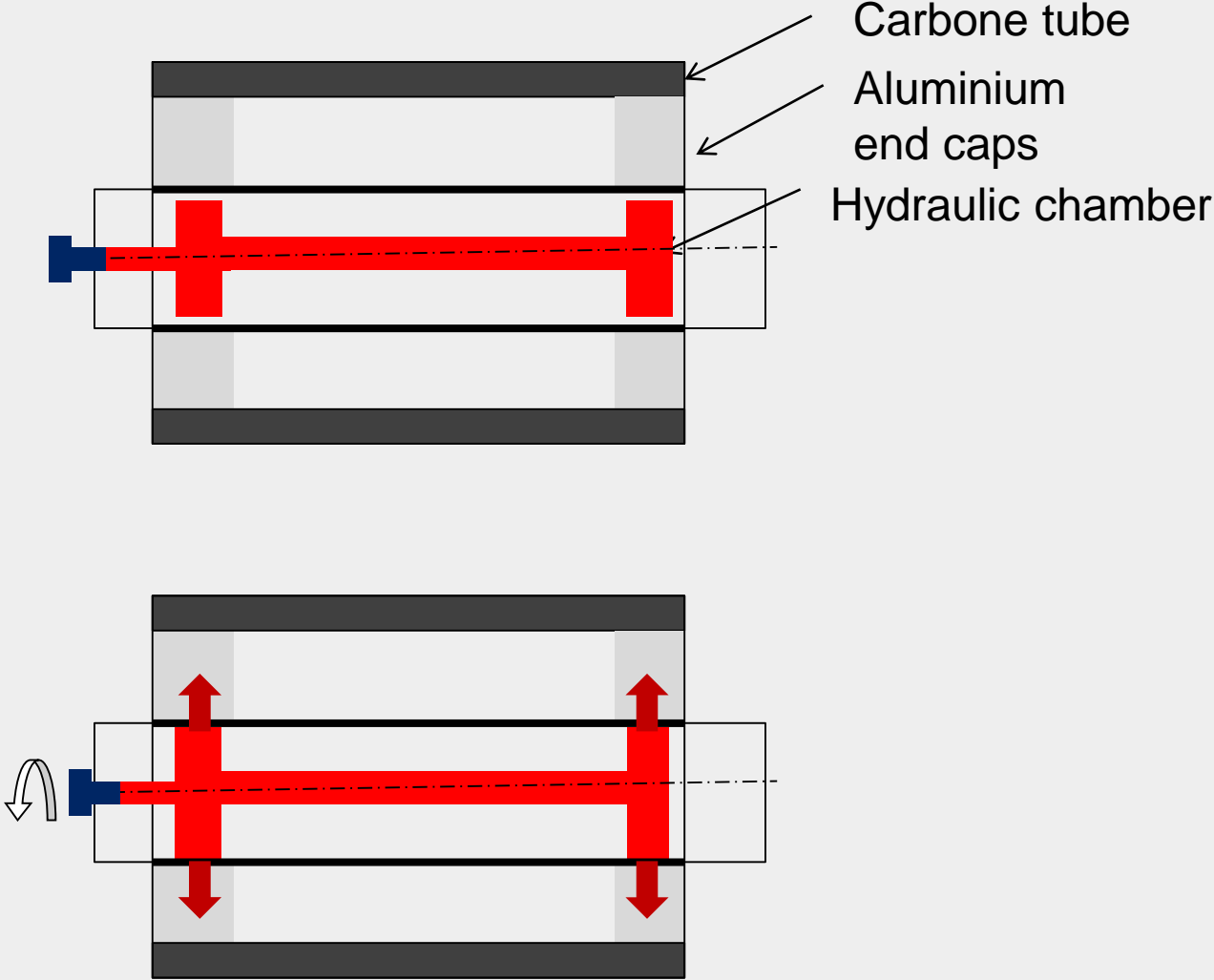
Introduction

Flexo being a relief printing process, productivity is often affected by design nature, implying speed limitations

