



# THE ULTIMATE GUIDE

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TO CHOOSING  
THE RIGHT CORE  
TRAY



# CONTENTS

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- 01 - CORE TRAY ESSENTIALS
- 02 - WHAT ARE YOU MISSING OUT ON IN A LOW-COST TRAY
- 03 - TOP 13 THINGS TO LOOK FOR WHEN CHOOSING A CORE TRAY
- 04 - THE DISCOVERER CORE TRAY RANGE
- 05 - FAQs ABOUT CORE TRAYS



# YOUR CORE TRAY

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The Core Tray, sometimes referred to as a Core Box, depending on where you are located in the world, is a plastic, injection moulded polypropylene container. It's divided into narrow parallel channels purposely designed for the secure storage and transportation of geological mineral core samples at the surface after they are extracted from a core barrel of a drill rig, drilling from below the ground.

Ergonomically constructed for the mining and exploration industry, it is the Geologist's main tool when collecting core samples on a mining or exploration site, and they are utilised to keep the samples protected and secure during transportation, analysis and storage.

A Geologists' goal is to spend as much time out in the field as possible, exploring for the next big discovery. Reliable Core Trays that have key productivity features support this objective, enabling geologists to work more efficiently.

It's crucial to select the correct Core Tray for your specific requirements to maximise the effective use of a Geologist's time in the field.

# CORE TRAY ESSENTIALS

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Due to the standard manufactured design and appearance of the Core Tray, at first glance it would appear that all Core Trays on the market are created equal. In reality, this is not so.

It's what you don't see at first that can make all the difference. A high quality product, like the Discoverer® Core Tray for example, will both protect the integrity of your core samples, and make the working with the core samples much easier.

You need to be aware of what is at stake if you settle for a substandard Core Tray, as the difference will become apparent when being utilised in the field.

This eBook will assist you in making the right choice by guiding you through important factors to take into consideration when selecting a Core Tray for your mining and exploration business.

Choosing a quality Core Tray is essential, as the hidden costs of a poorer alternative can cause significant setbacks during in-field projects and sample collection.

# WHAT ARE YOU MISSING OUT ON A LOW COST TRAY

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Just like any proven product, high quality Core Trays can be copied, and it's important to be wary.

If it doesn't feature the embossed badge of authenticity, it may not perform like the genuine product.

Do you want to risk your Geological projects and your core samples by using just any Core Tray?



# HERE ARE THE RESULTS FOUND WHEN FOREIGN COPIES WERE TESTED

Cheap imitators are manufactured from poor raw materials, and as a result easily break when being used. Some don't even survive international freight transport, much less the rigours of having core samples stored inside them.

[WATCH VIDEO](#)

Some copies are easily broken by hand, which is concerning as Core Trays have to withstand some of the harshest mining environments in the world, over an extended period of time.

For peace of mind, it's recommended you trust in the highest quality Core Tray brands in the market. This will have a direct effect on the efficiency and productivity of your Geologists in the field, as well as the integrity of your core samples.



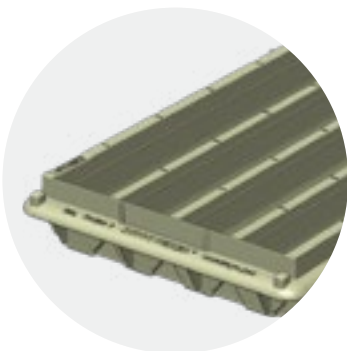
High Quality Plastic Core Trays in the field

In the next chapter, we discuss the large array of features that you should consider when making your decision.

# TOP 13 THINGS TO LOOK FOR WHEN CHOOSING A CORE TRAY

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When selecting the right Core Tray, it's very important to ensure that they have the following thirteen features. These ensure maximum effectiveness and efficiency when in the mining and exploration field.



## 01. INTEGRAL STRENGTH

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Strength is one of the most important factors when deciding on the right Core Tray for your requirements. Core samples are valuable, hence you need a tray that will transport them safely.



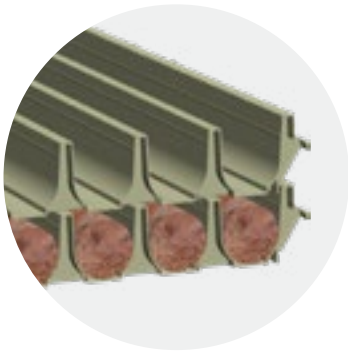
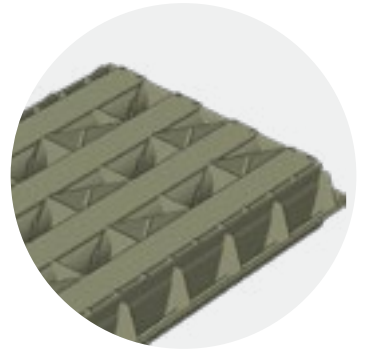
Keep an eye out for interlocking bracing between tray rows which ensure rigidity and strength through the entire length of the tray. They also increase the longevity of the product in tough mining environments.



