



Charging pantograph SLS101

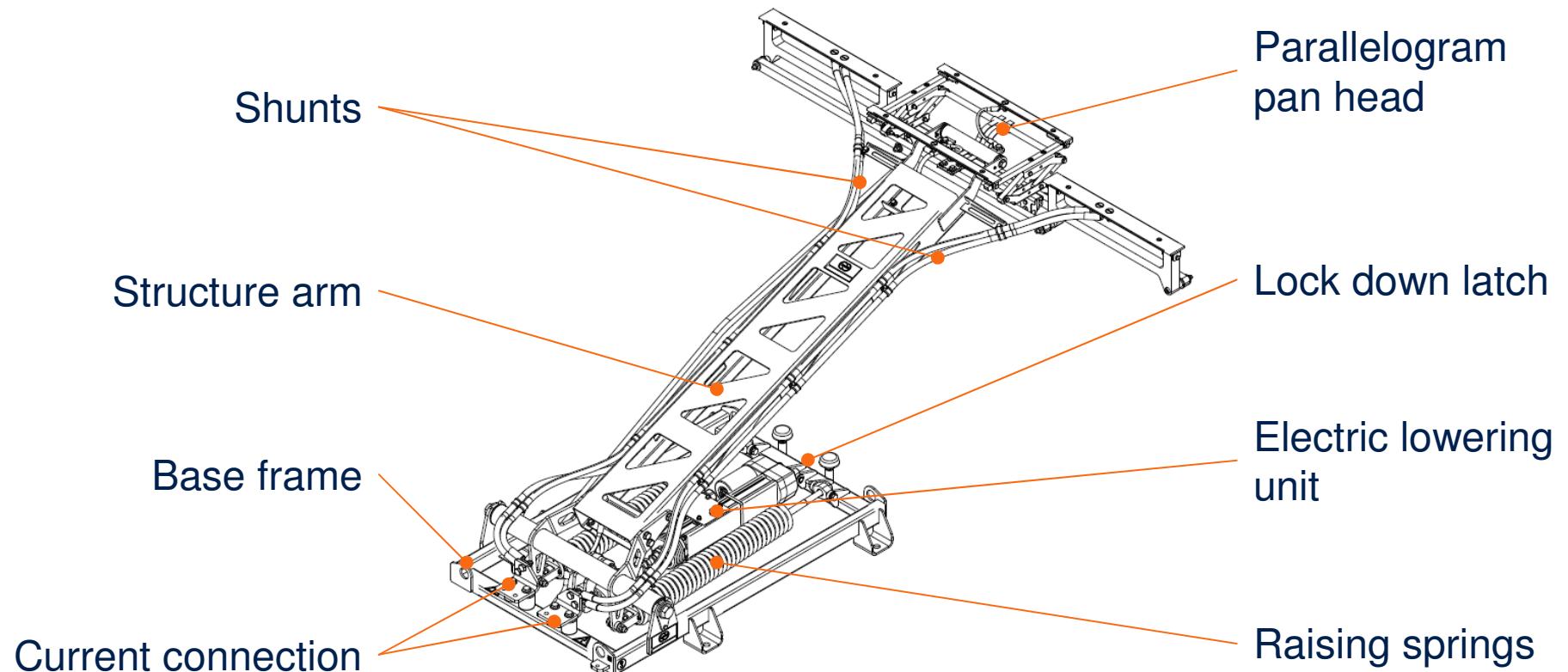
for Bus applications

Description



- Single arm charging pantograph with insulated multi-pole structure
- 3-poles (positive, negative, grounding)
- Special pan head concept in order to ensure an equal contact force on each pole
- Designed for bus charging at end stations
- Raised by spring force and lowered by electric lowering unit