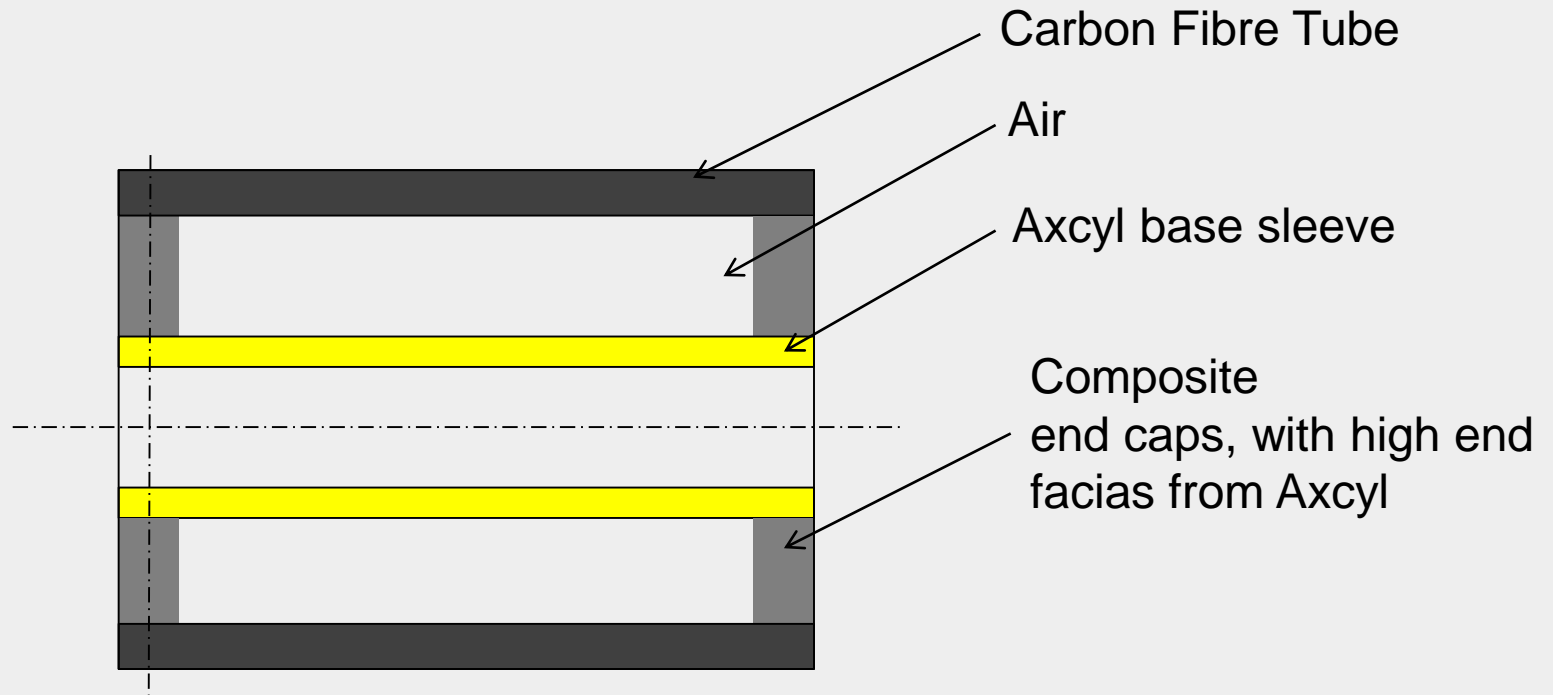
To overcome bounce, OEMs have endorsed carbon fiber since over a decade

Hydraulic technology has been accepted as state of the art, but is expensive

Hydraulic clamping design



Carbon BS concept



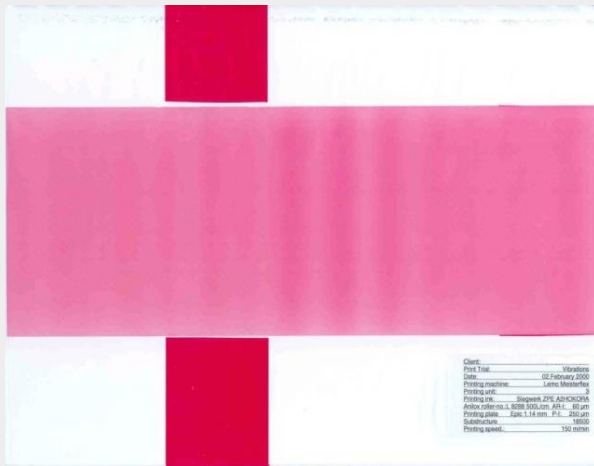
Concept is to de-couple the press shaft from the print form :

