



SLOVAKIA s.r.o.

**INTOOL**

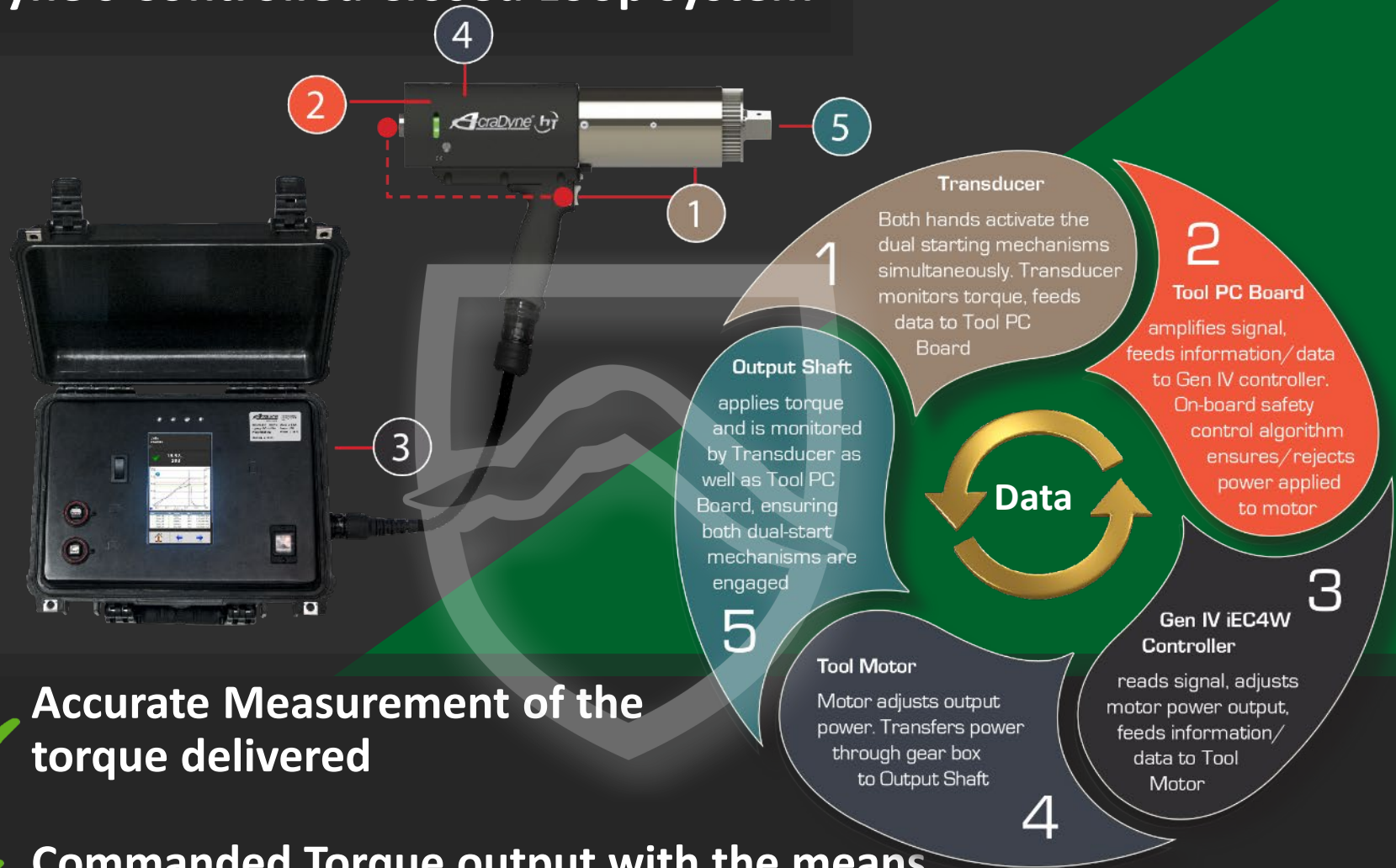
# AcraDyne HT Series

HIGH CAPABILITY DC  
PRODUCTS



DESIGNED + ASSEMBLED IN THE USA

# AcraDyne's Controlled Closed Loop system



✓ **Accurate Measurement of the torque delivered**

✓ **Commanded Torque output with the means of the tool – Over programming not allowed**