Components

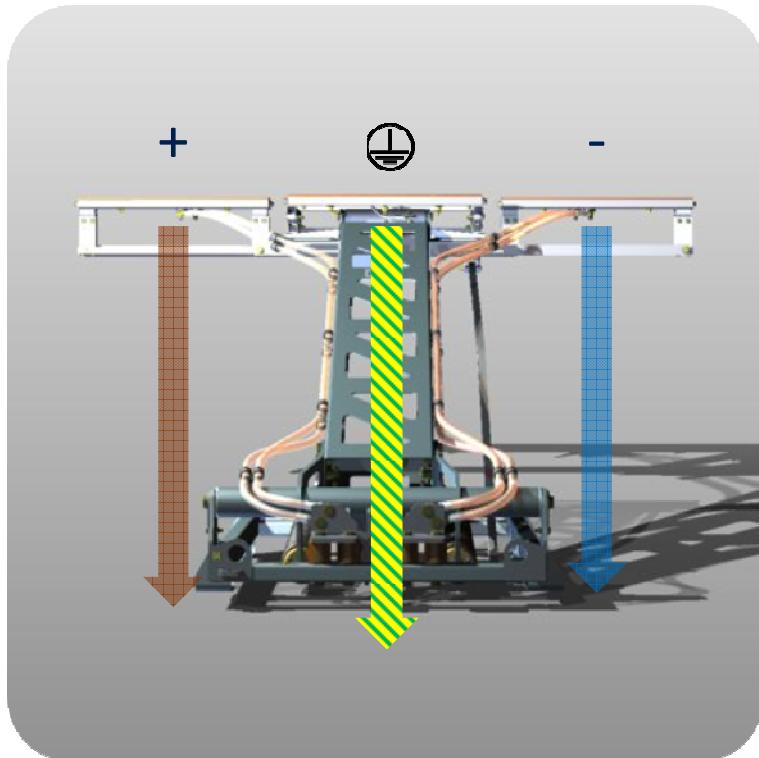




Technical Data

Maximum rated voltage	1800V
Maximum current at standstill	500A – ∞ min. 1000A – 1 min.
Supply voltage of electric lowering unit	24V DC ±30%
Contact force (adjustable)	100N / 50N / 100N
Raising-/lowering time	≤ 5sec.
Weight	~80kg
Operating temperature	-30 °C to +65 °C
Maximum working range	1060mm