No contact between the inner sleeve & outer tube apart from edges

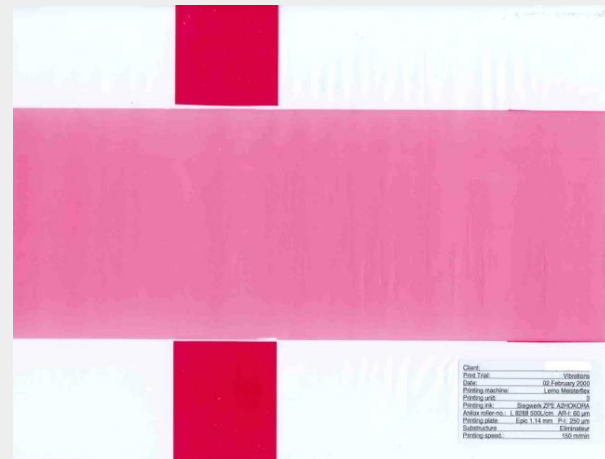
Special mounting layer

1. Based on the combination honeycomb structure and Epoxy resin (very stiff, stable and light)
2. **Engineered mounting layer designed to filter vibrations:**

Elastic structure

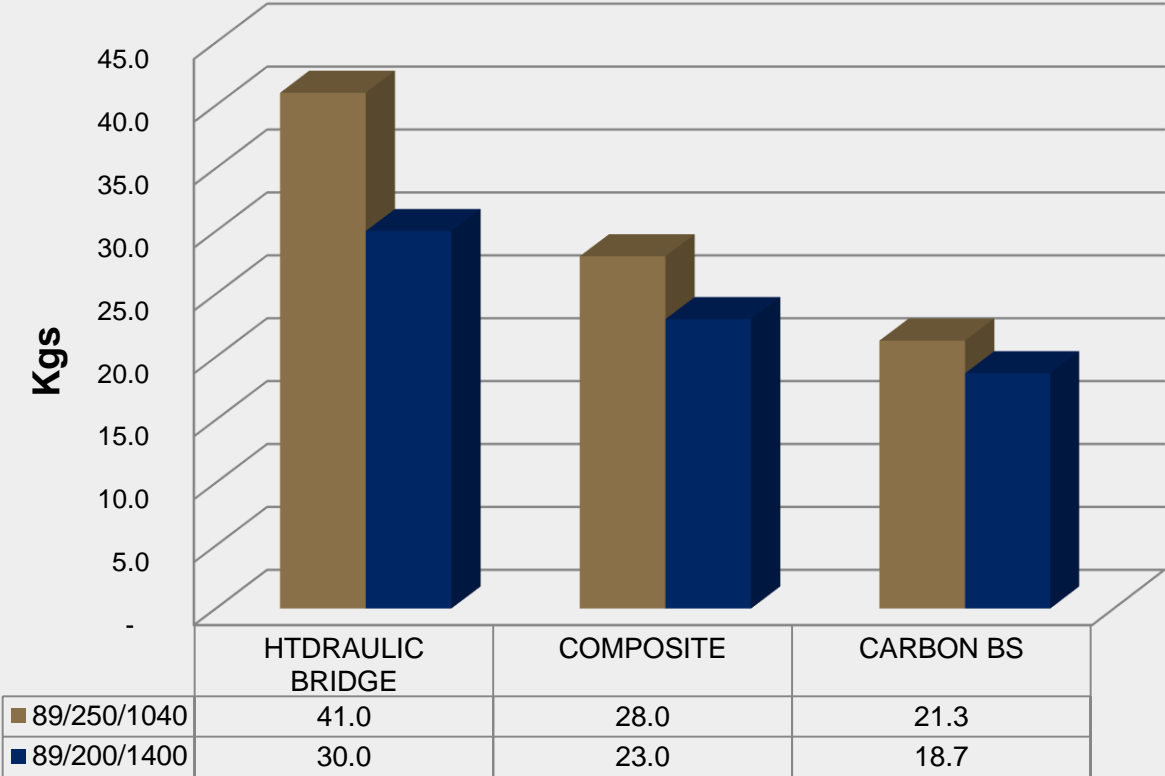


Axycyl damping structure



Weight reduction

Weight comparison



Features & benefits



Shock
absorbing &
sealed facia



Removable
register
insert



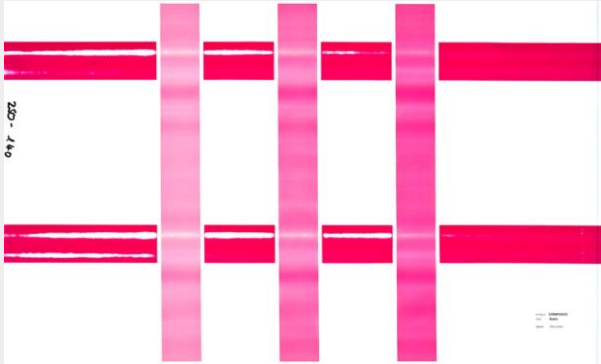
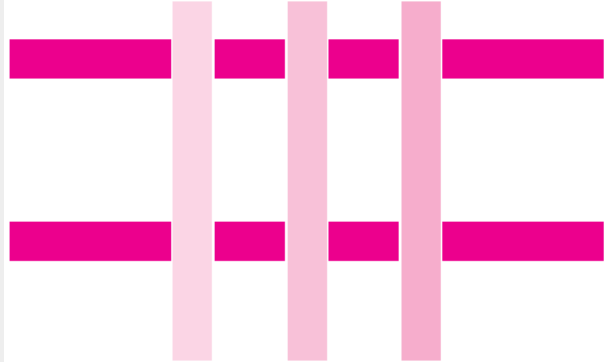
Fully sealed
ventilation

Value creation

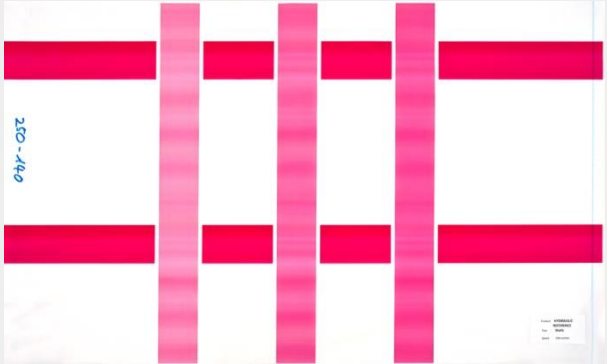
1. Rented press time at F&K user (16S press)
2. Benchmarked Hydraulic vs standard composite and Carbon BS
3. Assessement at 150/ 250 and 350 m/min
4. Hard plate (1.14mm D ACE)
5. Hard tape (0.55mm Lohman 5.4)
6. Difficult design **generating bounce even of Hydraulic system**

