DIAMOND SHIELD® SERIES

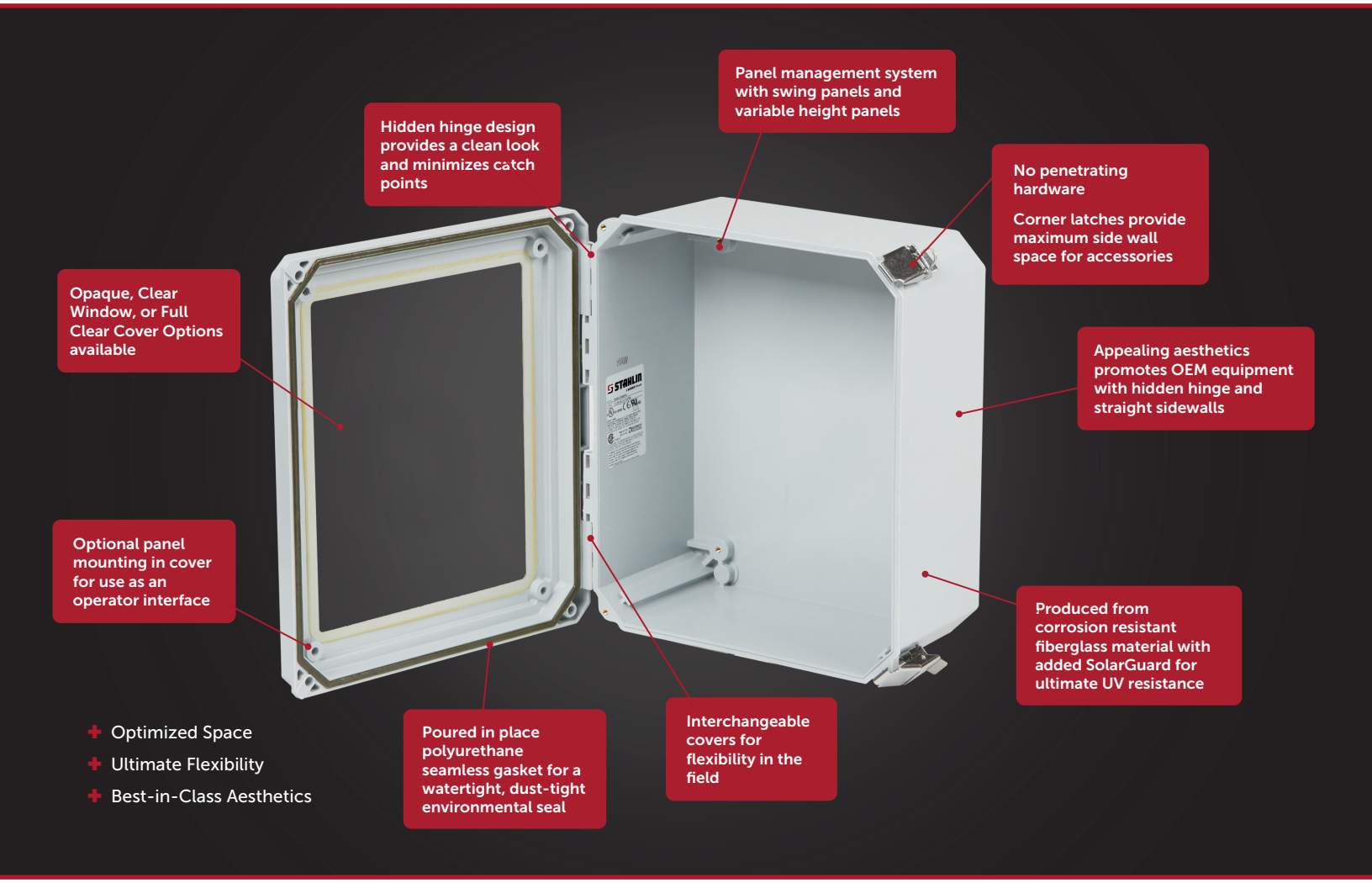
STAHLIN®
A ROBROY Brand

THE ULTIMATE IN INSTALLATION SPEED, FLEXIBILITY, AESTHETICS, AND CORROSION RESISTANCE.

