

MODULAR **ELSTEEL** **ENCLOSURES**

SABS

FULLY VERIFIED

IEC / SANS 61439 Series



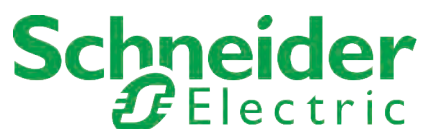
Direct from Stock!

Complete Motor Control & Power Distribution Assemblies

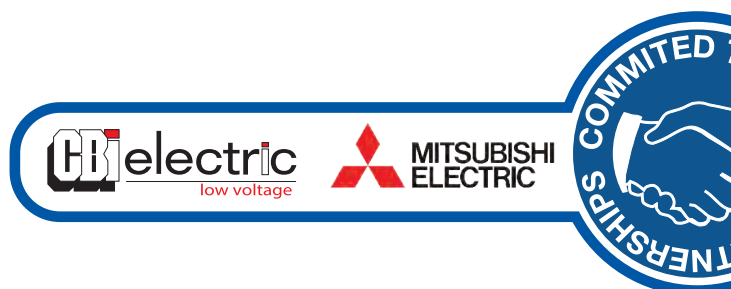


The Most Tested Assembly for Personal Safety

Brands Tested



- Tested up to 7100A at 100kA/1sec.
65kA/3sec.
- IEC / SANS 61439 Series
- Internal Arc Tested
- Fully **MODULAR** Assemblies
- Vibration and Seismic Certified
- Marine and Offshore Certified
- All major brands of breakers, just fits perfectly into the system.
- It is the result of many years of research and development, and continuous testing at recognised test stations worldwide.
- **Environmentally safe.** Save up to 30% on energy.
- **Free** Panel Designer Software Package
- Delivered **fully assembled** or in **flat-pack**



THE BEST TECHNICAL SOLUTION



The Most Tested Assembly for Personal Safety



Independence, accredited testing centre - Medizin Industrie AG, St. = 170040

CERTIFICATE

of Design

NO. 181921307780508

ESTER, Inc Inc
 Spur Road 3, Phase 1 (P)
 Katsambou 11420
 GR 14494

ESTER, Inc Inc

Power transformer 2nd company
 2030A EUTER, 103460 MOUA

Test sample

- Rated operational voltage
- Rated insulation voltage
- Rated impulse withstand voltage
- Rated current of the assembly
- Rated current load short-circuit
- Rated short-circuit current
- Rated impedance without core
- Rated short-circuit without core
- Rated frequency
- Degree of protection of windings
- Insulation

ESTER 61439-2-2011-08
 IEC 61439-2-2011-08

Validation of:

- strength of material and parts
- degree of protection of parts
- dimensions and geometry
- protection against electric shock
- electrical properties
- electromagnetic field
- mechanical withstand testing
- dielectric properties
- mechanical properties

14 August to 10 October 2013

The tests for design verification

SAB

TEST REPORT

Test Report No. NSC-171212-0001

Client	ATI System
Manufacturer	ATI System
Apparatus	Three-phase

Ratings assigned by the manufacturer:

- Impulse voltage Uimp
- Operational Voltage Ue
- Short-circuit withstand low
- Rated Current I_{NA}
- Test Voltage V
- Rated Frequency

Other characteristics listed on page 1

The tests have been carried out by:

IEC 61439-2:2011 Ed. 2 / IEC 61439-2:2011 Ed. 2 / IEC 61439-2:2011 Ed. 2

Low-voltage switchgear and controlgear

Part 1: General rules and

Date of test(s):

THE APPARATUS HAS COMPLIED

- Part 1: Sub-clause 10.2.2
- Part 1: Sub-clause 10.2.3.2
- Part 1: Sub-clause 10.3

RONALD SCHMIDT
 Senior engineer
 MSc, 10 December 2013

Signature of the responsible person for the test
 Signature of the responsible person for the test
 Signature of the responsible person for the test



SABS

TEST REPORT

Test Report No. NSC-171212-00004

SHORT-CIRCUIT LABORATORY

Page 1 of 18

Client : ATI Systems PTY (Ltd), 159 Gailloen Road, Wadeville, Germiston, South Africa
Manufacturer : ATI Systems PTY (Ltd), 159 Gailloen Road, Wadeville, Germiston, South Africa
Apparatus : Three-phase low-voltage switchgear and controlgear ASSEMBLY

