

# ALCATRAZ<sup>®</sup>

## I N T E R L O C K S

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Vendor Document Nr.: ALC-PDS-ML2-FR04


## Product Data Sheet

### Integral Interlocks

All <> Multi-Turn Variations: **Size 2**



1	12-04-2024	CY	DK	HB	Final
Rev	Date	Originator	Reviewed	Approved	Description
		Alcatraz	Alcatraz	Alcatraz	

<b>Product Data Sheet</b> <b>Multi-Turn Lock</b> <b>Size 2</b>		
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## 1. PRODUCT STANDARD FEATURES

### Features

- ✓ Integral parallel splined drive-tube
- ✓ Mechanically programmed key codes
- ✓ Encapsulated lock portion preventing ingress & contamination
- ✓ Bespoke nameplate / tagging
- ✓ Compact design
- ✓ Tamperproof mounted solutions
- ✓ Interlocked open / closed position
- ✓ Alcatraz 5 step safety integrity design

### Operational Keys

- ✓ Mechanically programmed keys
- ✓ Unique coding assigned
- ✓ Bespoke nameplate / tagging
- ✓ ASTM E208 25 metre drop test approved
- ✓ Encapsulated key housing

### Installation

- ✓ Cold work permit for installation
- ✓ No modification to host equipment
- ✓ Bespoke mounting bracket to suit host application
- ✓ Bespoke drive bush adaptor to suit host application
- ✓ Tamperproof fixings used throughout

A **Multi-Turn Size 2** interlock can be mounted onto all host valves with a drive bush edge to edge dimension less than 85mm

Above these sizes a bespoke solution would be designed by Alcatraz to suit applications needs.

### Key Options


- ✓ Alcatraz can supply the following key options.
- ✓ **Replacement** key kit
- ✓ **Spare** key
- ✓ **Group** key
- ✓ **Master** key
- ✓ **Commissioning** key
- ✓ All the above are suitable for our complete product range.

A **Group** key would be used within a dedicated zone, system, or process.

A **Master** Key allows an end client to operator regardless to product type, process logic situation all the Alcatraz products.

A **Commissioning** Key is used during the construction / commissioning phase of a project.

Ensuring the programmed sequence logic does not interfere with steam blowing, flushing or leak testing activities.

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## 2. DATA SHEET DML2 (DOUBLE KEYED)

### Dimensions DML2

Dimension		
Length	(mm)	201
Width	(mm)	158
Height	(mm)	114
Mass of Interlock (kg)*		6,15
Hand wheel sizes	Various Options	
Max. valve spindle Diameter (mm)		60,00

\* Not including bracket, adaptor & hand wheel

### Certificate & Standards


Certificate & Standards	
Product Material	2.1
Cert.*	
Fire Test	ANSI / API 607
ISO	ISO 9001 2015
Electro Polishing	ASTM B912-02
	ISBN 978-2-87997-310-4
Atex	EU 2014/34/EU Atex
	Declaration of Conformity

\* 3.1 material certificate available upon request

### Material Grades

Material Grades	
Interlock housing	SS 316
Internal Components	SS 316
Bracket	SS 316
Adaptor	SS 316
Hand wheel	Composed Carbon Steel
	Coating Interpon D1036
Hand wheel *	SS 316
Operational Key	SS 316
Tag plates	RESOPAL®

\* AISI 316 hand wheels available upon request

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3. EXPLODED VIEW DML2 (DOUBLE KEYED)

