



INNOVATIVE BOLTED CONNECTOR FOR LV AND MV WITH STEPLESS SHEAR BOLTS



Erich Frank, Pfisterer Kontaktsysteme GmbH & Co. KG (D), erich.frank@pfisterer.de.
Hervé GROSS, Pfisterer Kontaktsysteme GmbH & Co. KG (D), herve.gross@pfisterer.de.

ABSTRACT

Terminals, connectors and cable lugs using screw technology have been on the advance for years. And with good reason. Bolted connections offer technical and practical advantages that compression connections cannot provide. For instance, a large cross section, copper or and aluminium utilisation possible and no special tools as hydraulic pump and heads needed. This clamping technology perfectly complements the new multi range cable accessories.

Until now, the multi range shear bolt has been the state of the art in screw technology, but they don't have a clean break.

New from Pfisterer: An innovative connector with step less shear bolts.

KEYWORDS

- Step less shear bolt
- Large cross section range
- simple and faultless montage
- copper or and aluminium cable can be used
- non predefined cross section or cable diameter
- Full utilisation of the thread loading
- No special tools needed
- smooth breakage
- no edges protrudes.

Author Name & Affiliation

Erich Frank, Pfisterer (D), erich.frank@pfisterer.de.
Hervé GROSS, Pfisterer (D), herve.gross@pfisterer.de.

INTRODUCTION

Safe, reliable power transmission in low-voltage and medium-voltage power networks needs sophisticated solutions that cannot only withstand the harshest conditions but can also meet growing financial demands. Development and manufacture accordingly demand a great deal of experience and highly specialized know-how.

All around the world the first most used system to joint two end of cable is compression technique. The other possibility to make a joint between two cable is to used bolted connectors. We have packed all the knowledge we have accumulated in the last 85 years in this specific field of application and especially in this new development.

In the follow we want to give an overview about the difference between the compression technique (short) the usual bolted connector and the new stepless patented technology from Pfisterer.

COMPRESSION / BOLT



Compression connectors

Advantage

- Compact design
- Price
- Good contact properties
- Well known technology

Disadvantage

- One connector per cross section
- Material marriage must be respected
- Pressing tools are necessary

Bolted connectors



Advantage

- Wide cross section range
- One connector for Cu and / or Alu cable
- Easy mounting, no special tools needed
- Tested in accord with the IEC norms

Disadvantage

- Bigger design
- Price (apparently?)
- For a lot of customers a new technology

Utility market situation

Used technologies	Market Trend 2003; 2004; 2005; 2006
Compression 	
Bolted 	