Ratings assigned by the manufacturer:

Impulse voltage U _{imp}	8kV (Main Busbar structure - including MCCB's)
Operational Voltage U _e	Up to 1000 Volts a.c. 1500 Volts d.c
Short-circuit withstand low	50kA 1s (pk 105kA)
Rated Current I _{na}	3200A at IP4X - all sections
Test Voltage V	400V + 10 % (Conditional short-circuit tests)
Rated Frequency	50Hz

Other characteristics listed on page 2

The tests have been carried out strictly in accordance with:

IEC 61439-2:2011 Ed. 2 / SANS 61439-2:2012 Ed. 2 and IEC 61439-1:2011 Ed. 2 / SANS 61439-1:2012 Ed. 2
 Low-voltage switchgear and controlgear assemblies

Part 1: General rules and Part 2: Power switchgear and controlgear assemblies

Date of test(s): Period including 14 December 2017 to 08 February 2018

THE APPARATUS HAS COMPLIED WITH THE FOLLOWING CLAUSES OF IEC / SANS 61439 SERIES

Part 1: Sub-clause 10.2.2	- Resistance to corrosion	- See Gerotek test report No. 15373 - appended
Part 1: Sub-clause 10.2.3.2	- Glow-wire test - busbars support material	- 960 °C
Part 1: Sub-clause 10.3	- Verification of degree of protection - External	- IP4X
Part 1: Sub-clause 10.4	- Verification of clearances and creepage distances	- 8mm / 16mm
Part 1: Sub-clause 10.5.2	- Effective earth continuity	- < 0.1 Ω
Part 1: Sub-clause 10.9.2	- Power frequency withstand voltage test	- 2.6kV
Part 1: Sub-clause 10.9.3	- Impulse voltage withstand test	- 8kV
Part 1: Sub-clause 10.2.3.5	- Verification of temperature-rise limits-testing with current	- 3200A - IP4X
Part 1: Sub-clause 10.11.5	- Verification of short-circuit withstand strength	
	- Main and distribution busbars	- 50kA rms, 1s; 105kA peak
	- Protective earth (sub-clause 10.5.3.5) busbars	- 30kArms, 1s; 63kA peak
	- Neutral busbars	- 30kArms, 1s; 63kA peak
	- Functional units-Conditional short-circuit tests	- 50kA rms, 105kA peak at 400V+10%
Part 2: Sub-clause 8.101	- Internal separation of ASSEMBLIES by barriers or partitions	
	- In-comer : FORM 1	- Out-going functional units : FORM 3b

This report consists of:

Report forms	16	
Photograph(s)	26	As listed on page 18
Oscillogram(s)	12	IB0604, IB0602, IB0605, IB0605, IB0606, IB0607, IB0703 - IB0705, IB0707, IB0709, IB0710

Data Sheet(s) 13 As appended to this report

Drawing(s) 20 As listed on page 2

S. S. Misi
 Manager Short-Circuit Laboratory
 NETFA - SABS Commercial (SOC) Ltd
 (Technical Signatory)

M. K. Ntseke
 Test Officer: Short Circuit Laboratory
 NETFA - SABS Commercial (SOC) Ltd
 Ollifantsfontein, 10 April 2018

43rd Street, Ollifantsfontein, PO Box 144, Ollifantsfontein, 1665. Tel +27 11 238 2300. Fax +27 11 238 2363

The test work relates to this report was performed by SABS Commercial SOC Ltd.
 The report and its test results relate only to the specific sample(s) identified herein.
 They do not imply SABS approval of the quality and/or performance of the item(s)
 in question and the test results do not apply to any similar item that has not been
 tested. This report may not be reproduced except in full. The authenticity of this
 report and its contents can be confirmed by contacting the person who signed it.