Multipole Design

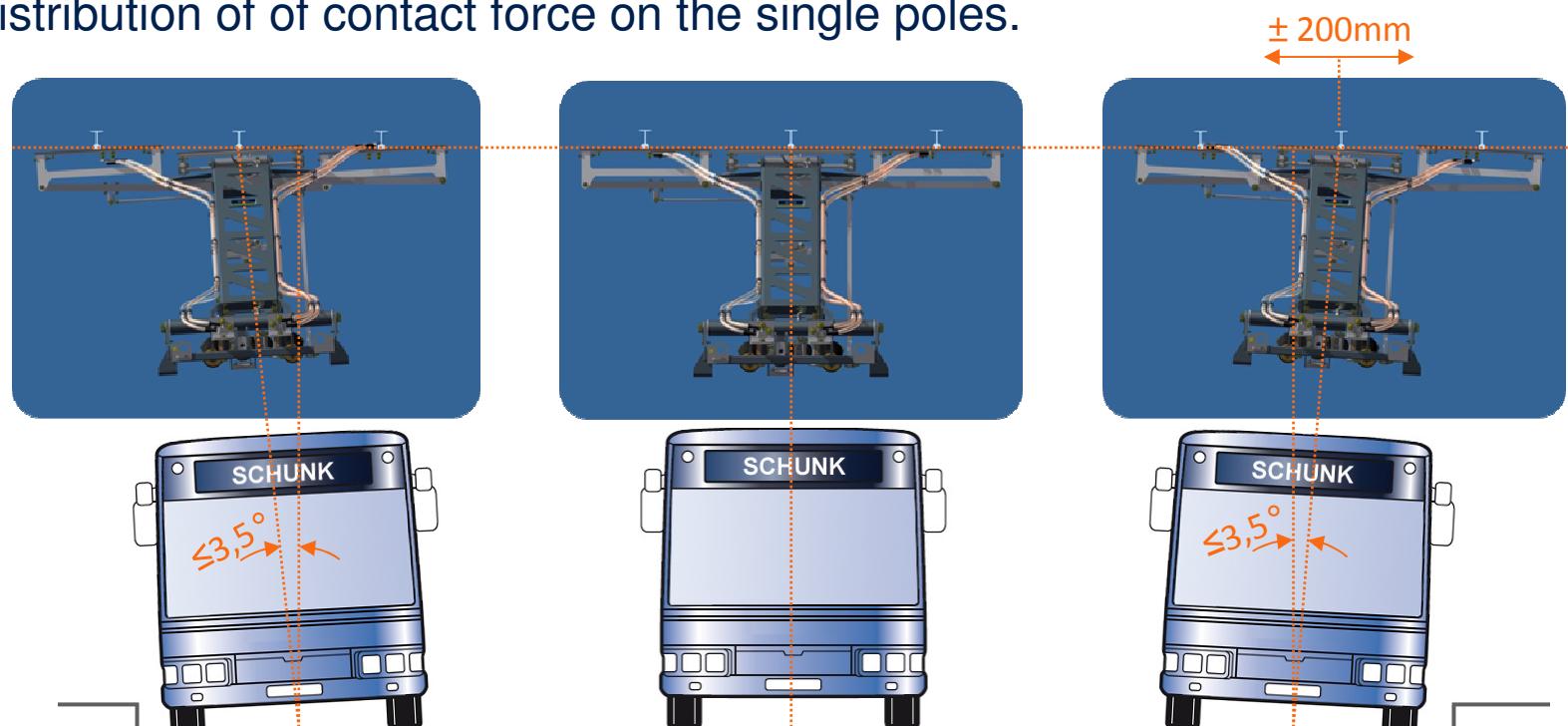


- 3-pole charging system for electric bus (positive, negative, grounding)
- Single poles are insulated from each other
- Zero-potential frame parts
- This system enables the contact to the charging station and thereby allow the current transmission.
- 4-pole system possible (optional)

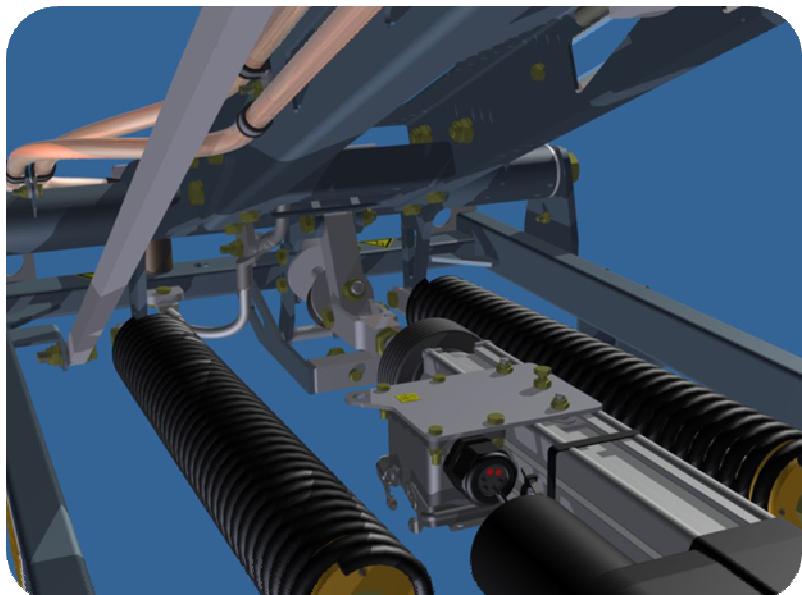
Compensation of parking tolerances

In case of inaccuracy at parking or possible kneeling, the pan head system is able to cover angular tolerances up to $3,5^\circ$ and a lateral offset of $\pm 200\text{mm}$

Due to the design of the contact area, it is assured, to establish an equal distribution of contact force on the single poles.