✓ **Verification of torque sensor integrity at start command – Sensor must be functional for tool to run**

# AcraDyne HT Series

OPTIMAL ERGONOMICS WITH MULTIPLE HANDLE CONFIGURATIONS



**Pistol Lever Handle**  
AEP Series



**Fixtured Lever Handle**  
AEF series



**Straight Lever Handle**  
AES Series



**Rear Mounted Lever Handle**  
AED Series



**Dual J-Handle**  
AEJ4U Series

U.S. Patent D968491



**J-Handle**  
AEJ Series



**Angle**  
AEN Series





# AcraDyne HT Series

## ROBUST DESIGN



- Advanced gearbox design with Aerospace Materials and Heat Treating
- 2-5 times stronger than competition



- Modular handle design
- Multiple handle configurations available



- Spline reaction bar design
- Transducerized at the output – Measures actual torque



- Molded connector insert – cable cannot be inserted improperly and bend pins



- Green light for tactical feedback



- Thick rear cover plate



- Dual Lever option provides additional safety by avoiding accidental tool start



# AcraDyne iEC4WF Field Controller

## Advanced Tool Control and Data Collection

- Multiple fastening strategies
- Real-time curve viewing
- Optional tool fan kit keeps tool from overheating
- Compact design weighs less than 20 pounds
- Integrated ground clamp
- Rugged weatherproof case
- Curve storage: 20,000
- Rundown storage: 1,000,000



### PRODUCTIVITY

- Replace multiple conventional tools with one flexible controlled system
- Quick and easy setup
- Fan kit reduces downtime due to tool overheating



### ERGONOMICS

- Compact, rugged case with easy carry handle makes field use easy and convenient
- Lightweight for operator comfort



### RELIABILITY

- Weatherproof rugged case
- Industrial touch screen

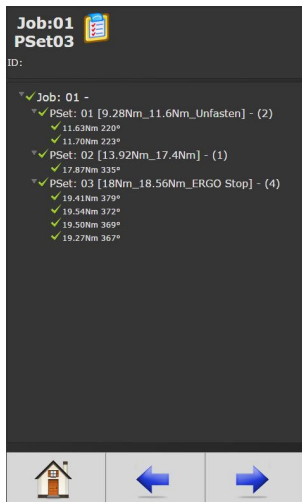


### QUALITY

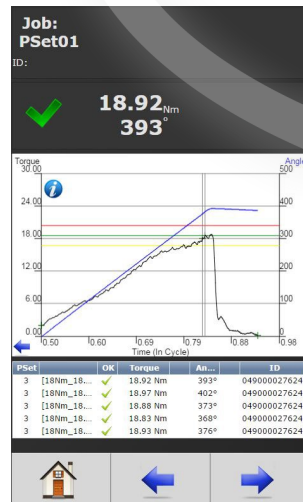
- Controlled tightening and consistent torque control improves quality
- Process controls reduce human error, and ensure no missed fasteners, stripped threads, rehits, or damaged threads
- No premature shut-off

# Gen IV Software for Programming, Analysis, and Diagnostics

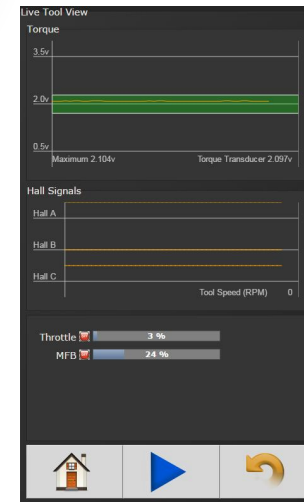
- Provided Free of Charge
- Web-Browser Based – Connect Controller with Computer, Tablet, or Smart Device
- Advanced Networking Capabilities