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 Testing & Calibration

10159



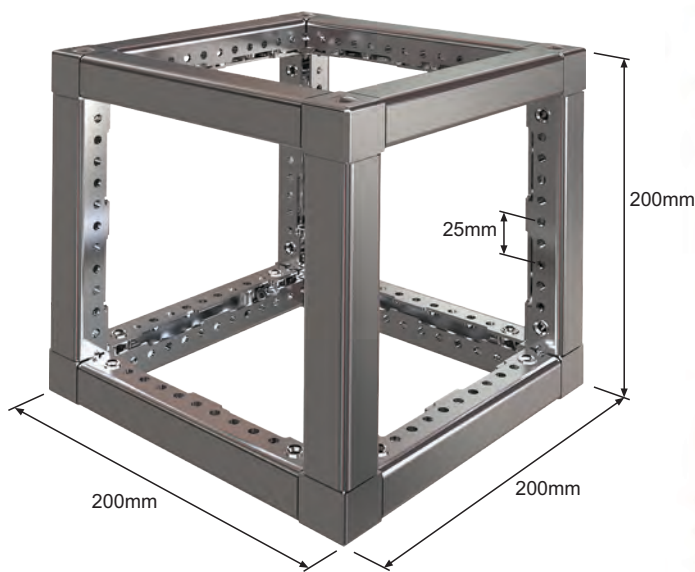
SABS Verified IEC / SANS 61439 Series



THE BEST TECHNICAL SOLUTION



The Toughest Framework on the Market



Patented System

- Patented 200mm grid **MODULAR** system.
- Extensively tested to IEC / SANS 61439 Series.
- Strong framework is made from profiled 2mm **electro-galvanized** and powder coated steel.
- Safe, flexible panel boards allow you to build exactly what you need.
- **Zirconium Nano Pre-Treatment** allows for superior corrosion resistance.

All Joints Bolted & Torqued

- The Techno Module system is **MODULAR** in steps of 200 mm in all three directions, height, width & depth.
- That means that there is no limit to the possibilities and positions.
- Frames punched in 25mm grid, for unlimited options.
- Rests on a **MODULAR** base frame which incorporates all facilities for dividing and transportation.

*ELSTEEL Modular Enclosures allow for **panel changes** during all stages of manufacturing.*



Form 3b + 4b

- Free design choice up to Form 4b, the highest form of personal safety.
- With these forms of separation, it is possible to safely work in one section of the panel board, while the rest of the panel is live.
- Special separation plates effectively prevent contamination of the whole panel board in case of an internal arc fault.
- Perfect **temperature equalization** throughout the complete panel board.





Techno Module

Panel Board Options

All Option Functional Units.

Patented Plug & Power



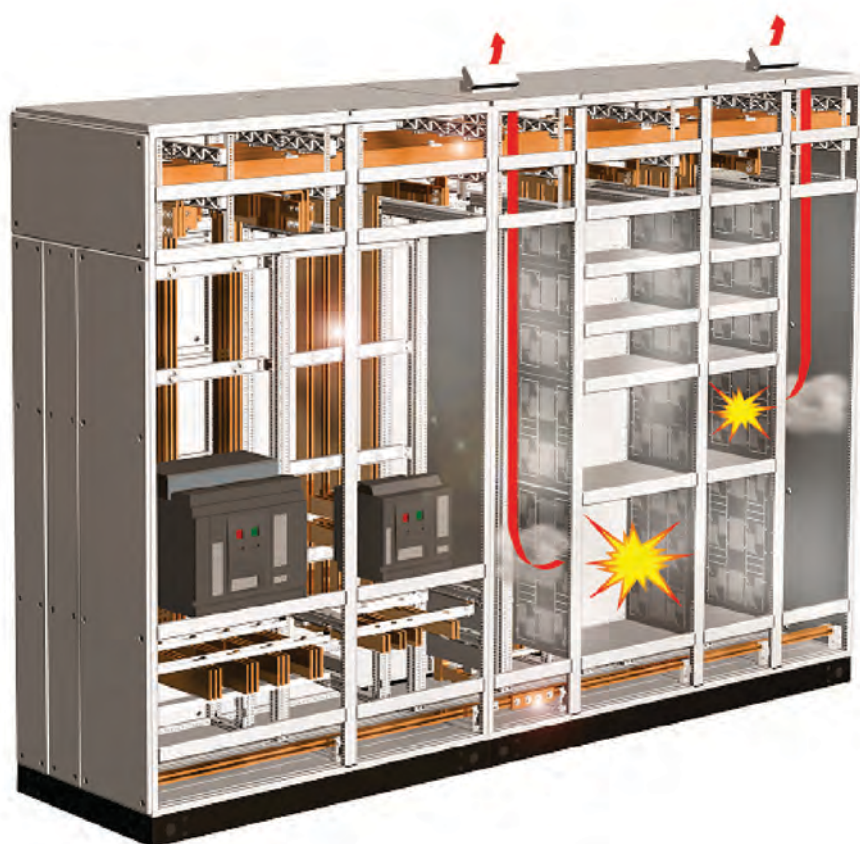
*Fixed Mounting Plates
Plug-in Option
Fully Withdrawable
Custom Options*