## 02. ROLLER RACKING FRIENDLY

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Trays which don't run smoothly or bump on roller racking are difficult to work with and disturb the core samples. It's therefore important that the tray has a smooth, flat bottom structure, to ensure easy movement on ball bearing transfer tables and roller racking in any direction or angle, without disturbing the valuable samples inside.



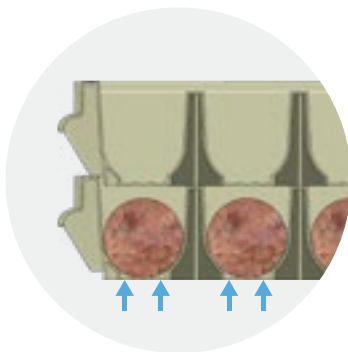
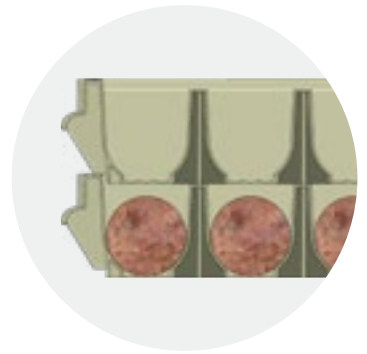
## 03. STABLE STACKING

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The Core Tray design should allow for neat and easy stacking on top of each other, without the tray above interfering with any of the samples in the tray below. Changing the size of core barrel down a particular hole, e.g. from NQ to HQ size, will mean you'll need to change the size of core tray. Therefore it's critical that the different-sized Core Trays have the same overall footprint so you are able to stack, for example, NQ Core Trays on top of HQ Core Trays and vice versa on the same pallet.

## 04. EXTRA CHANNEL HEIGHT

When stacking Core Trays containing fragmented or protrusive core samples, there needs to be enough clearance between the core itself, and the tray stacked on top. Ensuring that the tray has a slightly increased channel height will prevent protrusive cores from interfering with the stacking capability of the trays, therefore avoiding the very costly mistake of having the core trays fall over due to instability, whilst also protecting the fragmented core from any further damage.



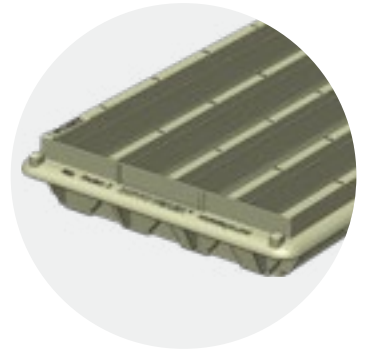
## 05. NON SUCTION CHANNEL

Pay close attention to the channel design. By selecting a Core Tray which allows a small air channel to run beneath the core (as shown in the left photo), it is possible to stop the frustrating 'suction effect' which can occur when storing wet cores in a Core Tray channel that is formed exactly in the shape of the cylindrical core.

## 06. ERGONOMIC GRIP BAR

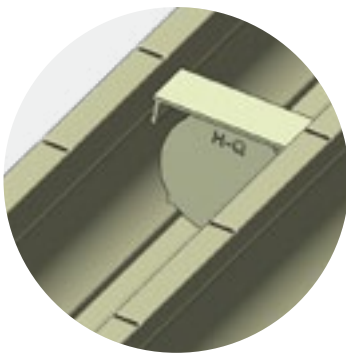
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Your team has to carry and transport their Core Trays around frequently, so the ideal tray will have a hand-friendly, 360-degree lift bar for gripping on all sides. This allows for easy lifting from your operators' natural lifting position, while allowing safe and easy manipulation of the Core Trays in all directions within the core shed.



## 07. CLIP-IN CORE MARKERS

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The Core Tray should be compatible with clip-in core markers to enable optimal use of the tray. This way, Geologists are able to place these dividers in the channels to separate and label the stored cores. Also for ease of use your core markers should be colour coded to match the colour and designate the size of the core trays.

## 08. NO LOGGING ERRORS

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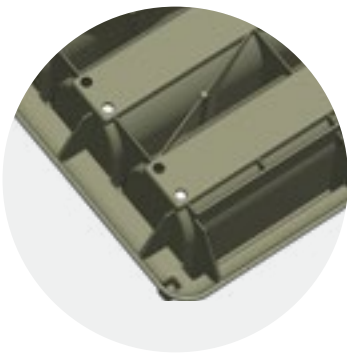
Your trays should have a Bold 'Start' Indicator providing clarity for drillers, reducing the potential of errors when logging the core.