Hand Wheel



Interlock & Lock Portions



Host valve nut

Bespoke Adaptor

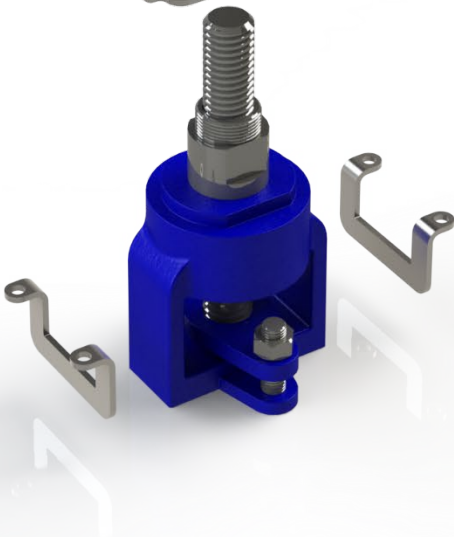


Bespoke Bracket Part 1



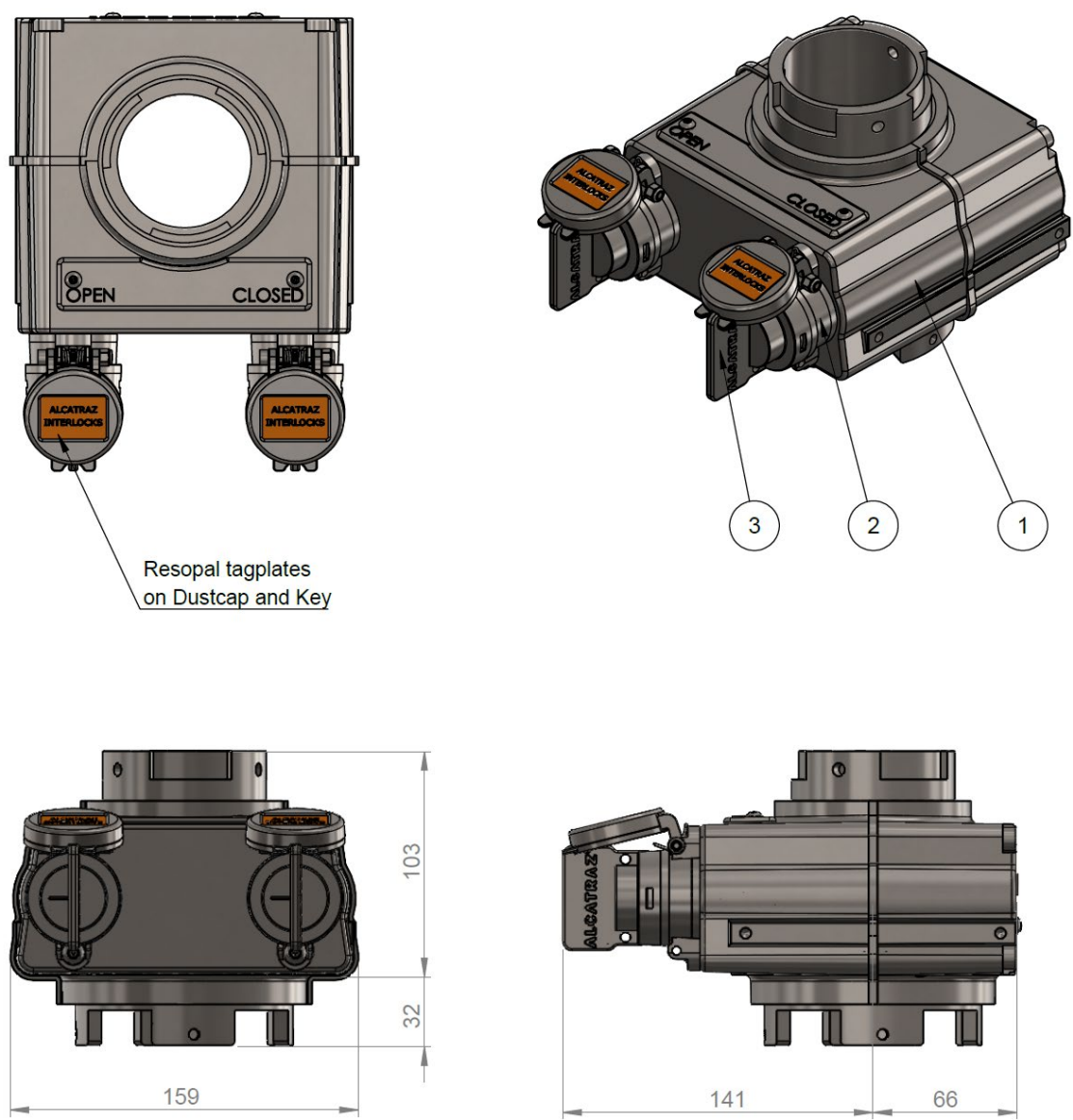
Host Valve

Bespoke Bracket Part 2



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4. GAD DML2 (DOUBLE KEYED)