Diamond Shield series enclosures offer unique internal equipment management capabilites to increase flexibility while allowing for utilization of every cubic inch of valuable internal enclosure space.

For more information, see Page 6 of this brochure.

INNOVATION	VALUE
Corner Latches offer maximum enclosure side wall space	Optimizes use of all space within the enclosure for mounting additional equipment
Innovative Panel Management System® – NEW patent-pending SpeedPanel swing panel kits	Ability to externally assemble the panel before installing it into the enclosure
Field-Interchangeable Covers with Hidden Hinge Design – Opaque, window, or clear cover options	Minimized catch points for dirt and debris and unobstructed viewing of internal displays
Inside Cover Equipment Mounting	Added equipment installation flexibility reduces modification cost



MARKETS AND INDUSTRIES

- Ideal for Non-Hazardous Industrial and Commercial OEM market segments
- Industries such as Oil and Gas, Electrical Control, Manufacturing, Water/Wastewater, Communications, Instrumentation, Renewable Energy, and Wireless & Remote Monitoring

STANDARDS AND RATINGS

- NEMA 10250, UL 50, UL 50e, UL 508A
- cULus Listed / CSA Std. C22.2 File #E64358
- Type 1, 3, 3S, 4, 4X, 12, 13, as designated
- IEC Ingress Rating: IP66
- IEC Impact Rating: IK10 (Opaque Cover only)
- UL 1741 Listed File #E333478
- Flammability Rating: UL94-5VA
- NFPA No. 101 Flame Spread: Class A(1)
- Outdoor Exposure UL 746C: (f1) Rated
- CE Certified

Temperature Range (by Cover Type)

- Opaque: -76°F to +274°F (-60°C to +134°C)
- Window: -26°F to +170°F (-32°C to +76°C)
- Clear: -40°F to +248°F (-40°C to +120°C)

APPLICATIONS

- Ideal for electrical and high-end electronics in harsh corrosive environments and industrial applications – both indoors and out.

INNOVATIVE FEATURES

- Available with game-changing panel management system, and SpeedPanel Dead Front/Swing Panel mounting system for fast installation
- UV resistant with SolarGuard®, Stahlin's proprietary blend of UV-resistant fiberglass material
- Three field-interchangeable cover options (opaque, flush-bonded window, and clear polycarbonate), each with multiple cover securement methods and panel-mounting capabilities
- Maximum visibility for raised panels and control devices
- High temperature, flame retardant, non-corrosive environmental designs
- Stands up to an exceptionally broad range of chemical exposures
- Results in an environmentally sealed and sound space
- High impact resistance
- No penetrable hardware
- Unobstructed walls for ease of conduit or component placement
- Double insulated material to eliminate incidental electrical contact
- Solid construction in a lightweight design
- Back panels available for all sizes

DIAMOND SHIELD CONFIGURATIONS

OPAQUE COVER

HW configuration shown.

FLUSH BONDED WINDOW COVER

HLL configuration shown.

CLEAR COVER

HPL configuration shown.

CONSTRUCTION

Materials

- Body and Opaque Covers - SolarGuard® hot compression molded fiberglass reinforced polyester
- Clear Covers - Clear polycarbonate with UV inhibitors
- Bonded Window Covers - Precision routed flush bonded super abrasion resistant acrylic material for maximum visibility**
- Gasket - Poured polyurethane seamless gasket provides watertight, dust-tight environmental seal
- Stainless Steel Hardware - 300 Series stainless used on all external hardware

Mounting Bosses

- Panel mounting capability for fixed rear panel

Metal Inserts

- All bosses utilize threaded brass inserts accepting 10-32 screws
- Covers — screws 10-24*

Soft Edge Design

- Rounded edges, minimal protrusions or exposed pocket areas for assembly of dust and debris
- Latches in corners to maximize mounting space**

Color

- Standard glacier grey (PMS 428C).

  Additional colors available as part of ModRight program – Consult factory.