Print result

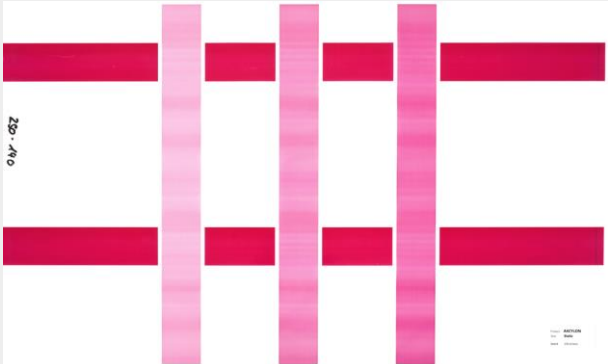
Objective



Standard Composite



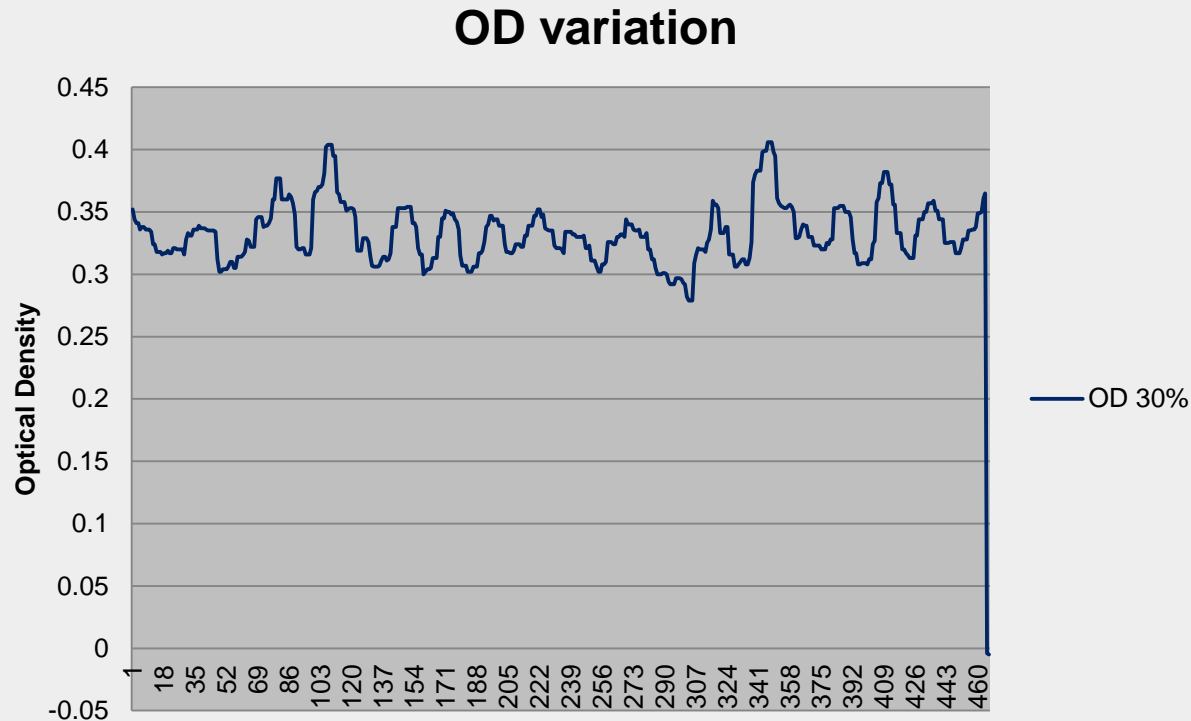
Hydraulic bridges



Carbon BS



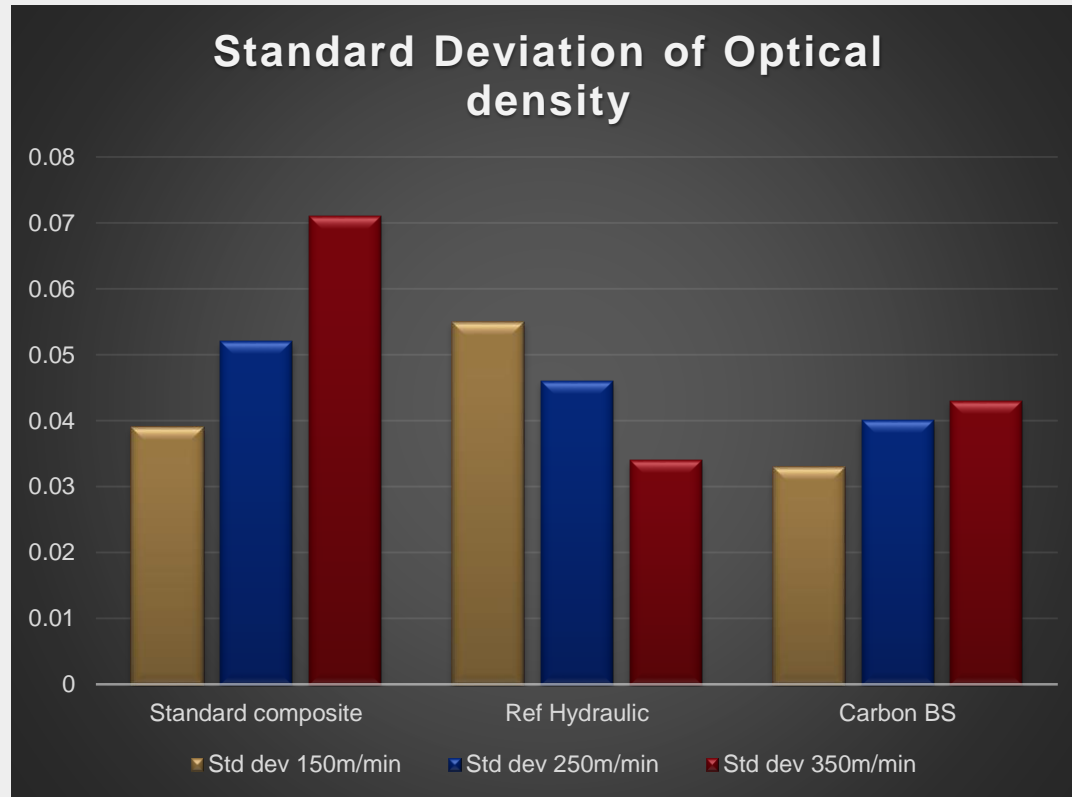
Value Creation Quantification



Quantified results = Standard deviation in OD 30%

The higher the standard deviation, the more vibration noise is visible

Results



1. Carbon BS better than Hydraulic reference
2. **Carbon BS much better than standard composite bridge**

Fields Feed back

From W&H et F&K customers:

1. The best mounting/ demounting behavior
2. Excellent stability in speed ramps
3. +10 to +20% speed vs competitive HM solutions
4. A clear preference over opposition technologies

A great asset for retrofit & new press



TRELLEBORG

damien.leterrier@trelleborg.com

[Website](#)

[Linkedin](#)