

DQLS Product Data Sheet

ALCATRAZ®
INTERLOCKS

Alcatraz Doc. No.: ALC-PDS-QLS-DK01

Rev.: 2 Status: Final

Date: 15-04-2024

Vendor Document Nr.: ALC-PDS-QLS-DK01

Product Data Sheet Integral Interlocks

DQLS Quarter Turn Interlock



2	15-04-2024	CY	DK	HB	Final
Rev	Date	Originator	Reviewed	Approved	Description
		Alcatraz	Alcatraz	Alcatraz	

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1. PRODUCT STANDARD FEATURES

DQLS Features

- ✓ Intergraded 90-degree end stops
- ✓ Ergonomic lever
- ✓ 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

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 **DQLS** interlock can be mounted onto all host valves with a valve stem flat to flat dimension <12mm

Above these sizes a M or L solution would be the suited Alcatraz application.

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. PRODUCT DATA SHEET

Dimensions DQLS

Dimension	
Length (mm)	90
Width (mm)	131
Height (mm)	73
Mass of Interlock (kg)*	2,08
Lever sizes *	Standardly 126mm
Bespoke sizes possible	
Max. valve stem width (mm)	12,00

* Not including bracket, adaptor & lever

Material Grades

Material Grades	
Interlock housing	SS 316
Internal components	SS 316
Bracket	SS 316
Adaptor	SS 316
Lever *	SS 316
Operational Key	SS 316
Tag plates	RESOPAL®

* AISI 304 levers available upon request

Certificate & Standards

Certificate & Standards

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

* 3.1 material certificate available upon request

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3. DQLS EXPLODED VIEW ON BALL VALVE

Lever



Interlock & Lock Portions



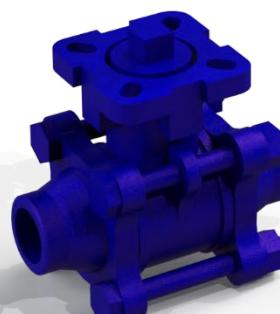
Bespoke Adaptor



Bespoke Bracket



Host Valve



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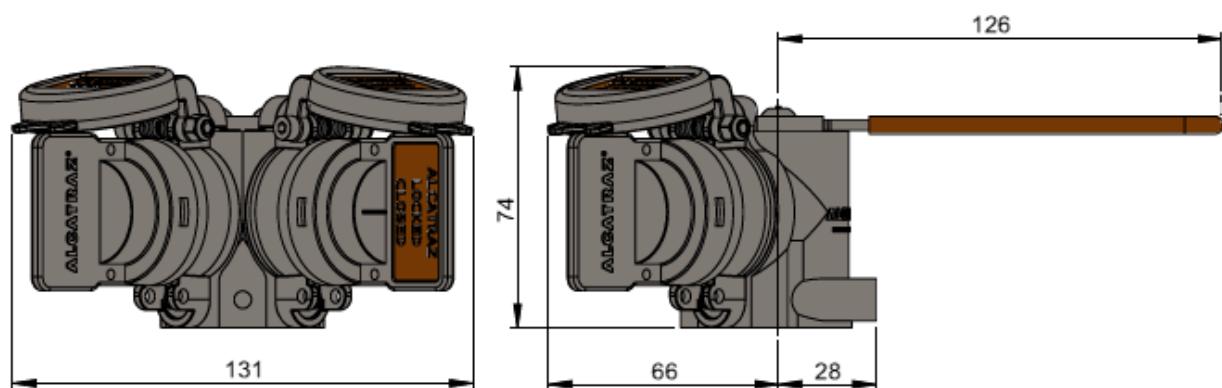
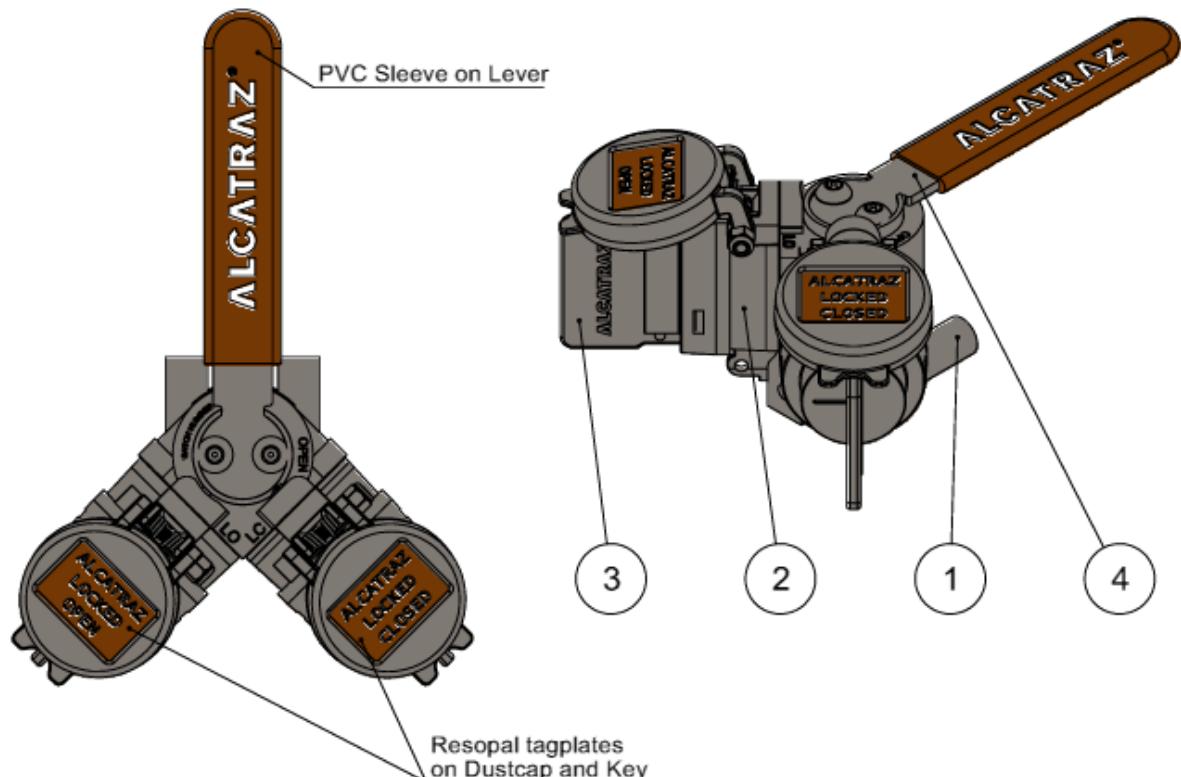
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4. DQLS: GENERAL ARRANGEMENT DRAWING



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
4	Lever	SS 316
*	Lever lengths standardly 126mm, but can be supplied in bespoke lengths	

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5. SUMMARY OF OUR 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 Mechanically Programmed Key Codes
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	Key Lock Portion (LP) separates & seals lock body from any external ingress and product tampering	An extra level of defence & separation between lock portion and interlock housing internal workings. No access / zero possibility to override internal lock workings or have exposure to ingress / contamination
Step 5	Two moving parts. Intergraded 90-degree end stops ISO footprint connection possibilities between Interlock & its mated valve	Minimization of moving parts Valve protection with intergraded ninety-degree end stops built within actual lock housing. Tamperproof mounting solution including fixation screws.

**Alcatraz Mechanical Coded Key Interlock devices are in accordance to
EN ISO 14119:2013 Type-2 B.2**