PRODUCT CONFIGURATIONS

OPAQUE COVER

HPL	HW	W	HLL
HINGED, 2 LOCKABLE PULL LATCHES	HINGED, 2 COVER SCREWS	4 COVER SCREWS, LIFT-OFF COVER	HINGED, 2 LOCKABLE LINK LATCHES

FLUSH BONDED WINDOW

HPL	HLL
HINGED, 2 LOCKABLE PULL LATCHES	HINGED, 2 LOCKABLE LINK LATCHES

CLEAR COVER

HPL
HINGED, 2 LOCKABLE PULL LATCHES

MODRIGHT™ FACTORY CUSTOMIZATION

- ModRight is your go-to solution for tackling even the most unique and complex enclosure needs!
- With state-of-the-art technology and a proven process, we ensure that every modification is delivered on time and meets the highest quality standards in the industry.
- Plus, modifications can be mixed and matched in endless combinations, including:

Custom Holes	Silk Screening	EMI/RFI Shielding
Custom Cutouts	Digital Printing	Custom Back Panels
Custom Windows	Custom Mold-In Colors	Other Special Requests

*Only on HW and W configurations
**Only on HPL and HLL configurations

CATALOG NUMBERS AND DIMENSIONS

Available Configurations	
Catalog # Suffix	Description
HPL	Hinged w/ Padlock Latch
HW	Hinged w/ Cover Screws
W	Lift-off Cover w/ Cover Screws
HLL	Hinged w/ Lockable Link Latches

Back Panel Material Types	
Panel # Suffix	Description
AL	Aluminum
CS	Carbon Steel
FG	Fiberglass
SS	Stainless Steel
ABS	ABS Material

Opaque Cover Configurations					
Catalog #	Available Configurations	Overall H x W x D	Inside H x W x D	Window Area H x W	Panel #
DS60604*	HPL, HW, W, HLL	7.42 x 7.79 x 4.31	6.77 x 6.77 x 4.06	4.25 x 4.25	BP66*
DS80604*	HPL, HW, W, HLL	9.42 x 7.79 x 4.31	8.77 x 6.77 x 4.76	6.25 x 4.25	BP86*
DS80804*	HPL, HW, W, HLL	9.39 x 9.77 x 4.31	8.74 x 8.74 x 4.06	6.25 x 6.25	BP88*
DS100806*	HPL, HW, W, HLL	11.42 x 9.80 x 6.31	10.73 x 8.73 x 6.06	8.25 x 6.25	BP108*
DS121006*	HPL, HW, W, HLL	13.46 x 11.83 x 6.31	12.72 x 10.72 x 6.06	10.25 x 8.25	BP1210*
DS141206*	HPL, HW, W, HLL	15.49 x 13.86 x 6.34	14.72 x 12.72 x 6.06	12.25 x 10.25	BP1412*
DS141208*	HPL, HW, W, HLL	15.49 x 13.86 x 8.34	14.72 x 12.72 x 8.06	12.25 x 10.25	BP1412*
DS161408*	HPL, HW, W, HLL	17.59 x 15.96 x 8.34	16.69 x 14.69 x 8.06	14.25 x 12.25	BP1614*
DS181610*	HPL, HW, W, HLL	19.77 x 18.15 x 10.34	18.63 x 16.63 x 10.06	16.25 x 14.25	BP1816*
DS201610*	HPL, HW, W, HLL	21.79 x 18.17 x 10.34	20.63 x 16.63 x 10.06	18.25 x 14.25	BPJ2016*