MODULAR
ELSTEEL
ENCLOSURES

THE BEST TECHNICAL SOLUTION



Internal Arc Protected



Tested & Verified
IEC 61641
AS/NZ53439.1:2002

Ultimate in Safety

- Arc filters have been included in the design of the separation plate - just add the standard chimneys and your enclosure is Arc Safe.
- Standard panel is Arc Protected Ready.
- No flames or solid objects will explode towards the operator or to adjacent sections.
- Internal Arc separation guarantee temperature equalization throughout the assembly.

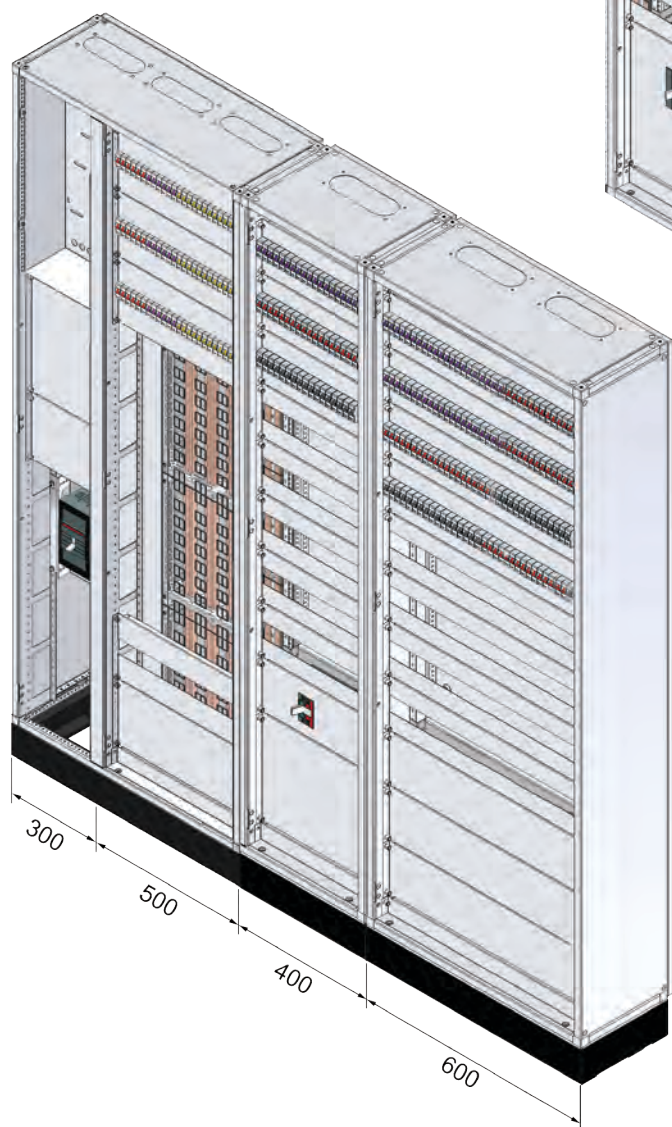


Techno Module up to 1250A

Distribution boards are 'quick' products. Techno Module Light was designed as a quick distribution board. Easy to assemble, fast to wire and delivered yesterday.