Actuation system



- Integrated electric lowering unit
- Integrated raising springs
- 1 Million raising/lowering cycles
- 24V supply voltage
- Position indicator by means of magnet switch
- 110V supply voltage (optional)
- Manual emergency actuation by hand crank (optional)

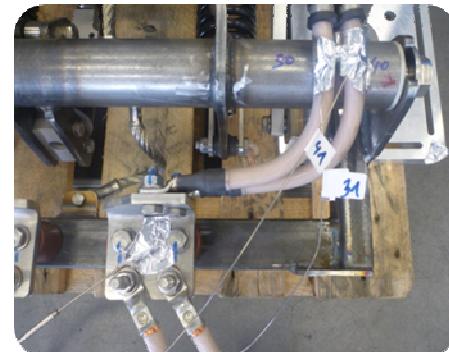
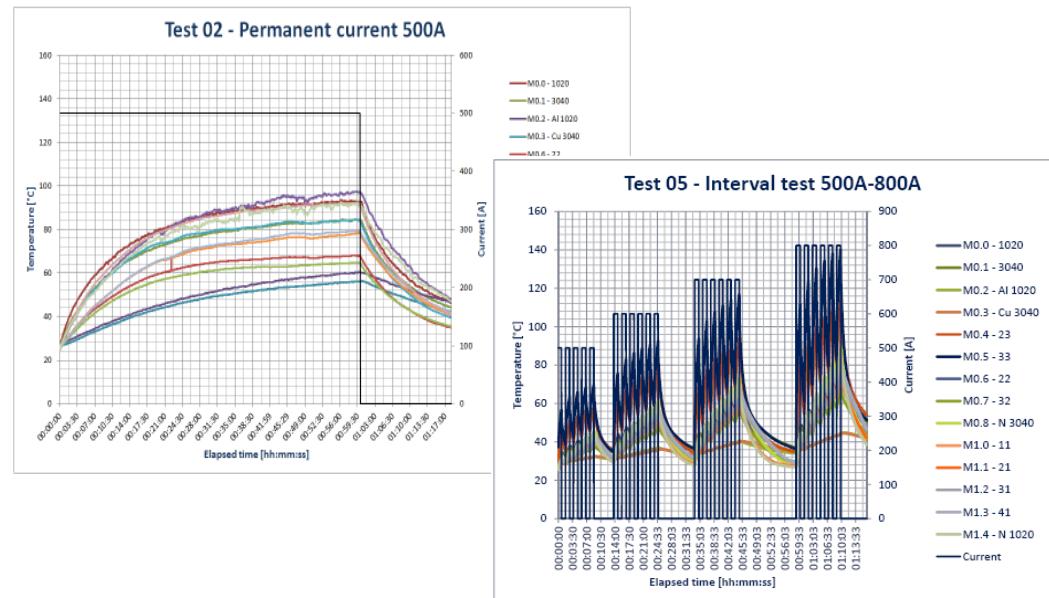


Dimensions

Total length	1824±10mm
Total width	1450±5mm
Total height	245±5mm
Mounting dimension longitudinal	600±1mm
Mounting dimension transversal	630±1mm
Length of contact strips	450mm
Maximum extension	1160mm

Prototype & Tests

- First prototype finished
- Current load test finished
- Endurance test ongoing
- Shock and vibration ongoing



Summary

- Patented design of multipole structure
- Patented design of pan head concept (parallelogram)
- Patented brake system of electric lowering device (optional)

- First prototype assembled
- Internal tests started / partly finished



Test trials start in december 2013 at „IXION“ project in the Netherlands!!!



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