**add suffix to specify configuration/material*
Panel sold separately.

Flush Bonded Window Configurations					
Catalog #	Available Configurations	Overall H x W x D	Inside H x W x D	Window Area H x W	Panel #
DSW60604*	HPL, HLL	7.42 x 7.79 x 4.31	6.77 x 6.77 x 4.06	4.25 x 4.25	BP66*
DSW80604*	HPL, HLL	9.42 x 7.79 x 4.31	8.77 x 6.77 x 4.76	6.25 x 4.25	BP86*
DSW80804*	HPL, HLL	9.39 x 9.77 x 4.31	8.74 x 8.74 x 4.06	6.25 x 6.25	BP88*
DSW100806*	HPL, HLL	11.42 x 9.80 x 6.31	10.73 x 8.73 x 6.06	8.25 x 6.25	BP108*
DSW121006*	HPL	13.46 x 11.83 x 6.31	12.72 x 10.72 x 6.06	10.25 x 8.25	BP1210*
DSW141206*	HPL	15.49 x 13.86 x 6.34	14.72 x 12.72 x 6.06	12.25 x 10.25	BP1412*
DSW141208*	HPL	15.49 x 13.86 x 8.34	14.72 x 12.72 x 8.06	12.25 x 10.25	BP1412*
DSW161408*	HPL, HLL	17.59 x 15.96 x 8.34	16.69 x 14.69 x 8.06	14.25 x 12.25	BP1614*
DSW181610*	HPL, HLL	19.77 x 18.15 x 10.34	18.63 x 16.63 x 10.06	16.25 x 14.25	BP1816*
DSW201610*	HPL, HLL	21.79 x 18.17 x 10.34	20.63 x 16.63 x 10.06	18.25 x 14.25	BPJ2016*

**add suffix to specify configuration/material*
Panel sold separately.

CATALOG NUMBERS AND DIMENSIONS

Clear Cover Configuration			
Catalog #	Overall H x W x D	Inside H x W x D	Panel #
DSCC60604HPL	7.42 x 7.79 x 4.31	6.77 x 6.77 x 4.06	BP66*
DSCC80604HPL	9.42 x 7.79 x 4.31	8.77 x 6.77 x 4.76	BP86*
DSCC80804HPL	9.39 x 9.77 x 4.31	8.74 x 8.74 x 4.06	BP88*
DSCC100806HPL	11.42 x 9.80 x 6.31	10.73 x 8.73 x 6.06	BP108*
DSCC121006HPL	13.46 x 11.83 x 6.31	12.72 x 10.72 x 6.06	BP1210*
DSCC141206HPL	15.49 x 13.86 x 6.34	14.72 x 12.72 x 6.06	BP1412*
DSCC141208HPL	15.49 x 13.86 x 8.34	14.72 x 12.72 x 8.06	BP1412*
DSCC161408HPL	17.59 x 15.96 x 8.34	16.69 x 14.69 x 8.06	BP1614*

**add suffix to specify material*
Panel sold separately.

REPLACEMENT COVERS

- Field-interchangeable covers and hardware offer maximum flexibility for a variety of applications.

Diamond Shield Replacement Covers Only			
Enclosure Size	Opaque Cover Catalog #	Clear Cover Catalog #	Window Cover Catalog #
6 x 6	DS606CVR	DSCC606CVR	DSW606CVR
8 x 6	DS806CVR	DSCC806CVR	DSW806CVR
8 x 8	DS808CVR	DSCC808CVR	DSW808CVR
10 x 8	DS1008CVR	DSCC1008CVR	DSW1008CVR
12 x 10	DS1210CVR	DSCC1210CVR	DSW1210CVR
14 x 12	DS1412CVR	DSCC1412CVR	DSW1412CVR
16 x 14	DS1614CVR	DSCC1614CVR	DSW1614CVR
18 x 16	DS1816CVR	N/A	DSW1816CVR
20 x 16	DS1816CVR	N/A	DSW2016CVR

ACCESSORIES

- With extra latches, covers screws, and mounting feet readily available, Diamond Shield enclosures can be outfitted to meet your needs.

Diamond Shield Accessories	
Description	Catalog #
Mounting Foot Kit	DSMGFTKIT
Opaque Cover Screw Kit	DSWKIT
Clear Cover Screw Kit	DSCCKIT
Link Latch Kit	DSHLLKIT
Pull Latch Kit	DSHPLKIT

