The new technology for the tensioning device...

Compact, without counterweights,
Self regulated,
temperature compensated,
force adjustable system,
With possibility to monitor the contact wire
New tensioning device to compensate the copper dilatation due to the ambiant temperature for catenary and overhead lines.

- No counterweights for a better and safe integration downtown,

- Self-regulated solution with a reduced maintenance,

- No risk of pollution because of inert gaz (nitrogen),

- Possibility to monitor the catenary wires through an electronic supervision system with pressure sensor and linear transducer sensor (possibility of data transmission by GSM).
Overview

Accumulator for nitrogen and oil
- Length: 1500 mm
- Diameter: 120 mm
- Weight: 43 kg

Cylinder
- Length: 1300 mm
- Diameter: 80 mm
- Weight: 24 kg
Nitro Cylinder Tension System

- Tension cylinder
- Atmospheric air
- Separating piston
- Nitrogen
- Oil
- Hydraulic hose
- Accumulator
- Piston rod
Operating instructions

The tension system is self-compensating for outdoor temperature changes.

The mechanical tension applied on the catenary wires depends on the gaz charge pressure in the accumulator.

The position of the piston rod is adjusted once only; according to the temperature at the installation stage.
The Pressure Equipment Directive (97/23/EC) was adopted by the European Parliament and the European Council in May 1997. It has initially come into force on 29 November 1999. From that date until 28 May 2002 manufacturers had a choice between applying the pressure equipment directive or continuing with the application of the existing national legislation. From 29 May 2002 the pressure equipment directive is obligatory throughout the EU.

The directive provides, together with the directives related to simple pressure vessels (2009/105/EC), transportable pressure equipment (99/36/EC) and Aerosol Dispensers (75/324/EEC), for an adequate legislative framework on European level for equipment subject to a pressure hazard.
Information on field test with RATP in Paris from June 2010.

Experimentation on T2 tramway line in Paris.

- Length of wire compensated: 717.45m until middle point;
- Mechanical force on tension cylinder is 2x1000daN;
- Stroke length is 1200mm;
- Ambient temperature: from -10 to +60° C.
Information on field test with RATP in Paris from June 2010.
Experimentation on T2 tramway line in Paris.
Monitoring of contact wire

1 x pressure sensor and 1 x linear transducer sensor.
Versions available

With separated accumulator.

With integrated accumulator.
Versions available

Two versions are available:

For catenary

- L max regulated : 1000 m
- Pull force max. : 4000 daN (*)
- Stroke length : 1200 mm

For tramway

- L max regulated : 400 m
- Pull force max. : 4000 daN (*)
- Stroke length : 480 mm

(*) the pull force can reach 4000daN for the 72 hrs overload at the installation stage; afterwards the tension can be adjusted to the specified force on contact wire and/or messenger wire.
Main advantages

- Wide range of pull force values up to 4000 daN;
- Cost-saving solution for tunnels, without niches;
- No need of counterweights and protection cage;
- Supervision of the line;
- Very light and compact solution;
- Reduced visual impact design.
Liaisons au boîtier de lecture pour le contrôle de la caténaire
Supervision box for monitoring of catenary wires

Soufflet de protection
Protection bellow

Caractéristiques techniques / Technical characteristics:
- Longueur max. à régulariser / Max. length compensated: 750 m
- Tension max. / Max. tensile load: 4000 daN
- Course du vérin / Stroke length: 1200 mm

Nouvel appareil tendeur
New tensioning device
Caractéristiques techniques / Technicals characteristics:
- Longueur max. à régulariser / Max. length compensated: 400 m
- Tension max. / Max. tensile load: 4000 daN
- Course du vérin / Stroke length: 480 mm

Liaisons au boîtier de lecture pour le contrôle de la caténaire
Supervision box for monitoring of catenary wires

Soufflet de protection
Protection bellow

Montage Appareil Tendeur
Tensioning Device Assembly

Nouvel appareil tendeur
New tensioning device
For any questions, please contact us:

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