Add and Edit  
Parameter Sets  
and Jobs



View Curve  
Results in Real  
Time



View Diagnostics  
for Repair,  
Calibration, and  
Troubleshooting

# Productivity

SPEED & EFFICIENCY



	AcraDyne DC	Hydraulic
Fast speed	✓	✗
Custom Engineered Solution	✓	✗
Broad Torque Range (Low to High)	✓	✗
Multi-Handle Design	✓	✗
Horizontal, Vertical, Angle, Low Clearance Bolt Access	✓	✗
Multiple Tightening Strategies	✓	✗

# Ergonomics/Safety



SAFETY OF THE WORKER







	AcraDyne DC	Hydraulic
Minimal Noise	✓	✗
Safety Algorithm	✓	✗
Custom Engineered Solution/ Design	✓	✗
Less Worker Fatigue	✓ <ul style="list-style-type: none"> <li>• Multiple Ergonomic Handle Options</li> <li>• Lighter Weight (Under 50 lbs)</li> </ul>	✗ <ul style="list-style-type: none"> <li>• Heavy</li> <li>• Attached Pump may be Difficult to Move</li> </ul>
Worker Protection	✓ <ul style="list-style-type: none"> <li>• Dual Trigger Prevents Accidental Tool Start</li> <li>• Clean Operation</li> </ul>	✗ <ul style="list-style-type: none"> <li>• Pinch Points</li> <li>• Slip Hazards from Leaked Fluids</li> <li>• Very High Pressure Operation (10,000 PSI)</li> <li>• Ratchet Design</li> </ul>



# Reliability



















REDUCED REPAIR AND MAINTENANCE COSTS

	AcraDyne DC	Hydraulic
Delivers Consistent Power		 Dependent on: <ul style="list-style-type: none"> <li>• Temperature</li> <li>• Viscosity</li> <li>• Pressure</li> <li>• Pump Operation</li> <li>• Oil Life</li> </ul>
Durability		
Fewer Points of Failure	 Accessories Required: <ul style="list-style-type: none"> <li>• Tool Cable</li> </ul>	 Accessories Required: <ul style="list-style-type: none"> <li>• Air Compressor</li> <li>• Hydraulic Fluid Hose</li> <li>• Air Fittings and Adapters</li> </ul>

# Quality



## MEETING ENGINEERING REQUIREMENTS

	AcraDyne DC	Hydraulic
Highly Accurate	 <ul style="list-style-type: none"><li>• Transducerized Closed-Loop System</li></ul>	 <p>Accuracy Dependent on:</p> <ul style="list-style-type: none"><li>• Fluid Dynamics</li><li>• Temperature</li></ul>
Data Collection and Traceability		
Torque/Angle/Yield Control		
Torque Curve Viewing and Graph Storage		
Tightening Strategies (Including Counter-Clockwise)		
Network Capability		
Password Protection		
Field Calibration		

# Safety is #1



AcraDyne Enhances Safe Tool Operation, Protecting Tool Operators from Injuries to Fingers, Hands, Wrists, and Backs

U.S. Bureau of Labor & Statistics:



**\$6,000**

Average Hand injury Claim  
Individual workers' compensation claims nearing \$7500



**30,000**

Bolts Tightened/Year in Construction



**110,000**

Lost-Time Hand Injuries Annually



**1,000,000**

Emergency Room Visits/Year Due to Work Related Hand Injuries



**\$400,000,000**

Construction Industry Annual Cost of Hand Cuts & Punctures

# Safety is #1

## *HT Dual-Lever Nutrunners: **SAFETY** is **VITAL** in Critical Bolting*

AcraDyne's Nutrunners are designed with ultimate operator safety in mind. The optional dual-lever design helps prevent:



### **Injuries from Accidental Tool Start**

Two-hand operation with no tie-down feature requires the operator to use both hands on the trigger simultaneously. This eliminates the possibility of accidental tool start and keeps both of the operator's hands out of harm's way.



### **Strain Caused by Awkward Tool Operation**

Multiple handle styles ensure the safest, most ergonomic tool for your specific application.