SPEED PANEL™

DEAD FRONT/SWING PANEL KIT

SLICES INSTALLATION TIME AND COMPLEXITY BY 50%

BROAD SIZE RANGE FOR INCREASED FLEXIBILITY

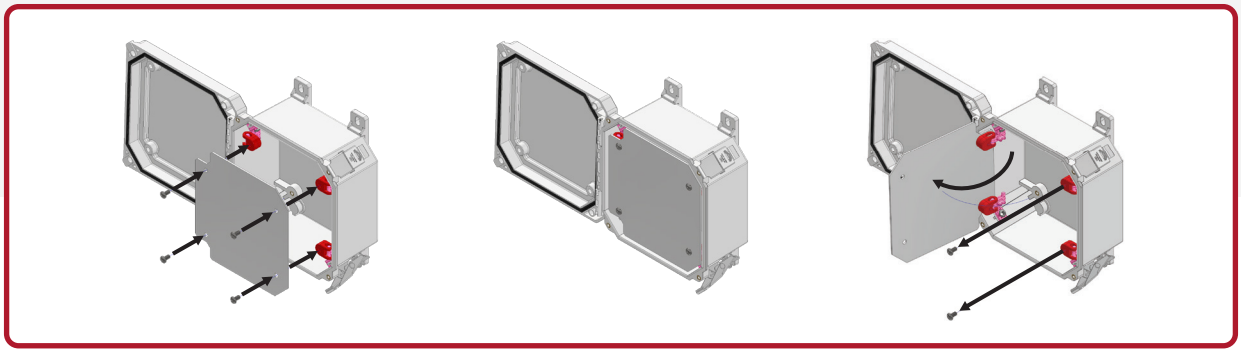
REDUCES LABOR AND MATERIAL COSTS

APPLICATIONS

- **Designed for OEMs** looking to save time and labor while installing a swing panel or dead front panel in the most functional, intelligently designed fiberglass enclosure on the market.
- **Innovative, Patent-Pending Design** functions with all existing Diamond Shield sizes and can be ordered as a complete kit with Panel included, or as a hardware kit with swing panel mounts only for customers who prefer to provide their own panels.

INNOVATIVE FEATURES

- **Quick and Easy Installation** by attaching the SpeedPanel components to the molded-in posts in the corners of the enclosure and securing with included hardware.
- **Reduced Number of Components** needed to install the fixed-height panel (vs. the previous discontinued post system).
- **Expanded Size Range**, available in sizes up to 20" x 16" (New 6" x 6" compact size available!)
- **Standardized** Swing Panel Mount components function with all sizes of Diamond Shield Enclosures.



DSDFSPMK Kit Components

Item	Quantity	Description
1	4	T-Member
2	4	Hinge
3	4	10-32 x 1/4" Phillips Pan Head S.S. Set Screw
4	4	10-32 x 3/8" Phillips Pan Head S.S. Panel Fastening Screw
5	1	Installation Instructions

SpeedPanel Configuration and Catalog Numbers

Catalog #	Part Description	Fits Enclosure Part #*
DSDFSPK606	SpeedPanel Mounting Kit with 6" x 6" Aluminum Panel	DS60604
DSDFSPK806	SpeedPanel Mounting Kit with 8" x 6" Aluminum Panel	DS80604
DSDFSPK808	SpeedPanel Mounting Kit with 8" x 8" Aluminum Panel	DS80804
DSDFSPK1008	SpeedPanel Mounting Kit with 10" x 8" Aluminum Panel	DS100806
DSDFSPK1210	SpeedPanel Mounting Kit with 12" x 10" Aluminum Panel	DS121006
DSDFSPK1412	SpeedPanel Mounting Kit with 14" x 12" Aluminum Panel	DS141206, DS141208
DSDFSPK1614	SpeedPanel Mounting Kit with 16" x 14" Aluminum Panel	DS161408
DSDFSPK1816	SpeedPanel Mounting Kit with 18" x 16" Aluminum Panel	DS181610
DSDFSPK2016	SpeedPanel Mounting Kit with 20" x 16" Aluminum Panel	DS201610
DSDFSPMK	SpeedPanel Mounting Kit (no panel included)	All DS Enclosures

