

SCHIROTH®

SAFETY THROUGH TECHNOLOGY

PRETENSIONING HEAD ARC
REDUCTION SYSTEM



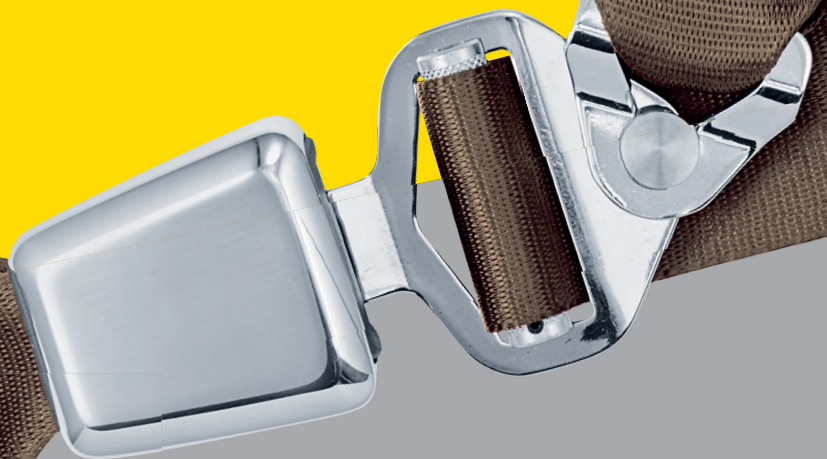
PRETENSIONING HEAD ARC REDUCTION SYSTEM

The SCHROTH 3-point diagonal restraint system with pretensioner called PHARS (Pretensioning Head Arc Reduction System) is a self-contained restraint system specifically designed to improve occupant protection especially in forward facing and angled seat orientations during a survivable accident. The seat belt is a 3-point restraint system with standard webbing, end-fittings, and push button buckle. The shoulder belt is attached to an inertia reel with an integrated pretensioning system. The pretensioning system is activated by the Mechanical Crash Sensor Unit (MCSU) which is battery powered and entirely independent from aircraft power.

The system uses a micro gas generator to retract shoulder strap webbing removing slack between occupant and webbing securing the passenger in the seat. It locks to firmly hold the occupant in position during the impact event.

PRODUCT HIGHLIGHTS

- Not visible to occupants
- Independent from aircraft power
- Passengers cannot alter the system
- Reduction in webbing slack enhances the restraining of occupants
- Proven to meet new proposed Spinal Tension loads
- Proven to meet new Neck Injury (Nij) criteria



COMPONENTS

3-Point Restraint System with Inertia Reel Pretensioner


The restraint system consists of standard polyester webbing, an inertia reel assembly with pretensioning feature, end-fittings, and a push button buckle assembly. The standard configuration is the same as for conventional 3-point restraints, with the addition of a pretensioning feature in the inertia reel.





Mechanical Crash Sensor Unit (MCSU) / Wire Harness


The MCSU senses a high impact event and sends a signal for the pretensioner to activate. The unit has a diagnostic tool which checks the squibs and the wiring harness for open connection and short circuits as well as the voltage level of the MCSU. Live fire warning indicators light up when the MCSU is triggering. The customized cable connects the MCSU with up to three retractor pretensioners.

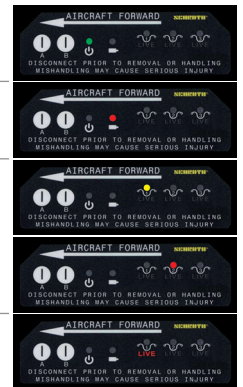


- 
Power Symbol
 - Power Symbol LED lights up green
 - Power Symbol LED does not light up

- 
Battery Symbol
 - Battery Symbol LED lights up red
 - Battery Symbol LED does not light up

- 
Connection Symbol (1-3)
 - Connection Symbol LED lights up yellow
 - Connection Symbol LED lights up red
 - Connection Symbol LED does not light up

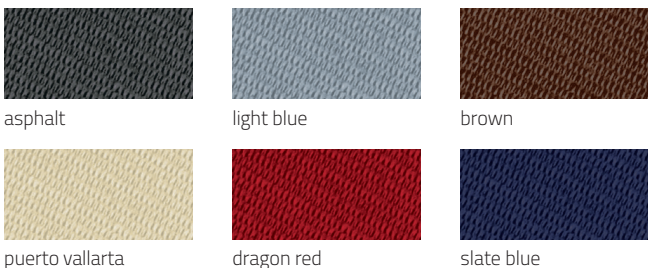
- 
Live Fire Indicator (1-3)
 - Live Fire Indicator LED lights up red
 - Live Fire Indicator LED does not light up



Accessories / Customization

Webbing More than 160 webbing colors

Special woven light-weight polyester webbing for increased longevity, available in either 7% or 15% elongation @11.1kN (2,500 lbs).