## 09. NO WATERLOGGING

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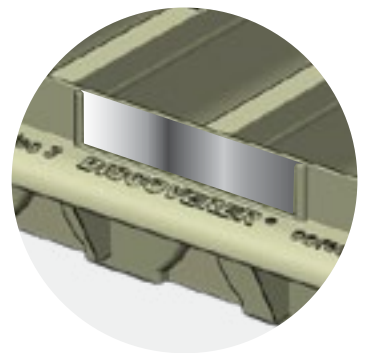
Sufficient size drainage holes should be built into your core trays to allow for water drainage along each channel, avoiding waterlogging and helping the sample dry out quickly, while remaining securely stored with minimal disturbance.



## 10. PERMANENT IDENTIFICATION RECORD

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To keep identification simple, your Core Trays should feature built-in ID tag holders at both ends of the Core Trays, for an Aluminium ID Tag. This provides a permanent identification record of tray contents and allows Geologists to easily recognise what is held in each tray, especially when trays are stored in a stack.



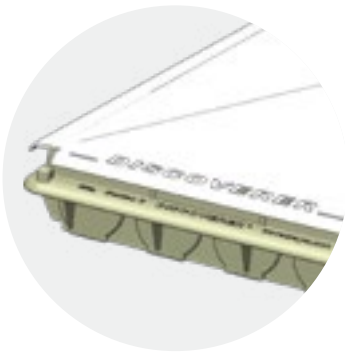
## 11. TRANSPORTATION STABILITY

Securing the Core Trays for transport is essential, not just for the storage of the core samples themselves, but also for the safety of the Geologist and Field team. The Core Trays should feature locking link bands that fit to the corners of the trays, fastening them together securely during movement.



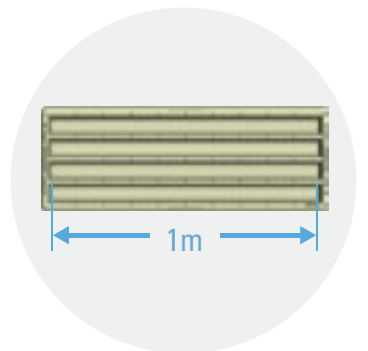
## 12. PROTECTION FROM THE ELEMENTS

Lids further protect your core integrity from the elements, and can seal the Tray shut for safe storage and transport. They should be manufactured from a durable UV plastic design to last for extreme periods in years of sunlight exposure.



## 13. STANDARD PRACTICE DESIGN

Keeping core logging practices consistent for the Geologist means it's important to fit 1 meter of core in each row of your core trays. Having a consistent 1 meter capacity in each row will ensure that core logging is easier. It is also more efficient, with less trays needed compared to an approach that uses trays with shorter internal length.



## DOES YOUR CORE TRAY MEET ALL THIRTEEN FEATURES?

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There is one brand of Core Trays that successfully meets all of the above criteria, and that's Discoverer®.

### **The Discoverer® Core Tray Range**

The premium Discoverer® Core Tray/Box has been proven in the field since 1993 as the world's first Plastic Core Tray, as well as being the easiest to use and most durable product on the market.

Designed with safety and ease of handling valuable rock samples in mind, the Discoverer® Range is built to withstand the rigours of all extreme conditions, from the harsh boiling Australian summers, to the freezing winters of Mongolia.

Robust, yet lightweight, and with no sharp edges, this is the most OH&S friendly product.

There are a wide range of Discoverer® Core Trays available, each with specific features and designs to suit specific conditions. When deciding on the right Core Tray product for your needs, consider the following specifications.

# 04 THE DISCOVERER CORE TRAY RANGE

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## THE DISCOVERER® SERIES 1 RANGE

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The classic standard design, tried and tested globally since 1993. This 'beefy' robust design is still going strong decades later!



## THE DISCOVERER® SERIES 2 RANGE

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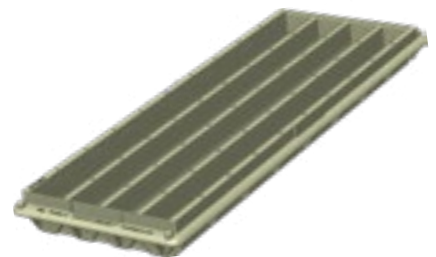
The Series 2 has the extra features of being able to nest as well as stack, delivering savings in freight costs with double the quantity of trays on one pallet. Brilliant for remote and international mining locations.



## THE DISCOVERER® SERIES 3 RANGE

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The premium and most advanced core tray on today's market, with the crucial flat bottom feature to roll smoothly on core shed roller racking and a unique 360° gripbar.



In addition to the Discoverer® Core Tray, Dynamics G-Ex offers a range of accessories from wooden core blocks through to core tray racking, to help make your drilling and exploration programs successful from the field, back to the core shed.