**Includes all latch and cover variations.*
For Speed Panel Mounting Kits with custom panel materials, consult factory.

DIAMOND SHIELD PANEL MANAGEMENT SYSTEM®

BENEFITS

- Optimized use and function of all usable space within the enclosure while assisting in the mounting of cover mounted devices, such as touchpads and printed circuit boards
- Maximized visibility of panels that offer critical feedback, such as instrumentation, while preserving the integrity of the enclosure
- Ability to meet unique visual requirements usually associated with a dead front panel
- Ability to externally assemble, then "drop in" DIN rail mounted components, minimizing assembly, modification and field servicing
- Ability to restrict access to areas of adjustment calibration and dangerous voltage
- Maximum surface area for pushbutton or touch pad layout boosts end users' design possibilities

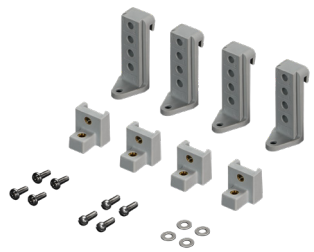
VARIABLE HEIGHT SWING PANEL KIT

- Panel and installation accessories included; enclosure NOT included
- Mounts at any height in the enclosure base
- Hinged on one side, secured to the other
- Larger panel area than traditional back panels maximizes surface mounting area
- Used in conjunction with corner mounting posts

Variable Height Swing Panel Accessory Kits	
Enclosure Size	Catalog #
6 x 6 x 4	N/A
8 x 6 x 4	DS80604SPKA
8 x 8 x 4	DS80804SPKA
10 x 8 x 6	DS100806SPKA
12 x 10 x 6	DS121006SPKA
14 x 12 x 6	DS141206SPKA
14 x 12 x 8	DS141208SPKA
16 x 14 x 8	DS161408SPKA
18 x 16 x 10	DS181610SPKA
20 x 16 x 10	DS201610SPKA

PANEL MANAGEMENT KITS

- Accessories only, panels NOT included



Panel Management System Accessory Kits			
Enclosure Size	Panel Kit Catalog #	Corner Post Kit Catalog #	Hinge Kit Catalog #
6 x 6 x 4	DS4PKA	DS4POST	DS3HINGEKIT
8 x 6 x 4	DS4PKA	DS4POST	DS4HINGEKIT
8 x 8 x 4	DS4PKA	DS4POST	DS4HINGEKIT
10 x 8 x 6	DS6PKA	DS6POST	DS5HINGEKIT
12 x 10 x 6	DS6PKA	DS6POST	DS5HINGEKIT
14 x 12 x 6	DS6PKA	DS6POST	DS6HINGEKIT
14 x 12 x 8	DS8PKA	DS8POST	DS6HINGEKIT
16 x 14 x 8	DS8PKA	DS8POST	DS6HINGEKIT
18 x 16 x 10	DS10PKA	DS10POST	DS6HINGEKIT
20 x 16 x 10	DS10PKA	DS10POST	DS6HINGEKIT

HEAR FROM OUR DIAMOND SHIELD CUSTOMERS!

MICRO GROW CONTROL SYSTEMS – AGRICULTURAL INDUSTRY

"We pioneered the first computerized environmental controls for greenhouses — Stahlin pioneered the first fiberglass enclosure — so we go together well. Stahlin's product quality and their personnel are second-to-none. In addition, what sets Stahlin apart is that I can call their factory and whoever picks up the phone can help me right then and there. I have always felt that I am a top priority."

-Tim Piini, Founder

METIS SECURE SOLUTIONS – COMMUNICATIONS & TELECOM INDUSTRY

"Stahlin Diamond Shield continues to meet all our criteria. Stahlin was able to mold the MS-6100 with a bright safety yellow color. The enclosures proved to be rugged enough to resist vandalism. They accommodate and protect all of our controls."

-Dave Hochendoner, Chief Technical Officer

OTIS INSTRUMENTS, INC. – OIL & GAS INDUSTRY

"The quality and performance of Stahlin Diamond Shield enclosures proved superior in cold environments – especially in Alaska and Canada. Unlike [other enclosure types], Diamond Shield would not crack around the lid, base, or the many custom holes drilled on our enclosures."

-Eric Brown, Operations Manager

Discover more success stories at stahlin.com/resources/case-studies

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