### **Hand and Finger Trauma**

Significantly reduce the risk of crushed or mutilated fingers from unintended tool start.

***Protect your most valuable asset — your tool operator.***



# AcraDyne HT Dual-Lever Series

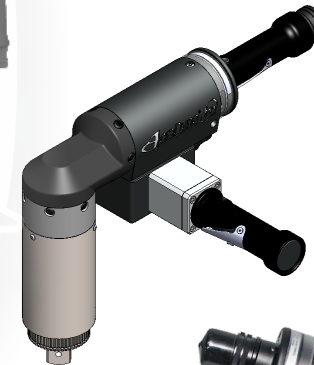
SAFETY IN MIND

## Features & Benefits

- Additional safety when using a tool with a reaction bar / nose extension
- Requires both hands to start the tool, keeping hands clear of application
- Helps avoid accidental starting of the tool
- Available in
  - Handle Bar (F) Style
  - Straight (S) Style
  - Pistol (P) Style
  - J-Handle (J) Style
  - D-Handle (D) Style
  - Angle (N) Style



AEP Type



AEN Type



AEJ Type



AEF Type



AED Type



AES Type



**AcraDyne® HTXD™**



## AcraDyne HTXD

FOR EXTREME DUTY  
APPLICATIONS



DESIGNED + ASSEMBLED IN THE USA

# EXTREME DUTY

8,000 - 17,000 Nm



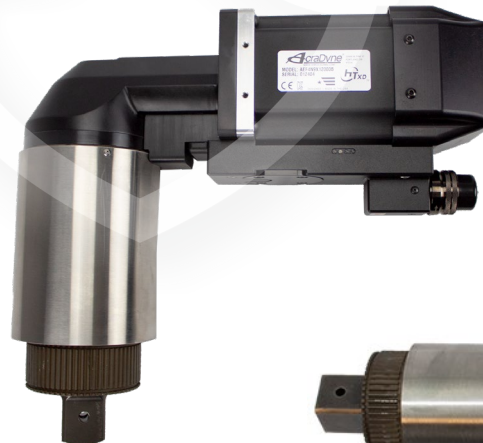
Pistol



J-Handle



Dual J-Handle



Angle



Straight

# EXTREME DUTY

*8,000 - 17,000 Nm*

- Extreme Duty technology meant for near continuous duty cycles
- Why is this technology not used across all AcraDyne high torque (HT) models?
  - Weight / Space
    - In order to provide near continuous use without heat generation, the electric motor must be larger and of additional mass
    - Many applications and use conditions do not require near continuous use and therefor smaller, less mass motors are perfectly suited
  - Speed
    - Free speed of the HTXD series is slower than HT Series
    - Speed under load is actually **faster** with the HTXD than the HT Series



**NEW**  
**AcraDyne**  
**XT Cordless Series**



# AcraDyne XT Cordless Series

## Features / Benefits

- Built-in transducer for measurement and traceability
- Torque overload limit function removes responsibility from the operator
- Ultimate flexibility for your application with 3 selectable tightening strategies:
  - Torque Control
  - Torque Control and Angle Monitoring
  - Torque Control PLUS Angle Monitoring
- Temperature monitoring sensor helps prevent overheating
- High-efficiency brushless motor provides longer motor life and increased efficiency
- Monitor and review reliable data with results stored on tool log
- User friendly digital adjustment and display of wrench status provides quick operating feedback



# Case Studies



## Customer Need

- Siemens was searching for DC Controlled Tooling to replace Hydraulic tools for improved quality and data traceability
- Competition was disqualified because it could not meet project specifications accurately with traceable data