Bill of Materials		
Pos	Description	Material
1	Multi-turn main unit	SS 316 – Electro Polished
2	Lock portion including dust cap	SS 316 – Electro Polished
3	Key	SS 316 – Electro Polished
*	Hand wheel	Composed Carbon Steel Coating Interpon D1036
*	Hand wheel diameters Ø D and height H refer to document ALC-MC-HW-CCS-ML2	

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## 5. DATA SHEET SML2 (SINGLE KEY OPEN)

### Dimensions SML

Dimension		
Length	(mm)	201
Width	(mm)	158
Height	(mm)	114
Mass of Interlock (kg)*		5,75
Hand wheel sizes	Various Options	
Max. valve spindle Diameter (mm)		60,00

\* Not including bracket, adaptor & hand wheel

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Operational Key	SS 316
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6. EXPLODED VIEW SML2 (SINGLE LOCKED OPEN)

Hand Wheel



Interlock & Lock Portions



Host valve nut

Bespoke Adaptor

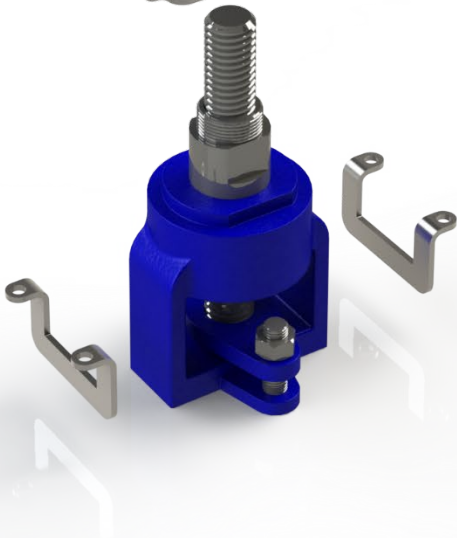


Bespoke Bracket Part 1



Host Valve

Bespoke Bracket Part 2



# Product Data Sheet

## Multi-Turn Lock

### Size 2

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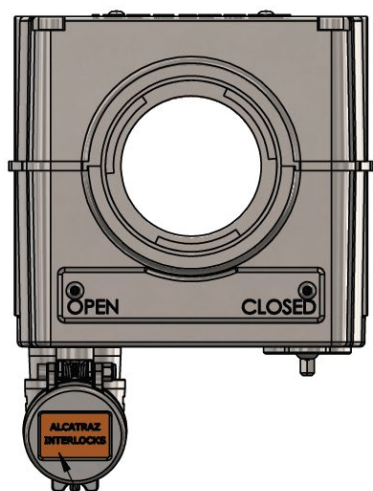
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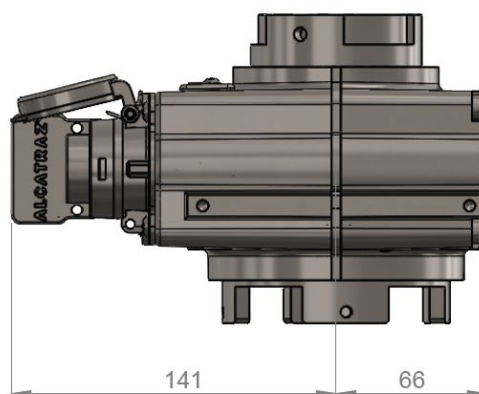
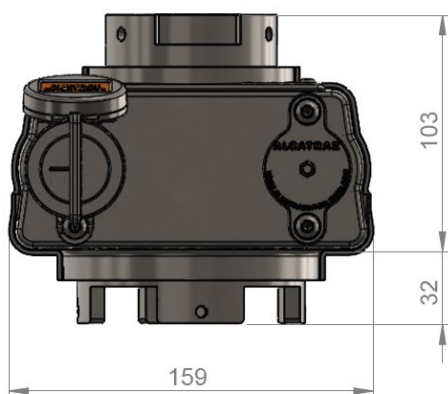
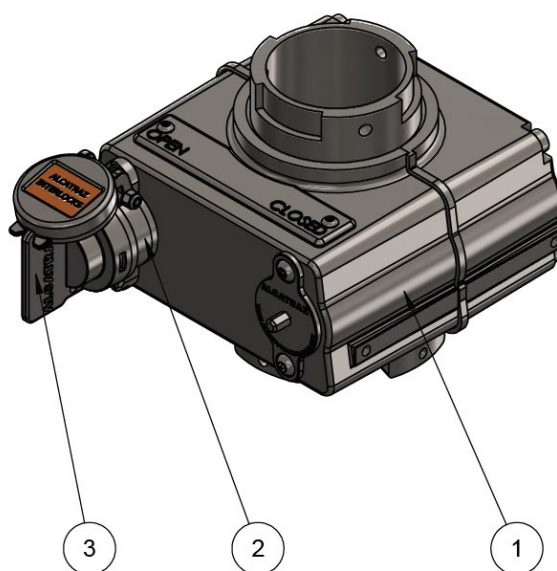
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## 7. GAD SML2 (SINGLE KEY OPEN)