1250 A
35 kA / 1 Sec.

Wall-Mounted



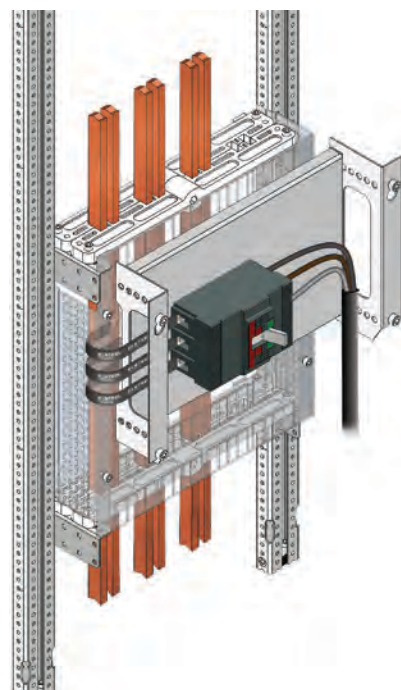
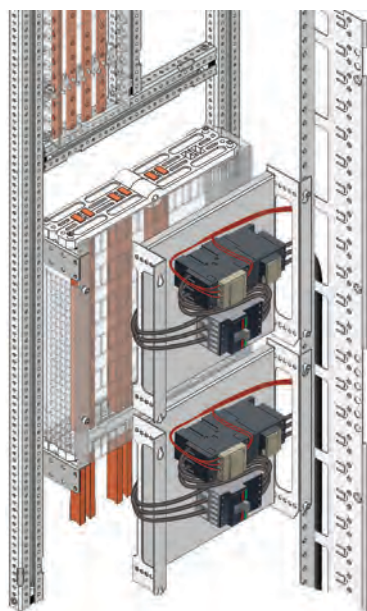
Floor-Standing

Instant plates come in a depth of 200mm and 300mm. In-going and out-going cables can be plugged from any side of the panel.

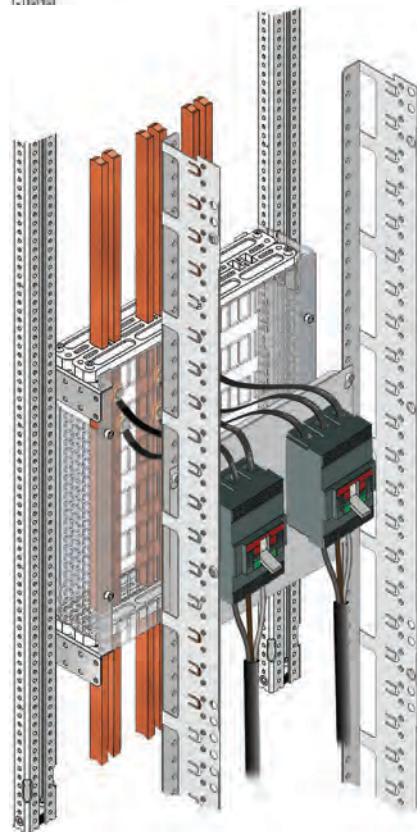
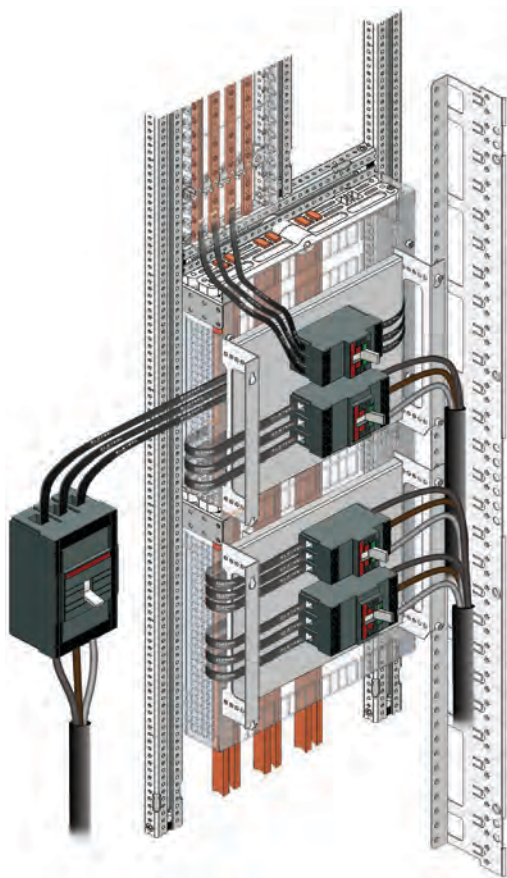