## AcraDyne Solution

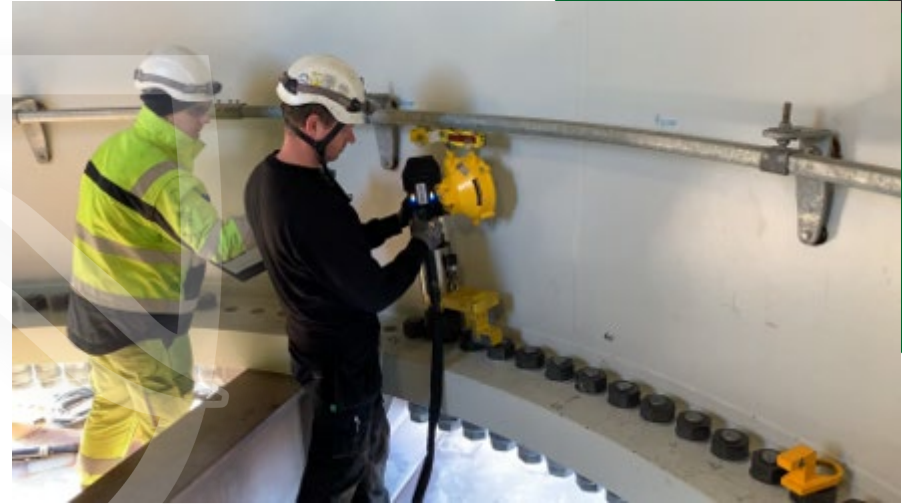
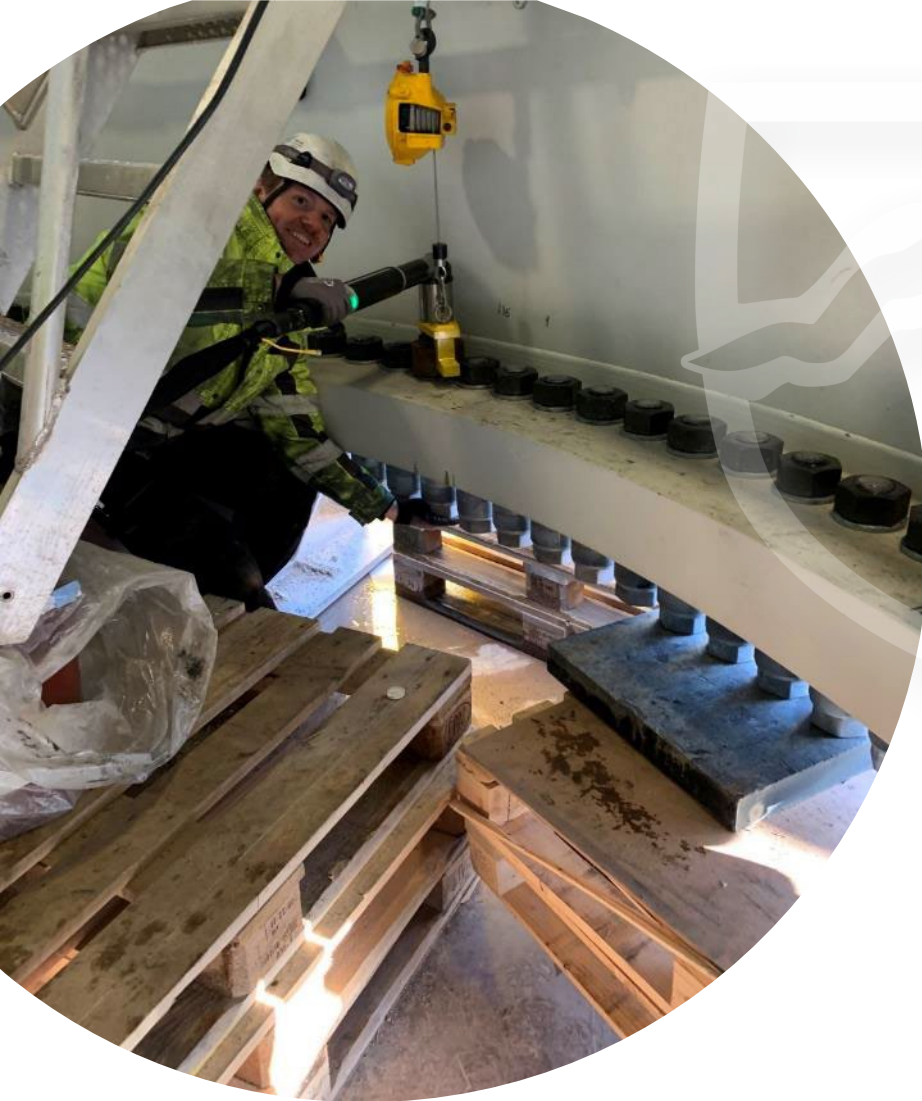
- **Accuracy**
  - AcraDyne provided DC Controlled HT tools that accurately measured and traceable data
  - Only company that had the transducer at the sq. drive