Resopal tagplates  
on Dustcap and Key



### Bill of Materials

Pos	Description	Material
1	Multi-turn main unit	SS 316 – Electro polished
2	Lock portion including dust cap	SS 316 – Electro polished
3	Key	SS 316 – Electro polished
*	Hand wheel	Composed Carbon Steel Coating Interpon D1036
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## 8. DATA SHEET SML2 (SINGLE KEY CLOSED)

### Dimensions SML

Dimension		
Length	(mm)	201
Width	(mm)	158
Height	(mm)	114
Mass of Interlock (kg)*		5,75
Hand wheel sizes	Various Options	
Max. valve spindle Diameter (mm)		60,00

\* Not including bracket, adaptor & hand wheel

### Certificate & Standards


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Product Material	2.1
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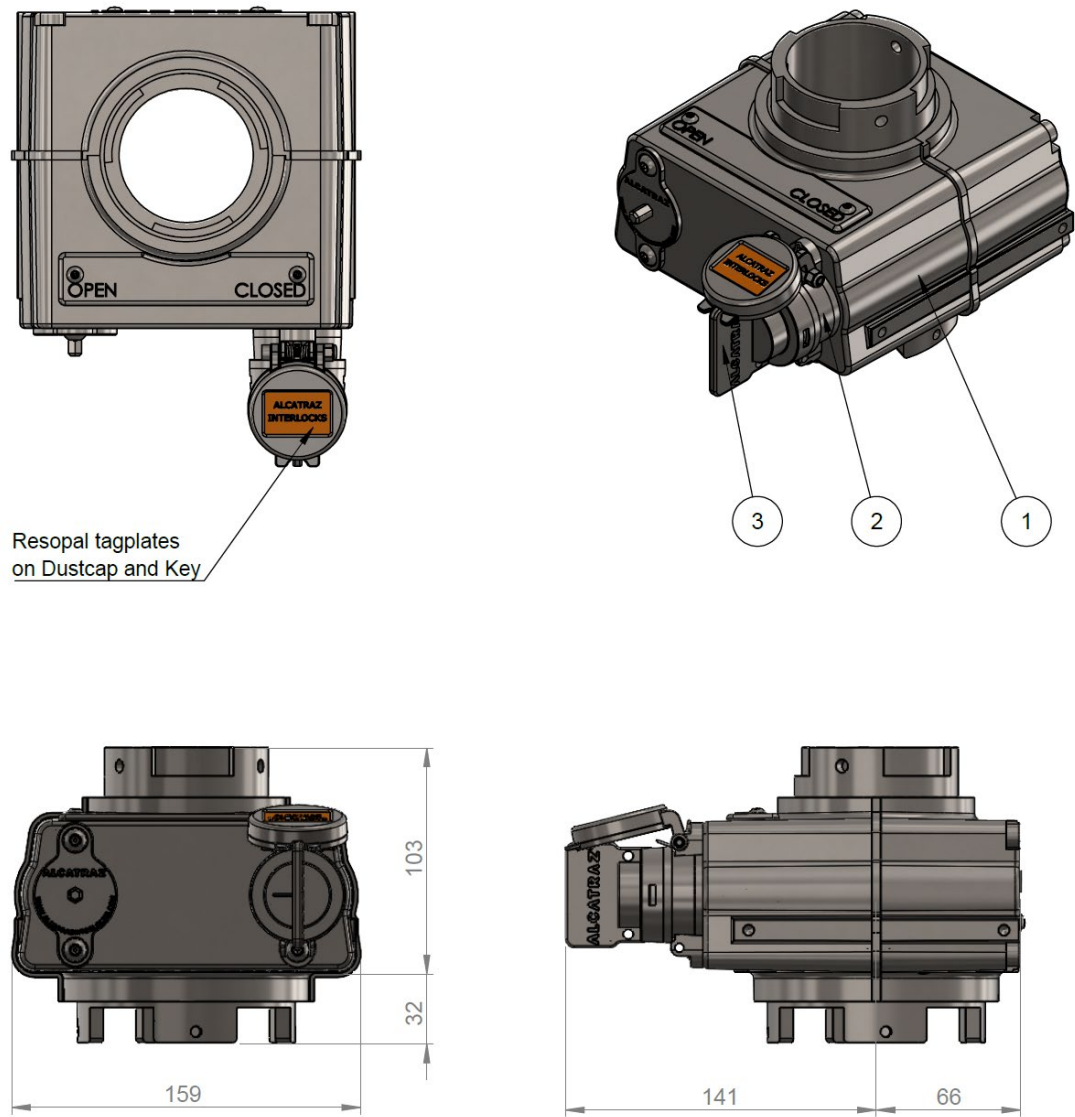
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**9. EXPLODED VIEW SML2 (SINGLE LOCKED CLOSED)**



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1. GAD SML2 (SINGLE KEY CLOSED)



Bill of Materials		
Pos	Description	Material
1	Multi-turn main unit	SS 316 – Electro Polished
2	Lock portion including dust cap	SS 316 – Electro Polished
3	Key	SS 316 – Electro Polished
*	Hand wheel	Composed Carbon Steel Coating Interpon D1036
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## 10. SUMMARY OF SAFETY INTEGRITY STEPS