Techno Module Light

Techno Module up to 1250A



*Easy to assemble,
Fast wiring,
Delivered yesterday.*



MODULAR
ELSTEEL
ENCLOSURES

THE BEST TECHNICAL SOLUTION



Approvals – SABS Approved ASTA Certified DEKRA Certified

Tests Performed	Certification Authority	Certificate Reference
Techno Module Panels Comply to IEC 60439-1 / IEC 61439-1 & 2		
01. 400A full type test with LS Breakers (Instant Panel Light)	ASTA	17013
02. 800A full type test with ABB breakers	ASTA	17545
03. 800A full type test with LS breakers (TM Light Panel)	ASTA	17012
04. 1600A full type test with ABB breakers	ASTA	17544
05. 1600A full type test with LS breakers	DEKRA	2190938.101
06. 1600A full type test with GE breakers	ASTA	16149
07. 2000A full type test with Siemens breakers	ASTA	16783
08. 2500A full type test with ABB breakers	ASTA	17742
09. 2500A full type test with ABB breakers	ASTA	17543
10. 2500A full type test with LS breakers	DEKRA	2190938.102
11. 2500A full type test with GE breakers	ASTA	16150
12. 2500A full type test with MG, ABB, Siemens, Jean Muller breakers	IPH	513.228.6.384
13. 3200A full type test (Al busbar) with ABB breakers	CPRI	S2060729
14. 3200A temperature rise test & short circuit test	ASTA	12798
15. 4000A full type test with Schneider breakers	ASTA	17756
16. 4000A full type test with ABB breakers	ASTA	17542
17. 4000A full type test with Terasaki breakers	IPH	1819.1206.5.668
18. 4000A full type test with LS breakers - IP43	DEKRA	2190938.103
19. 4000A full type test with LS breakers - IP54	DEKRA	2190938.104
20. 5000A full type test with ABB & Jean Muller breakers	IPH	1513.832.0.468
21. 6300A full type test with ABB breakers	ASTA	17541
22. 6300A full type test with ABB breakers	IPH	1819.1061.3.431
23. 7100A full type test with ABB breakers	IPH	1819.1061.3.434
24. Short circuit test 50kA/1sec for 1x10x40 Cu & 1x10x30 Cu & Power Cassette unit	TCA	102602
25. Mitsubishi	SABS / NETFA	NSC-171212-00004

Tests Performed	Certification Authority	Certificate Reference
Techno Module Panels Comply to other standards		
01. Internal Arc fault test according to IEC 61641 & AS/NZS 3439.1 : 2002	TCA	102601 102380/ 102378
02. Vibrations test according to IEC 68-2-6 & IEC 68-2-36	VIPAC	302649-01
03. Seismic test according IEC 68-3-3	VIPAC	302649-02
04. UL/ cUL Mark for TM Panels and components	UL	E207550:Vol-2
05. Loyd's Register type approval certificate for marine, offshore and industrial applications	LLOYD'S REGISTER	02/70003 (E1)
06. ABS type approval certificate for shipboard and associated marine & offshore installation	ABS	08-SG366750-PDA
07. Russian Maritime Register of Shipping (RS) Type approval certificate for Marine use	RS	10.00001.270
08. Bureau Veritas (BV) Type Approval Certificate for Marine use	BV	22875/A0 BV
09. Det Norske Veritas (DNV) Type Approval Certificate for offshore use	DNV	E-10273



Advantages

Very Short Delivery Times

Complete Assemblies delivered directly from stock.

Free Design Choice

Build the panel suitable to your application and available space.

Delivery Options

The panel can be delivered assembled with copper work fitted, or as flat-pack.

Free Software Package

ELSTEEL Panel Designer (EPD) is an advanced proprietary Windows based application. Free assembly and start-up training provided.

Full Range of Products

Wall-mounted boxes, panel cooling, flexible busbars, busbar supports, and terminals.



Flexible Busbars



Panel Air-Conditioners



Filter Fans



Peltier Coolers

What our Customers say



"ELSTEEL saves us money."

"Prices are competitive."

"We receive the panel when we need it, which helps with our cash-flow."

"The panels are robust and ships safely."

"I never have to worry about certification, they have them all."

"ELSTEEL will paint any colour I want."

"I can receive the panel in flat-pack, if I want."

"They are really easy guys to work with."

"There is no hidden cost."

"The modular design allows for easy changes."

"With the ELSTEEL system, I can use normal flat copper."

"The open Architecture design of the panel allows for easy access to do wiring, saving time and money."

"The easy-to-use ELSTEEL Constructors Manual is empowering. I can check every detail of the assembly."



ATI Systems

Committed to Quality

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Management
System

ISO 9001:2015

www.tuv.com