## Customer Need Continued

- Siemens satisfied, asked to develop a very robust 12,000NM System for offshore towers
- Three suppliers invited to participate at test site in Esbjerg, Denmark:
  - AIMCO
  - RAD
  - Plarad



# Test In Progress





# Test Results

- **Reliability**
  - The three AcraDyne systems performed all levels of the tests with zero issues
  - Siemens requested and used AcraDyne tool to pre-tighten and loosen bolts for the test with Plarad
  - RAD's tool failed several times during their test due to heat and other reported faults
- **Speed**
  - 3X Faster than Hydraulic tools
- **Safety**
  - Only option to meet safety requirement with dual lever handle and alternative handle designs



# Phase II AcraDyne Vs Hydraulic

**December 2018**

- Quality and reliability test of AcraDyne
- Offshore installation at a Wind Tower at a Siemens Gamesa construction site in Scotland
  - AcraDyne 12000 Nm tension tool (extreme duty model)
- Half of the tower was done with a Plarad hydraulic torque tool
- Other half with the AcraDyne HT Series Tool

## Stage 1 Test

- First stage was completed with zero problems
  - **Hydraulic:** 1 min 23 seconds
  - **AcraDyne:** 25 – 27 seconds

## Stage 2 Test

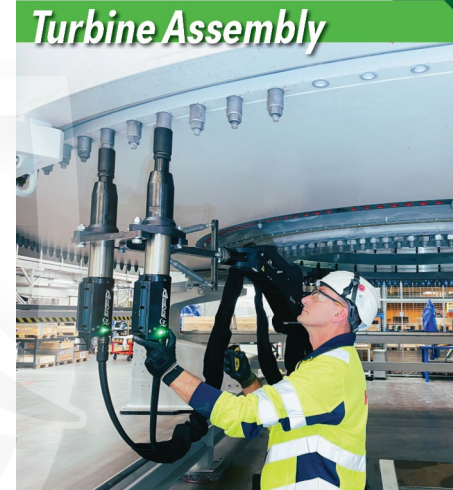
- First stage was completed with zero problems
- Time Per Bolt
  - **Hydraulic:** 30 – 45 seconds
  - **AcraDyne:** 7 seconds







# High Torque Solutions for ALL Your Toughest Bolting Jobs



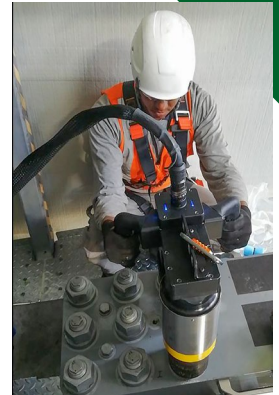
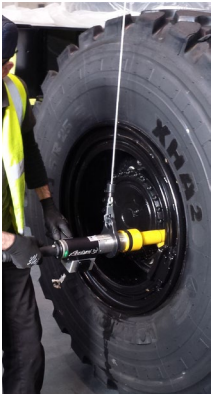


# Custom Tool Solutions for Your Unique Applications



# The *only* Reason to use Hydraulics for Bolt Tightening Today:

- Bolt Access
- High Torque Requirements over 17,000 Nm



## AcraDyne High Torque DC Tools

WELCOME TO THE 21<sup>ST</sup> CENTURY OF BOLT TIGHTENING!



# Thank You

🌐 [www.aimco-global.com](http://www.aimco-global.com)

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