Plating

Together with long-standing plating providers SCHROTH offers a variety of different plating colors for this product. Consult us for samples to support your individual design requirements.



Extension Belt

An extension belt is available to allow for additional length suiting the prevailing installation conditions on the aircraft.

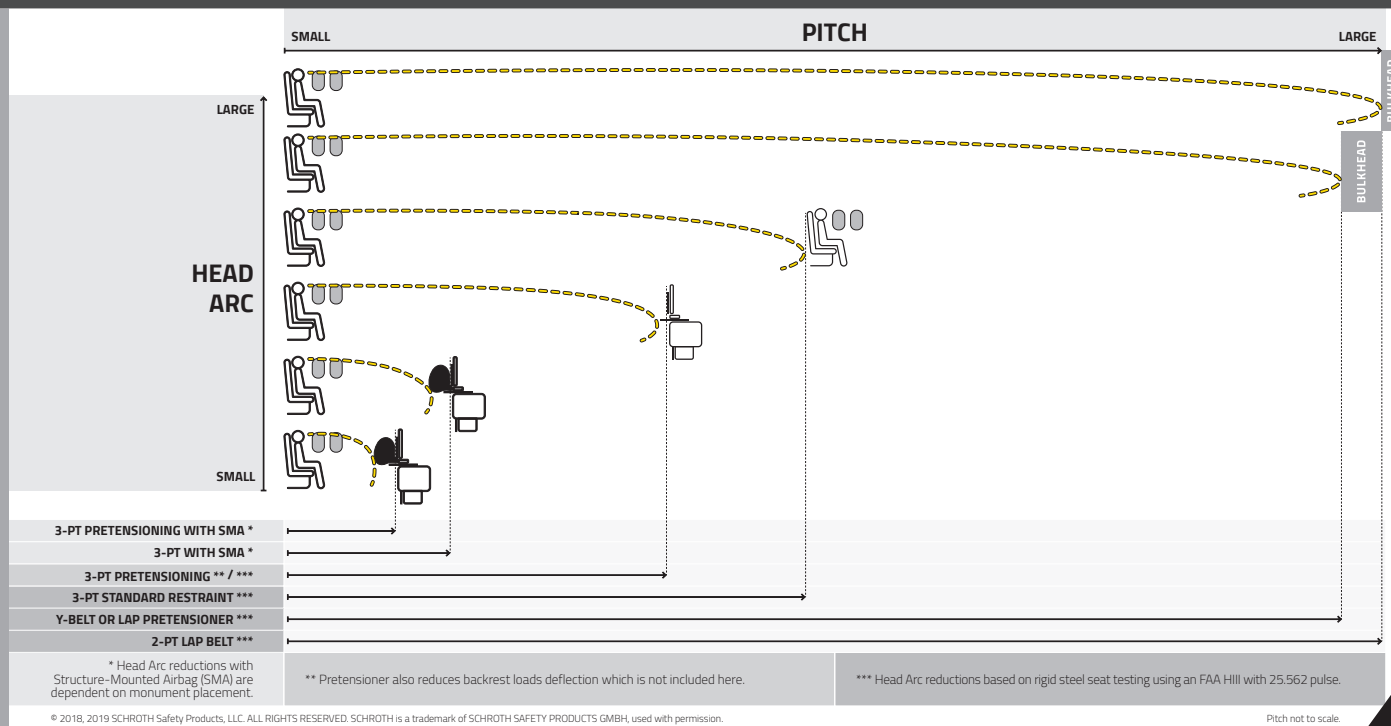


Leather Tab

A leather tab is available as an option to ease usability of detachable shoulder belts.



SCHROTH FAMILY OF HIC SOLUTIONS



Technical Details

Certification	Restraint System: ETSO-C114 certified (excluding pretensioning feature) Pretensioning Feature / MCSU / Cable: DO160 tested (standard configuration)
Rated Strength	13.3 kN
Buckle / Latch Options	Two buckle types / latch types available
Available Accessories	Extension Belt, Demo Belt and Infant / Utility Belt

tip! Certified for Airbus A330 and Airbus A350 platform.

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Company Approvals

GERMANY
 · EASA Part 21 Section A Subpart G
 Approval No. DE.21G.0114
 · EASA Part 145 /
 Approval No. DE.145.0240
 · APDOA Authorization
 EASA AP210
 · DIN EN ISO 9001
 · EN 9100

USA
 · FAR Part 21 /
 Approval No. PT 1662-CE
 · AS 9100

Disclaimer

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SCHROTH Safety Products GmbH®
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