## DISCOVERER® SUB ZERO CORE TRAYS

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Designed to withstand prolonged freezing conditions and tested to -50 °C (-58 °F). Manufactured from UV Stabilised premium polymer. Immune to Corrosion, Deterioration & Infestation. Recyclable/ Sustainable. Available in all sizes and models.



## DISCOVERER® CORE TRAYS HYLOGGING

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The Discoverer® Series 1 Tray is perfect for use in conjunction with HyLogging Technology. The black colour is the optimal choice for a backdrop to the HyLogging Scanners when generating digital images, surface profiles and mineralogical interpretations.

The evenly spaced rows also means the tray works perfectly in conjunction with the scanning head as it's programmed to scan specific widths along the core.



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# FAQS ABOUT CORE TRAYS

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## WHAT ARE DISCOVERER® TRAYS MADE OF?

The Discoverer® core trays are manufactured from the highest quality UV stabilised polypropylene available.

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## WHY IS IT MADE FROM POLYPROPYLENE?

The material has a high level of resistance to organic chemicals found in drill core recovery. It is highly resistant to impact and non-magnetic. It is also exceptionally durable, making it suitable for the harsh mining and exploration environment.

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## WHY DO YOU ONLY MANUFACTURE FOUR SIZES?

Unlike metal trays, the Discoverer® Core Tray offers the industry a standardised mode of core storage. By avoiding the multitude of sizes and types and encouraging standardisation, the mining industry can minimise complexities around inventory and logistics.

## WHY IS IT MANUFACTURED AS A ONE-PIECE MOULD?

As the Discoverer® Core Trays are a one piece moulding, they have no pop rivets and welds, which means increased product strength, reducing the risk of damage, and dramatically reducing wastage.

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## WHY DO THE TRAYS HAVE ROUNDED EDGES AND HANDLES WITH AN OPTIONAL ID TAG?

Rounded edges mean no more dangerous sharp edges, leading to improved safety when handling.

Built-in handles on both ends of the trays, or the 360° Gripbar on the Series 3 trays, provide safe and easy tray handling. The built-in ID tag area and optional tags provide for a permanent record of contents.

## WHY HAVE THE DESIGNERS USED A 'START' MARKER?

A bold START mark at the end of the tray was designed to make it absolutely clear to the driller which end they should start with when loading the core from the core barrel inner tube, thereby eliminating possible errors in logging the core.

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## WHY ARE THE TRAYS MADE IN DIFFERENT COLOURS?

The trays are colour coded, allowing for quick and easy identification of the different sizes both in storage and out in the field.

## DO THE DISCOVERER® TRAYS HEAT UP WHEN LEFT OUT IN THE SUN?

The plastic remains relatively cool to touch when left outside, unlike metal trays. Therefore, there are no more painful burns when handling core trays.

## ARE THE DISCOVERER® CORE TRAYS RECYCLABLE?

Yes, the Discoverer core trays are fully recyclable.

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## WHY ARE THERE RIBS IN THE DISCOVERER®?

The unique raised rib design has been incorporated as they improve drainage, whilst making it easier to slide the core into the tray. This assists in the field, helping to retain the quality of your core.

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## HOW LONG HAVE THE DISCOVERER CORE TRAYS BEEN IN USE?

The Discoverer® core trays is based on the original design 'The Explorer', which has been used in the field since 1993.

## ARE THE DISCOVERER CORE TRAYS MANUFACTURED FOR USE IN COLD CLIMATES?

Yes. We manufacture cold climate core trays that are tested to -50°C.

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## CAN I REQUEST SAMPLES BEFORE I PURCHASE THE DISCOVERER CORE TRAYS?

You can. Dynamics offer samples of the Discoverer Core Trays.

[Email](#) or call us to arrange a sample, or [visit the website](#) for more information.

**TO PROVE BEYOND DOUBT  
DISCOVERER IS THE TOUGHEST TRAY  
EVER BUILD ANYWHERE, CHECK THIS  
VIDEO OUT. IT'S AN AMAZING FEAT OF  
STRENGTH FOR THE HUMBLE  
CORE TRAY!**

**WATCH VIDEO**



## DISCOVERER IS STOCKED!

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### Australian Locations:

Gympie - Perth - Kalgoorlie - Dubbo - Mt Isa -  
Adelaide - Bendigo - Burnie - Port Hedland

### International Distributor Locations:

Dubai - Philippines - Africa - UK - PNG - USA -  
Indonesia

### GYMPIE OFFICE:

A: 37 LANGTON RD GYMPIE QLD 4570  
P: 07 5482 6649

### PERTH OFFICE:

A: 50 MULGUL ROAD, MALAGA WA 6090  
P: 08 9302 5700

P: 1800 105 584 / INT +61 7 5482 6649

E: [SALES@DYNAMICSGEX.COM.AU](mailto:SALES@DYNAMICSGEX.COM.AU)