Alcatraz Integrity Step	Action	Purpose
Step 1	Insert operational key into key lock portion (LP) in a linear action	First stage linear action, to confirm the <b>Mechanically Programmed Key Codes</b>
Step 2	Rotation of engaged operational key within lock portion (LP)	Second stage action, to engage or disengage the internal interlock input driveshaft & lock finger
Step 3	Operational key encapsulates Lock Portion (LP) housing	Ensuring zero ingress or contamination into the Lock Portion coding (LP)
Step 4	Lock Portion (LP) separates & seals lock body from any external ingress and product tampering	<p>An extra level of defence &amp; separation between lock portion and interlock housing internal workings.</p> <p>No access / zero possibility to override internal lock workings or have exposure to ingress / contamination</p>
Step 5	Parallel Splined Key (PSK) connection between Interlock drive-tube & its mated assigned hand wheel	<p>Robust mechanical connection whereby the rotational torques &amp; forces are evenly shared across the drive tube connection and mated hand wheel.</p> <p>Prevents loose handwheels and <b>HSE</b> issue. Plus, there is <b>No</b> operational forces solely focused on the hand wheel fixation screws as per all other brands.</p>
<b>Alcatraz Mechanical Coded Key Interlock devices are in accordance with EN ISO 14119:2013 Type-2 B.2</b>		